

**Development of Prototype
Occupational Information Network (O*NET)**

Content Model



Volume II: Appendices

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NOTICE

The American Institutes for Research, Washington, D.C., and its subcontractors Personnel Decisions Research Institutes, Inc., Management Research Institute, Inc., Jeanneret & Associates, Inc., Westat, Inc., and Policy Studies Associates, Inc., were awarded a contract by the Utah Department of Employment Security, on behalf of the U.S. Department of Labor (DOL), to develop an operational prototype for an occupational data collection, analysis, and dissemination system that will demonstrate the feasibility of and provide the foundation for creating an automated replacement for DOL's current Dictionary of Occupational Titles (DOT).

This report, submitted by The American Institutes for Research as a major deliverable under this contract, describes the types of occupational information that will be included in the prototype as well as the procedures used in their development. This "content model" will provide the framework for continued development of the DOT replacement system -- O*NET, The Occupational Information Network.

Because of the developmental nature of O*NET, the information presented in this report should be considered as "work in progress" and subject to revision and refinement as O*NET development continues.

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Norman G. Peterson, *American Institutes for Research*, Project Director

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Occupational Information System:
Content Model
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APPENDIX A
SKILLS QUESTIONNAIRE

Skills Questionnaire

Instructions for Making Skill Ratings

In this questionnaire you will be presented with a list of 46 skills. Some of the skills are developed over time and are used not only to do work but to learn other skills; examples include Reading Comprehension, Writing, and Speaking. Other skills are important for performance on many jobs; examples include Idea Generation, Troubleshooting, and Time Management.

For each skill, please make the following three ratings: **LEVEL**, **IMPORTANCE**, and **JOB ENTRY REQUIREMENT**.

(1) **LEVEL**. Ask yourself, "What level of this skill is needed to perform this job?" To help you make this judgment, the LEVEL scale includes descriptions of activities requiring high, medium, and low levels of the skill. These are only examples, so they may or may not apply to the specific job you are describing.

Use the example descriptions to select the number on the scale that indicates the skill level required by the job, and mark through the appropriate number, from 1 (indicating that a very low level of the skill is required) to 7 (indicating that a very high level of the skill is required) on the LEVEL scale. For example, the level of "Reading Comprehension" needed for one job might be much higher than that needed for another job.

THE NOT-RELEVANT (NR) RESPONSE. If the skill is NOT RELEVANT at all to performance on the job, mark through the NR circle that appears at the bottom of the LEVEL scale. Carefully read all of the level descriptions before selecting the NR option. If you select NR, however, there is no need to complete the IMPORTANCE and JOB ENTRY REQUIREMENT ratings described below.

(2) **IMPORTANCE**. (Complete only if a 1 to 7 LEVEL rating was selected.) Ask yourself, "How important is this skill to performance on this job?" For example, "Information Gathering" might be very important for one job, but less important for another job. For the second job, however, "Listening/Questioning" might be very important.

Rate the IMPORTANCE of the skill for performance on the job by marking through the appropriate number, from 1 (indicating that the skill is of little or no importance) to 5 (indicating that the skill is very important) on the IMPORTANCE scale.

(3) **JOB ENTRY REQUIREMENT**. (Complete only if a 1 to 7 LEVEL rating was selected.) Bearing in mind the LEVEL of the skill that is needed to perform the job, ask yourself, "Is this level of the skill required for entry to this job?" For example, "Reading Comprehension" might be needed by an employee before starting one job. However, "Troubleshooting" might not be necessary before starting a different job. "Troubleshooting" might be learned during on-the-job training.

Rate the **JOB ENTRY REQUIREMENT** for the job by marking through the appropriate number, either 1 (indicating that the level of the skill is required for entry on the job) or 2 (indicating that the level of the skill can be learned on the job).

Notice that the **LEVEL** of a skill and the **IMPORTANCE** of the skill are different. For example, "Reading Comprehension" can be high in **IMPORTANCE** for two different jobs, but the **LEVEL** of "Reading Comprehension" that an employee in one job needs is not as high as the **LEVEL** of "Reading Comprehension" for an employee in another job.

Below is an example completed by an employee in a particular job. For the LEVEL rating, the employee believes that a low-to-medium level of "Reading Comprehension" is needed to perform this job, so the 3 is selected on the rating scale. For the IMPORTANCE rating, the employee believes that "Reading Comprehension" is "Very Important" for performing this job, so the 4 is selected on the rating scale. For the JOB ENTRY REQUIREMENT rating, this employee believes that a person must have reached the level of "Reading Comprehension" required for the job before being hired, so the 1 is selected. These judgments are, of course, just examples. The job you are describing may be very different.

1. Reading Comprehension

Understanding written sentences and paragraphs in work related documents.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

~~③~~

②

①

(NR)

← Reading a scientific journal article describing surgical procedures.

← Reading a memo from management describing new personnel policies.

← Reading step-by-step instructions for completing a form.

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

~~①~~ YES, it is required for entry on the job. ② NO, it can be learned on the job.

Below is a second example completed by an employee in a different job. This employee does not believe that "Management of Personnel Resources" is at all relevant for this job. Therefore, the NR option is selected at the bottom of the LEVEL rating scale. Notice that, because the NR option was selected, the IMPORTANCE and JOB ENTRY REQUIREMENT ratings were not completed.

46. Management of Personnel Resources

Motivating, developing, and directing people as they work, identifying the best people for the job.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Planning, implementing and managing recruitment, training, and incentive programs for a high performance company.*

← *Directing the activities of a road repair crew with minimal disruption of traffic flow.*

← *Encouraging a co-worker who is having difficulty finishing a piece of work.*

LOW

Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

YES, it is required for entry on the job.

NO, it can be learned on the job.

Turn the page to begin the Skills Questionnaire.

1. Reading Comprehension

Understanding written sentences and paragraphs in work related documents.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

← *Reading a scientific journal article describing surgical procedures.*

⑤

④

← *Reading a memo from management describing new personnel policies.*

③

②

← *Reading step-by-step instructions for completing a form.*

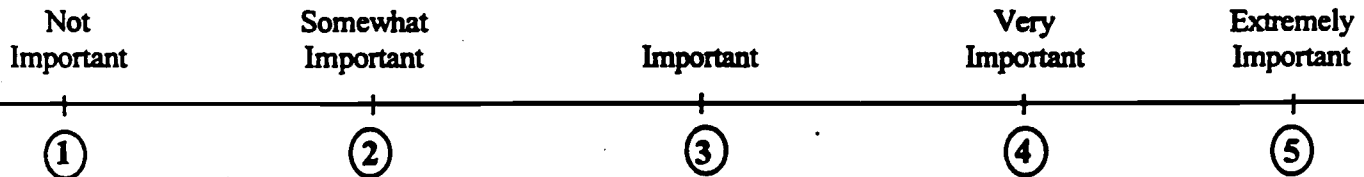
①

LOW

Ⓝ Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

2. Active Listening

Listening to what other people are saying and asking questions as appropriate.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

NR

← Presiding as judge in a complex legal disagreement.

← Answering inquiries regarding credit references.

← Taking a customer's order.

LOW

① Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

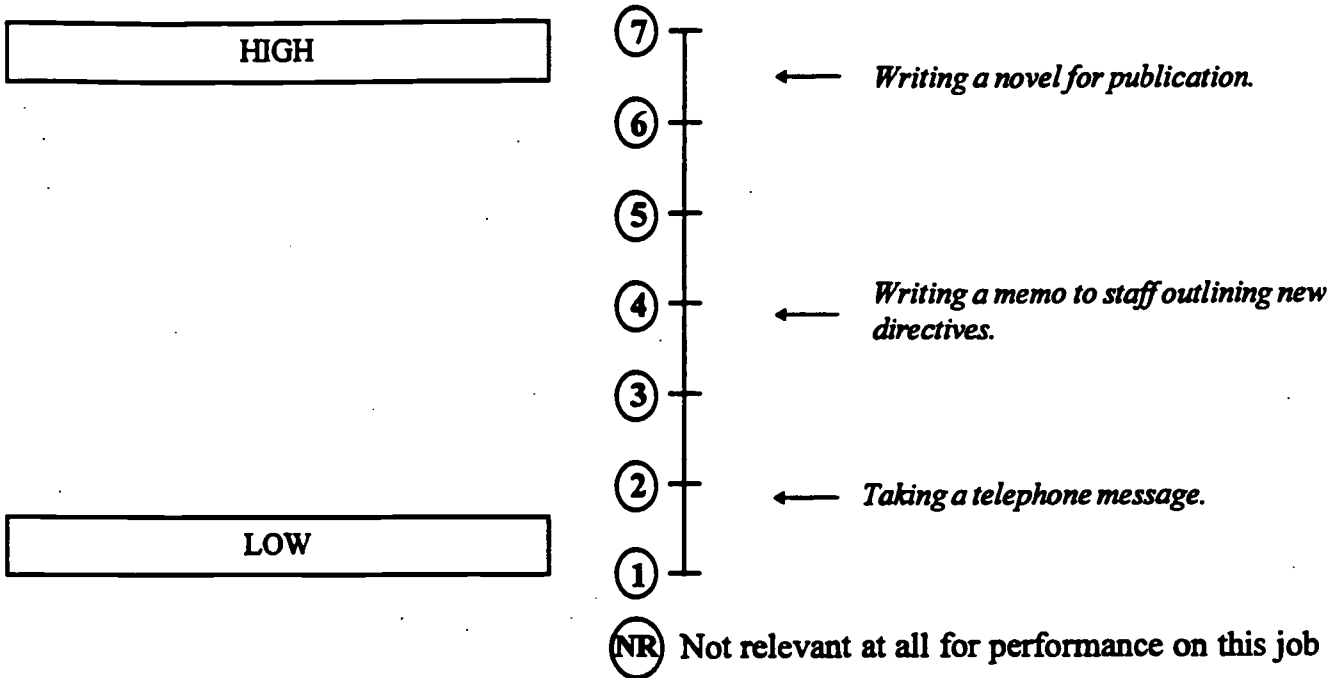
②. NO, it can be learned on the job.

3. Writing

Communicating effectively with others in writing as indicated by the needs of the audience.

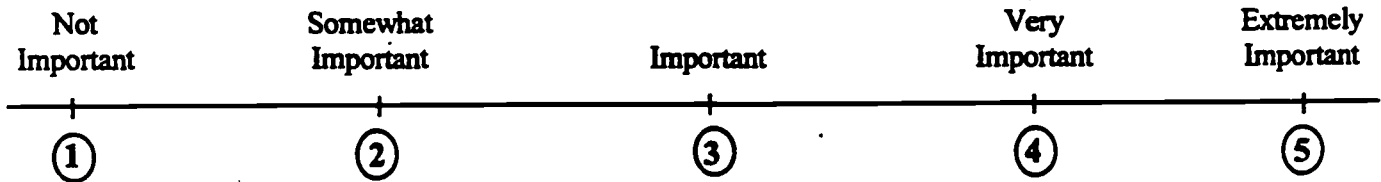
Level

What level of this skill is needed to perform this job?



Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

- ①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

4. Speaking

Talking to others to effectively convey information.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ

← Arguing a legal case before the Supreme Court.

← Interviewing applicants to obtain personal and work history.

← Greeting tourists and explaining tourist attractions.

Ⓝ Not relevant at all for performance on this job

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job. ② NO, it can be learned on the job.

5. Mathematics

Using mathematics to solve problems.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Developing a mathematical model to simulate and resolve an engineering problem.

← Calculating the square footage of a new home under construction.

← Counting the amount of change to be given to a customer.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

6. Science

Using scientific methods to solve problems.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← Conducting analyses of aerodynamic systems to determine the practicality of an aircraft design.

← Conducting product tests to ensure safety standards are met, following written instructions.

← Conducting standard tests to determine soil quality.

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

7. Critical Thinking

Using logic and analysis to identify the strengths and weaknesses of different approaches.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ Not relevant at all for performance on this job

← Writing a legal brief challenging a federal law.

← Evaluating customer complaints and determining appropriate responses.

← Determining whether a subordinate has a good excuse for being late.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

8. Active Learning

Working with new material or information to grasp its implications.

Level

What level of this skill is needed to perform this job?

HIGH	⑦		
	⑥	←	<i>Identifying the implications of a new scientific theory for product design.</i>
	⑤		
	④	←	<i>Determining the impact of new menu changes on a restaurant's purchasing requirements.</i>
	③		
	②	←	<i>Thinking about the implications of a newspaper article for job opportunities.</i>
LOW	①		
	(NR)		Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

9. Learning Strategies

Using multiple approaches when learning or teaching new things.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Applying principles of educational psychology to developing new teaching methods.

← Identifying an alternative approach that might help trainees who are having difficulties.

← Learning a different method of completing a task from a co-worker.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

10. Monitoring

Assessing how well one is doing when learning or doing something.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← *Reviewing corporate productivity and developing a plan to increase productivity.*

← *Monitoring a meeting's progress and revising the agenda to ensure that important topics are discussed.*

← *Proofreading and correcting a letter.*

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job. ② NO, it can be learned on the job.

11. Social Perceptiveness

Being aware of others' reactions and understanding why they react the way they do.

Level

What level of this skill is needed to perform this job?

HIGH



← Counseling depressive patients during a crisis period.

← Being aware of how a co-worker's promotion will affect a work group.

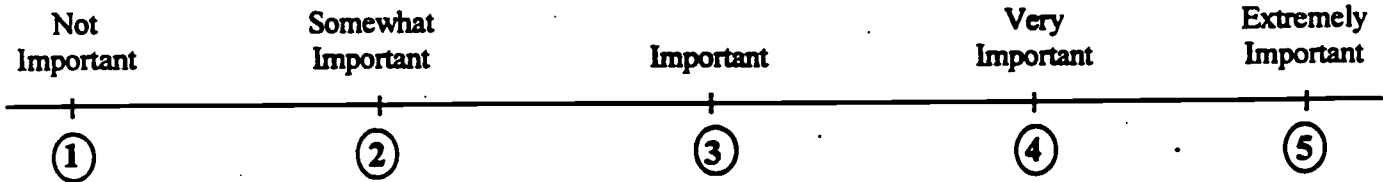
← Noticing that customers are angry because they have been waiting too long.

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

- ① YES, it is required for entry on the job.
- ② NO, it can be learned on the job.

12. Coordination

Adjusting actions in relation to others' actions.

Level

What level of this skill is needed to perform this job?

HIGH	⑦	
	⑥	← Working as director of a consulting project calling for interaction with multiple subcontractors.
	⑤	
	④	← Working with others to put a new roof on a house.
	③	
	②	← Scheduling appointments for a medical clinic.
LOW	①	
	(NR)	Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

13. Persuasion

Persuading others to approach things differently.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- (NR)

- ← Changing the opinion of the jury in a complex legal case.
- ← Convincing a supervisor to purchase a new copy machine.
- ← Soliciting donations for a charity.

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

- Not Important Somewhat Important Important Very Important Extremely Important
- ① ② ③ ④ ⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

- ①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

14. Negotiation

Bringing others together and trying to reconcile differences.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← Working as an ambassador in negotiating a new treaty.

← Contracting with a wholesaler to sell items at a given cost.

← Presenting justification to a manager for altering work schedule.

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

15. Instructing

Teaching others how to do something.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Demonstrating surgical procedures to interns in a teaching hospital.

← Instructing a co-worker in how to operate a software program.

← Instructing a new employee in the use of a time clock.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

16. Service Orientation

Actively looking for ways to help people.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← Directing relief agency operations in a disaster area.

← Making flight reservations for customers, using airline reservation system.

← Asking customers if they would like cups of coffee.

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

17. Problem Identification

Identifying the nature of problems.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

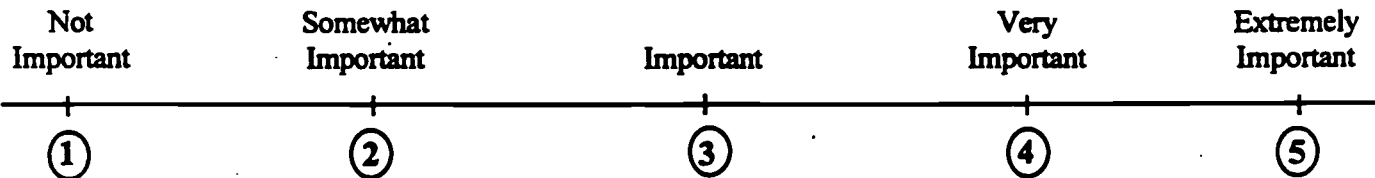
← Analyzing corporate finances to develop a restructuring plan.

← Identifying and resolving customer complaints.

← Comparing invoices of incoming articles to ensure they meet required specifications.

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

18. Information Gathering

Knowing how to find information and identifying essential information.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

Not relevant at all for performance on this job

LOW

← Analyzing industry indices and competitors' annual reports to determine feasibility of expansion.

← Conducting an employee opinion survey.

← Looking up procedures in a manual.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

19. Information Organization

Finding ways to structure or classify multiple pieces of information.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ Not relevant at all for performance on this job

← Developing a prototype for a new database system.

← Classifying library materials according to subject matter.

← Laying out tools to complete a job.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

20. Synthesis/ Reorganization

Reorganizing information to get a better approach to problems or tasks.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

← *Determining the best order in which to present evidence in a criminal trial.*

← *Redesigning a floor layout to take advantage of new manufacturing techniques.*

← *Rearranging a filing system to make it easier to get needed material.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

21. Idea Generation

Generating a number of different approaches to problems.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

← *Developing alternative transportation plans for a growing urban area.*

⑤

④

← *Developing recruitment strategies.*

③

②

← *Finding alternative routes while making deliveries.*

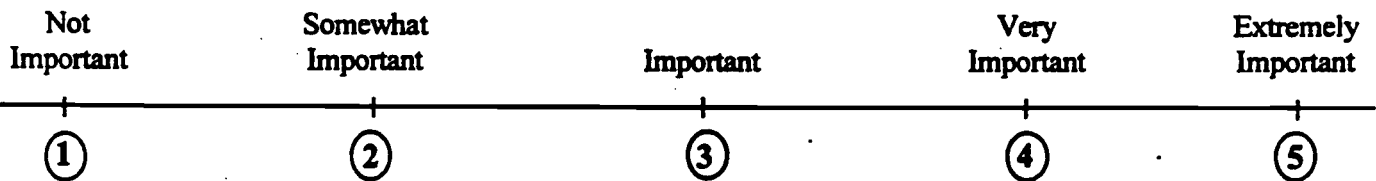
①

LOW

Ⓝ Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

22. Idea Evaluation

Evaluating the likely success of an idea in relation to the demands of the situation.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← Analyzing probable outcomes of public health policies to combat a disease epidemic.

← Evaluating and selecting employee suggestions for possible implementation.

← Determining which procedure to apply to get a report typed more quickly.

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

23. Implementation Planning

Developing approaches for implementing an idea.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Developing and implementing a plan to provide emergency relief for a major metropolitan area.

← Scheduling deliveries based on distance between sites, staffing time, availability of vehicles, and cost.

← Scheduling and coordinating a one-day meeting.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

24. Solution Appraisal

Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Reviewing, assessing, and modifying the implementation of a new business plan.*

← *Measuring customer satisfaction after the introduction of new billing procedures.*

← *Identifying and correcting an error made in preparing a report.*

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job. ② NO, it can be learned on the job.

25. Operations Analysis

Analyzing needs and product requirements to create a design.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Identifying the control system needed for a new process production plant.

← Suggesting changes in software to make a system more user friendly.

← Selecting a photocopy machine for an office.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

26. Technology Design

Generating or adapting equipment and technology to serve user needs.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← *Creating new technology for producing industrial diamonds.*

← *Redesigning the handle on a hand tool for easier gripping.*

← *Adjusting exercise equipment for use by a customer.*

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

27. Equipment Selection

Determining the kind of tools and equipment needed to do a job.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

NR

Not relevant at all for performance on this job

← Identifying the equipment needed to produce a new product line.

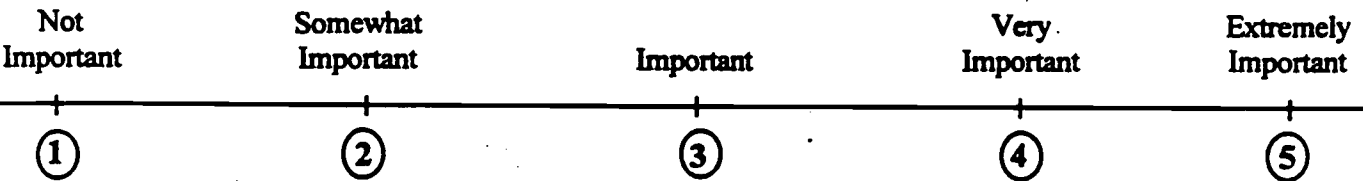
← Choosing a software application to use to complete a work assignment.

← Selecting a screwdriver to use in adjusting a vehicle's carburetor.

LOW

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

28. Installation

Installing equipment, machines, wiring, or programs to meet specifications.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← Installing a "one of a kind" process production molding machine.

← Installing new switches for a telephone exchange.

← Installing a new air filter in an air conditioner.

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

29. Programming

Writing computer programs for various purposes.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Writing expert system programs to analyze ground radar geological data for probable existence of mineral deposits.

← Writing a statistical analysis program to analyze demographic data.

← Writing a program in BASIC to sort objects in a database.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

30. Testing

Conducting tests to determine whether equipment, software, or procedures are operating as expected.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

NR

← Developing procedures to test a prototype of a new computer system.

← Starting a machine to obtain a first-run workpiece and verify dimensional tolerances.

← Using a test station to assess whether a car meets emissions requirements.

① Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job. ② NO, it can be learned on the job.

31. Operation Monitoring

Watching gauges, dials, or other indicators to make sure a machine is working properly.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- Ⓝ NR

← *Monitoring and integrating control feedback in a petrochemical processing facility to maintain production flow.*

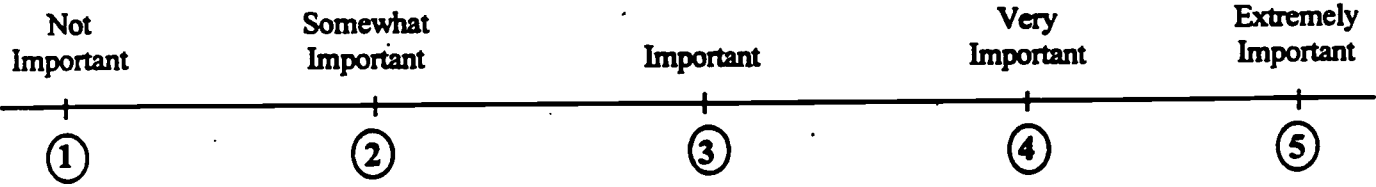
← *Monitoring machine functions on an automated production line.*

← *Monitoring completion times while running a computer program.*

Ⓝ NR Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

- ① YES, it is required for entry on the job.
- ② NO, it can be learned on the job.

32. Operation and Control

Controlling operations of equipment or systems.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

NR Not relevant at all for performance on this job

← Controlling aircraft approach and landing at a large airport during a busy period.

← Adjusting the speed of an assembly line equipment based on the type of product being assembled.

← Adjusting the settings on a copy machine to make reduced size photocopies.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

33. Product Inspection

Inspecting and evaluating the quality of products.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

(NR)

← *Establishing and monitoring quality control procedures for a large manufacturing operation.*

← *Measuring new part requisitions for tolerance to specifications.*

← *Inspecting a draft of a memorandum for clerical errors.*

Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

34. Equipment Maintenance

Performing routine maintenance and determining when and what kind of maintenance is needed.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

(NR)

← Conducting maintenance checks on an experimental aircraft.

← Clearing moving parts in production machinery.

← Adding oil to an engine as indicated by a gauge or warning light.

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

35. Troubleshooting

Determining what is causing an operating error and deciding what to do about it.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

NR

Not relevant at all for performance on this job

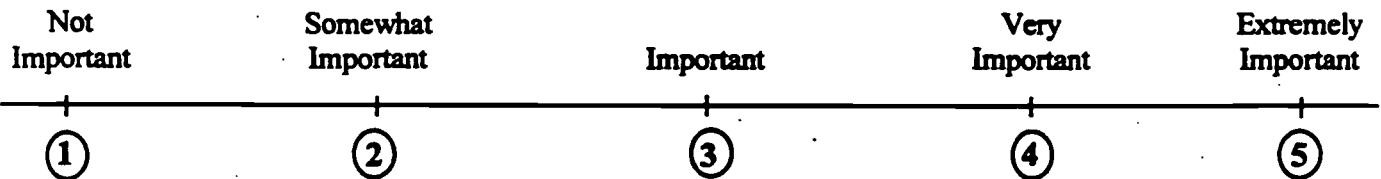
← Directing the debugging of control code for a new operating system.

← Identifying the circuit causing an electrical system to fail.

← Identifying the source of a leak by looking under a machine.

Importance

How important is this skill to performance on this job?



Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

36. Repairing

Repairing machines or systems using the needed tools.

Level

What level of this skill is needed to perform this job?

HIGH	⑦	
	⑥	← <i>Repairing structural damage to a building following an earthquake.</i>
	⑤	
	④	← <i>Replacing a faulty hydraulic valve.</i>
	③	
	②	← <i>Tightening a screw to get a door to close properly.</i>
LOW	①	
	(NR)	Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

37. Visioning

Developing an image of how a system should work under ideal conditions.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

NR

Not relevant at all for performance on this job

← *Creating a new vision for a large manufacturing organization that lets the company respond to changes in the market and technology.*

← *Preparing a presentation detailing the role of a work unit in relation to the organizational structure.*

← *Understanding co-workers' roles in finishing a job.*

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

38. Systems Perceptions

Determining when important changes have occurred in a system or are likely to occur.

Level
What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

Ⓝ Not relevant at all for performance on this job

← Identifying how changes in tax laws are likely to affect preferred sites for manufacturing operations in different industries.

← Observing conditions that may impede the flow of work on an assembly line and notifying personnel that corrective action is necessary.

← Identifying how an argument among team members might affect the day's work.

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

39. Identification of Downstream Consequences

Determining the long-term outcomes of a change in operations.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Determining changes that might occur in an industry if a new piece of legislation is passed.*

← *Determining how the introduction of a new piece of equipment will affect production rates.*

← *Determining how loss of a team member will affect the completion of a job.*

① NR Not relevant at all for performance on this job

LOW

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

40. Identification of Key Causes

Identifying the things that must be changed to achieve a goal.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Identifying the changes in organizational policy needed to encourage research and development efforts.*

← *Identifying the major reasons why a client might be unhappy with a product.*

← *Determining which route to take to deliver a passenger to a destination quickly.*

LOW

① Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

41. Judgment and Decision Making

Weighing the relative costs and benefits of a potential action.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Deciding whether a manufacturing company should invest in new robotics technology.*

← *Evaluating a loan application for degree of risk.*

← *Deciding how scheduling a break will affect work flow.*

LOW

Ⓝ Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

① YES, it is required for entry on the job.

② NO, it can be learned on the job.

42. Systems Evaluation

Looking at many indicators of system performance, taking into account their accuracy.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

← *Evaluating the long-term performance problem of a company.*

← *Determining why a manager has underestimated production costs.*

← *Determining why a co-worker has been overly optimistic about how long it would take to complete a task.*

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job. ②. NO, it can be learned on the job.

43. Time Management

Managing one's own time and the time of others.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Allocating the time of scientists to multiple research projects.

← Allocating the time of subordinates to projects for the coming week.

← Keeping a monthly calendar of appointments.

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

44. Management of Financial Resources

Determining how money will be spent to get the work done, and accounting for these expenditures.

Level

What level of this skill is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

← *Developing and approving yearly budgets for a large corporation and obtaining financing as necessary.*

← *Preparing and managing a budget for a short-term project.*

← *Taking money from petty cash to buy office supplies and recording the amount of the expenditure.*

LOW

(NR) Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

46. Management of Personnel Resources

Motivating, developing, and directing people as they work, identifying the best people for the job.

Level

What level of this skill is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

(NR)

Planning, implementing and managing recruitment, training, and incentive programs for a high performance company.

Directing the activities of a road repair crew with minimal disruption of traffic flow.

Encouraging a co-worker who is having difficulty finishing a piece of work.

Not relevant at all for performance on this job

Importance

How important is this skill to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Entry Requirement

Is this level of skill required for entry to this job?

①. YES, it is required for entry on the job.

②. NO, it can be learned on the job.

APPENDIX B
KNOWLEDGES QUESTIONNAIRE

Knowledges Questionnaire

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Instructions for Making Knowledge Ratings

In this questionnaire you will be presented with a list of 33 knowledges. Knowledges are sets of facts and principles needed to address problems and issues in particular parts of a job.

For each knowledge, please make three ratings: **LEVEL**, **IMPORTANCE**, and **JOB SPECIALTY REQUIREMENTS**.

(1) **LEVEL**. Ask yourself, "What level of this knowledge is needed to perform this job?" To help you make this judgment, the **LEVEL** has three special features. First, each knowledge is named and then defined. Second, to the left of the scale are descriptions of high and low levels of the knowledge. Third, to the right of each scale are examples of specific tasks that require different levels of the knowledge. These are only examples, so they may or may not apply to the specific job you are describing. However, all of this information should help you make a judgement about the **LEVEL** of the knowledge required on the job you are describing. Please take the time to carefully read all of this information before making your ratings.

Use all of the information provided to select the number on the scale that indicates the knowledge level required by the job you are describing, and mark through the appropriate number, from 1 (indicating that a very low level of the knowledge is required) to 7 (indicating that a very high level of the knowledge is required) on the **LEVEL** scale. For example, the level of "Fine Arts" knowledge for one job might be higher than that for another job.

THE NOT-RELEVANT (NR) RESPONSE. If the knowledge is **NOT RELEVANT** at all to performance on the job, mark through the **NR** circle that appears at the bottom of the **LEVEL** scale. Carefully read all of the level descriptions before selecting the **NR** option. If you select **NR**, however, there is no need to complete the **IMPORTANCE** and **JOB SPECIALTY REQUIREMENTS** ratings described below.

(2) **IMPORTANCE**. (Complete only if a 1 to 7 **LEVEL** rating was selected.) Ask yourself, "How important is this knowledge to performance on this job?" For example, "Mathematics" knowledge might be very important for one job, but less important for another job. For the second job, however, "Medicine and Dentistry" knowledge might be very important.

Rate the **IMPORTANCE** of the knowledge for performance on the job by marking through the appropriate number, from 1 (indicating that the knowledge is of little or no importance) to 5 (indicating that the knowledge is very important) on the **IMPORTANCE** scale.

(3) **JOB SPECIALTY REQUIREMENTS**. (Complete only if a 1 to 7 **LEVEL** rating was selected.) Ask yourself, "Which of the following specialties are relevant to this job?"

Rate the **JOB SPECIALTY REQUIREMENTS** by marking through the appropriate letter, either **R** (indicating that the specialty is relevant) or **NR** (indicating that the specialty is not

relevant). If the job requires a specialty that is not listed, please write the specialty beside "Other(s)."

For example, an employee in a particular job might need "Sales and Marketing" knowledge. From the specialties listed, that employee would mark through R for "Retailing and Wholesaling" and R for "Vehicle Sales and Service." The employee would mark through NR next to all the other specialties listed.

Notice that the LEVEL of a knowledge and the IMPORTANCE of the knowledge are different. For example, "English Language" can be high in IMPORTANCE for two different jobs, but the LEVEL of "English Language" that an employee in one job needs may not be as high as the LEVEL of "English Language" for an employee in another job.

Below is an example completed by an employee in a particular job. For the LEVEL rating, this employee believes that a low-to-medium level of "Customer and Personal Service" knowledge is needed to perform this job, so the 3 is selected on the LEVEL rating scale. For the IMPORTANCE rating, the employee believes that "Customer and Personal Service" knowledge is "Very Important" for performing this job, so the 4 is selected on the IMPORTANCE rating scale. For the JOB SPECIALTY REQUIREMENTS rating, this employee selected the R next to "Travel Service" and "Hospitality Service" because knowledge of these specialties is important to the employee's job. The employee selected the NR next to all the other specialties. These judgments are, of course, just examples. The job you are describing may be vary different.

5. Customer and Personal Service

Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex customer and personal service principles and processes for identifying and meeting complex demands of multiple clients with diverse needs.

⑦

⑥

⑤

④

~~③~~

②

①

NR Not relevant at all for performance on this job

← Responding to a citizen's request for assistance after a major natural disaster.

← Catering a large wedding.

← Working as a day care aide supervising ten children.

← Running a hospital cleaning service.

← Providing air flight arrival times over the phone.

← Processing customer dry-cleaning drop-off.

Importance

How important is this knowledge to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

~~④~~

⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Barbering and Cosmetology	R	NR		Hospitality Service	R	NR
Bartending	R	NR		Housekeeping and Custodial	R	NR
Cashiering	R	NR		Laundry and Dry Cleaning	R	NR
Child Care and Home Management	R	NR		Meatcutting and Butchering	R	NR
Flight Attending	R	NR		Travel Service	R	NR
Food Preparation	R	NR		Other(s) _____	R	NR
Food Service	R	NR				

(Please specify)

Below is a second example completed by an employee in a different job. This employee does not believe that "Biology" knowledge is at all relevant for this job. Therefore, the NR option is selected at the bottom of the LEVEL rating scale. Notice that, because the NR option was selected, the IMPORTANCE and JOB SPECIALTY REQUIREMENT ratings were not completed.

17. Biology

Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced biological, physiological, and ecological systems, their interactions, and management.

⑦

⑥

⑤

④

③

②

①

← Isolating and identifying a microscopic virus.

← Investigating the effects of pollution on marine plants and animals.

← Dissecting a frog.

← Feeding domestic animals.

Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Biochemistry	R	NR		Marine and Aquatic Biology	R	NR
Botany	R	NR		Microbiology and Bacteriology	R	NR
Cell and Molecular Biology	R	NR		Nutritional Science	R	NR
Ecology	R	NR		Physiology	R	NR
Genetics	R	NR		Zoology	R	NR
				Other(s) _____		
				(Please specify)		

Turn the page to begin the Knowledges Questionnaire.

2. Clerical

Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced clerical, stenographic, and word processing procedures and records management systems.

⑦

⑥

⑤

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①

← Organizing a storage system for company forms.

← Typing 30 words per minute.

← Filing letters alphabetically.

Requires knowledge of simple clerical and filing procedures.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Banking Support	R	NR		Medical Secretarial	R	NR
Bookkeeping	R	NR		Office Clerical	R	NR
Computer Operations	R	NR		Receptionist	R	NR
Data Entry	R	NR		Stenography	R	NR
Health Unit Coordinating	R	NR		Stock and Warehousing	R	NR
Legal Secretarial	R	NR		Other(s) _____		
				(Please specify)		

3. Economics and Accounting

Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex financial operations, regulations, agencies, and advanced cost accounting procedures.

Requires knowledge of simple number and accounting procedures.

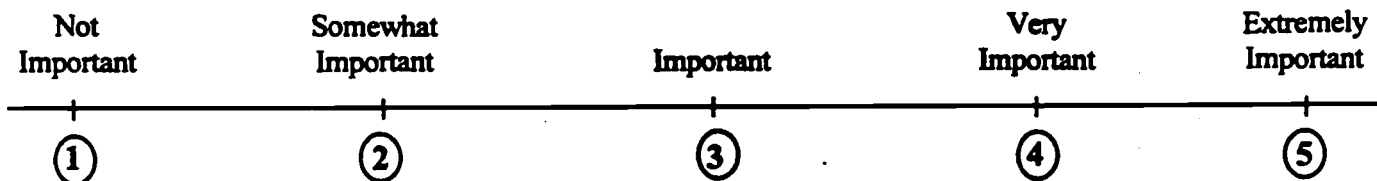
- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- (NR)

- ← Keeping a major corporation's financial records.
- ← Approving a multi-million dollar loan to a real estate developer.
- ← Developing financial investment programs for individual clients.
- ← Keeping financial records for a family business.
- ← Answering billing questions from credit card customers.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Accounting

R NR

Financial Management

R NR

Economics

R NR

Securities and Investments

R NR

Other(s) _____
(Please specify)

4. Sales and Marketing

Knowledge of principles and methods involved in showing, promoting, and selling products or services. This includes marketing strategies and tactics, product demonstration and sales techniques, and sales control systems.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced marketing and sales principles and methods required to market and sell complex goods or services to new, large, or multiple clients with varying needs.

⑦

⑥

⑤

④

③

②

①

← Developing a marketing plan for a nationwide phone system.

← Calling a list of clients to introduce them to a new product line.

← Selling cakes at a bake sale.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Advertising and Public Relations	R	NR		Real Estate	R	NR
Fashion and Apparel	R	NR		Retailing and Wholesaling	R	NR
Food Marketing	R	NR		Vehicle Sales and Service	R	NR
Insurance	R	NR		Other(s) _____		
Purchasing	R	NR		(Please specify)		

5. Customer and Personal Service

Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex customer and personal service principles and processes for identifying and meeting complex demands of multiple clients with diverse needs.

Requires knowledge of basic customer and personal service processes for meeting demands of single clients with simple needs.

- ⑦
⑥
⑤
④
③
②
①
NR

← Responding to a citizen's request for assistance after a major natural disaster.

← Catering a large wedding.

← Working as a day care aide supervising ten children.

← Running a hospital cleaning service.

← Providing air flight arrival times over the phone.

← Processing customer dry-cleaning drop-off.

NR Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

- Not Important Somewhat Important Important Very Important Extremely Important
- ① ② ③ ④ ⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Barbering and Cosmetology	R	NR	Hospitality Service	R	NR
Bartending	R	NR	Housekeeping and Custodial	R	NR
Cashiering	R	NR	Laundry and Dry Cleaning	R	NR
Child Care and Home Management	R	NR	Meatcutting and Butchering	R	NR
Flight Attending	R	NR	Travel Service	R	NR
Food Preparation	R	NR	Other(s) _____		
Food Service	R	NR	(Please specify)		

6. Personnel and Human Resources

Knowledge of policies and practices involved in personnel/human resource functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies; and personnel information systems.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of a broad range of employment and personnel practices, complex regulations, legal precedents, and labor negotiation principles.

⑦

⑥

⑤

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①

← *Designing a new personnel selection and promotion system for the Army.*

← *Conducting negotiations between labor and management to settle a dispute over wages.*

← *Interviewing applicants for a secretarial position.*

← *Filling out a medical claim form.*

① NR Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Human Resource Management	R	NR		Management Analysis	R	NR
Interviewing and Hiring	R	NR		Personnel Research	R	NR
Labor Relations	R	NR		Training	R	NR
				Other(s) _____		
				(Please specify)		

7. Production and Processing

Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced production, processing, and distribution techniques involved in large-scale manufacture and/or distribution of complex products.

Requires knowledge of simple production, processing, and distribution techniques involved in small-scale manufacture and/or distribution of simple products.

- ⑦
⑥
⑤
④
③
②
①
Ⓝ

← *Managing a food processing plant.*

← *Managing an international shipping company distribution center.*

← *Supervising an appliance assembly line.*

← *Packing glassware to be shipped airmail.*

← *Putting a computer back into its packing materials.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

- Not Important Somewhat Important Important Very Important Extremely Important
- ① ② ③ ④ ⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Clothing Production	R	NR	Metal Production and Processing	R	NR
Food Processing and Production	R	NR	Printing and Publishing	R	NR
Home Furnishing Production	R	NR	Quality Control and Inspection	R	NR
Line Supervision	R	NR	Other(s) _____		
			(Please specify)		

8. Food Production

Knowledge of techniques and equipment for planting, growing, and harvesting of food for consumption including crop rotation methods, animal husbandry, and food storage/handling techniques.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced techniques and equipment involved in the large-scale production of multiple food products.

(7)

(6)

(5)

(4)

(3)

(2)

(1)

(NR)

← *Running a 100,000 acre farm.*

← *Operating a commercial fishing boat.*

← *Keeping an herb box in the kitchen.*

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
(1)	(2)	(3)	(4)	(5)

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Agricultural and Business Management	R	NR		Crop Production	R	NR
Agricultural Sciences	R	NR		Fishing and Wildlife Management	R	NR
Animal Husbandry and Production	R	NR		Food Sciences	R	NR
Animal Sciences	R	NR		Other(s) _____		
				(Please specify)		

9. Computers and Electronics

Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex electronic principles and equipment.	⑦	
	⑥	← <i>Creating a program to scan computer disks for viruses.</i>
	⑤	← <i>Fixing a two-way radio in order to transmit a message.</i>
	④	
Requires knowledge of basic electronic equipment and its use.	③	← <i>Using a word processor.</i>
	②	
	①	← <i>Operating a VCR to watch a pre-recorded training tape.</i>
	(NR)	Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Computer Programming	R	NR	Electrical and Electronics Technology	R	NR
Computer Science	R	NR	Systems Analysis	R	NR
Computer Technology	R	NR	Other(s) _____		
			(Please specify)		

10. Engineering and Technology

Knowledge of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complicated engineering principles, devices, and structures.

Requires knowledge of simple engineering devices.

⑦

⑥

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④

③

②

①

NR

← *Designing an efficient and clean power plant.*

← *Planning for the impact of weather in designing a bridge.*

← *Designing a more stable grocery cart.*

← *Installing a door lock.*

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Aeronautical and Astronautical Engineering	R	NR		Materials Engineering	R	NR
Chemical Engineering	R	NR		Mechanical Engineering	R	NR
Civil Engineering	R	NR		Mining, Petroleum, and Nuclear Engineering	R	NR
Electrical Engineering	R	NR		Surveying	R	NR
Industrial Engineering	R	NR		Other(s) _____		

(Please specify)

12. Building and Construction

Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced construction techniques and materials required to build complicated objects, structures, and buildings.

⑦

⑥

⑤

④

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①

← Building a high rise office tower.

← Estimating the cost of developing a housing project.

← Fixing a plumbing leak in the ceiling.

← Choosing the proper type of wood for adding a deck onto a house.

← Sawing a board in half.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Bricklaying	R	NR		Drywall and Plaster	R	NR
Carpentry	R	NR		Electrical Power	R	NR
Concrete	R	NR		Painting and Paperhanging	R	NR
Construction and Building Inspection	R	NR		Plumbing	R	NR
Construction Equipment Operations	R	NR		Structural Metal	R	NR
				Other(s) _____		
				(Please specify)		

13. Mechanical

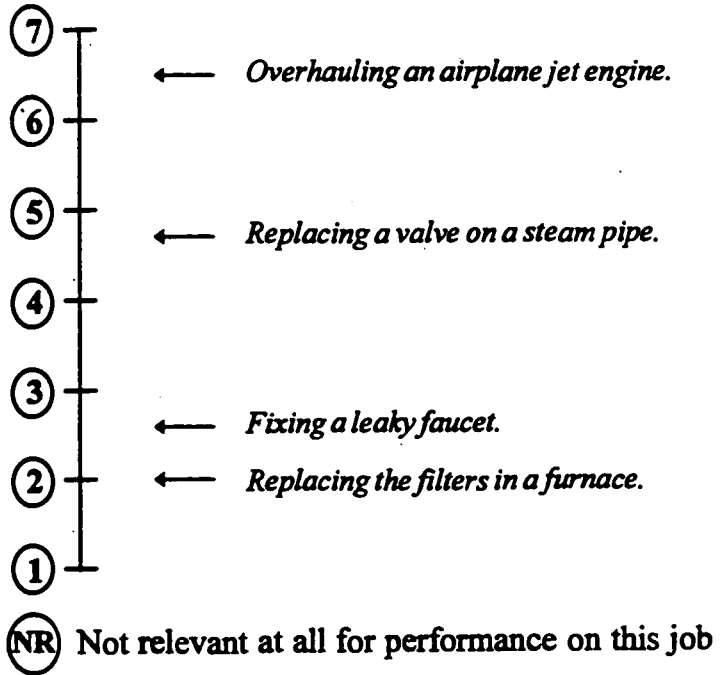
Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance.

Level

What level of this knowledge is needed to perform this job?

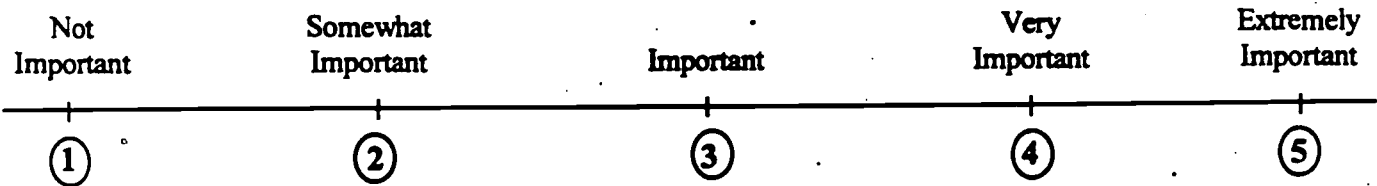
Requires knowledge of use and maintenance of complex power tools and machinery.

Requires knowledge of use and maintenance of simple hand tools.



Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Agricultural Mechanics	R	NR	Engine Repair	R	NR
Aircraft Mechanics	R	NR	Heavy Equipment Repair	R	NR
Appliance Repair	R	NR	Instrument Repair	R	NR
Automobile Mechanics	R	NR	Light Equipment Repair	R	NR
Building Maintenance	R	NR	Other(s) _____		
			(Please specify)		

14. Mathematics

Knowledge of numbers, their operations, and interrelationships including arithmetic, algebra, geometry, calculus, statistics, and their applications.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced mathematical concepts and operations such as calculus, non-linear algebra, and statistics.

⑦

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← *Deriving a complex mathematical equation.*

← *Analyzing data to determine areas with the highest sales.*

← *Adding two numbers.*

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

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⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Accounting	R	NR		Operations Research	R	NR
Actuarial Science	R	NR		Statistics	R	NR
Applied Mathematics	R	NR		Other(s) _____		
				(Please specify)		

15. Physics

Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex physical principles, laws, their applications, and interrelationships.

⑦

⑥

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④

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②

①

←

←

←

Designing a cleaner burning gasoline engine.

Calculating water pressure through a pipe.

Using a crowbar to pry open a box.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Astronomy	R	NR		Geology	R	NR
Astrophysics	R	NR		Nuclear Physics	R	NR
Atmospheric Sciences and Meteorology	R	NR		Oceanography	R	NR
Earth and Planetary Sciences	R	NR		Optics and Acoustics	R	NR
General Physics	R	NR		Other(s) _____		
				(Please specify)		

16. Chemistry

Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex chemicals, their properties, composition, structure, and possible interactions.

⑦

⑥

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← Developing a safe commercial cleaner.

← Using the proper concentration of chlorine to purify a water source.

← Using a common household bug spray.

Requires knowledge of common-place chemicals and their use.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Analytical Chemistry	R	NR		Organic Chemistry	R	NR
Biochemistry	R	NR		Physical and Theoretical Chemistry	R	NR
Inorganic Chemistry	R	NR		Polymer Chemistry	R	NR
Medicinal and Pharmaceutical Chemistry	R	NR		Other(s) _____		
				(Please specify)		

18. Psychology

Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex human behavior, advanced methods of psychological research, evaluation, and treatment.

Requires knowledge of basic concepts of human behavior.

⑦

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NR

← *Treating a person with a severe mental illness.*

← *Developing a job performance appraisal system.*

← *Understanding the impact of alcohol on human responses.*

← *Soothing a sad friend.*

← *Monitoring several children on a playground.*

NR Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Clinical Psychology	R	NR		Experimental Psychology	R	NR
Cognitive Psychology	R	NR		Industrial/Organizational Psychology	R	NR
Community Psychology	R	NR		Physiological/Biological Psychology	R	NR
Counseling Psychology	R	NR		Social Psychology	R	NR
Developmental Psychology	R	NR		Other(s) _____		
				(Please specify)		

20. Geography

Knowledge of various methods for describing the location and distribution of land, sea, and air masses including their physical locations, relationships, and characteristics

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of the geographical location of a large number of places around the world.

⑦

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← Developing a map of the world showing mountains, deserts, and rivers.

← Identifying Turkey on a world map.

← Knowing the capital of the United States.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

<p>Cartography</p>	R	NR		<p>Geography</p>	R	NR
				Other(s) _____		
				(Please specify)		

22. Therapy and Counseling

Knowledge of information and techniques needed to rehabilitate physical and mental ailments and to provide career guidance including alternative treatments, rehabilitation equipment and its proper use, and methods to evaluate treatment effects.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of counseling and therapy for treating complicated or difficult mental, emotional, or physical conditions or situations.

Requires knowledge of basic counseling and therapy techniques for treating simple mental, emotional, and physical conditions or situations.

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← Counseling an abused child.

← Designing a physical therapy program to rehabilitate stroke victims.

← Providing job counseling to the unemployed.

← Putting ice on a sprained ankle.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Educational Counseling	R	NR		Recreational Therapy	R	NR
Occupational Therapy	R	NR		Speech Pathology and Audiology	R	NR
Physical Therapy	R	NR		Social Work	R	NR
Psychiatric and Mental Health Counseling	R	NR		Vocational Counseling	R	NR
				Other(s) _____		
				(Please specify)		

23. Education and Training

Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles.

Level

What level of this knowledge is needed to perform this job?

Requires in-depth knowledge of numerous relevant facts and multiple instructional techniques to teach experts in a given field.

Requires knowledge of single instructional approaches to teach simple tasks to students.

⑦

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Ⓝ Not relevant at all for performance on this job

← *Designing a training program for new employees.*

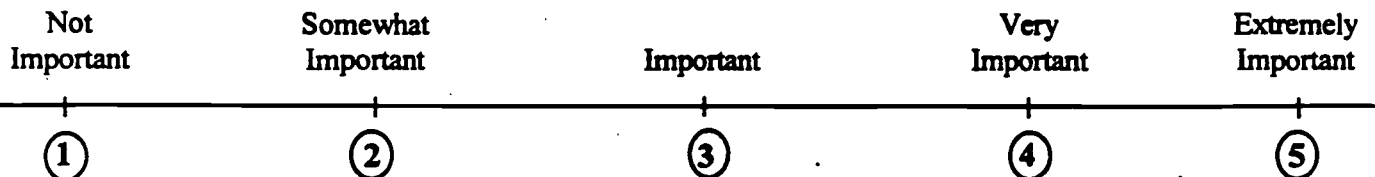
← *Teaching a high school general sciences course.*

← *Leading a quality improvement seminar.*

← *Showing someone how to bowl.*

Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Educational Administration	R	NR	College and University Education	R	NR
Instructional Design	R	NR	Special Education	R	NR
Pre-School Education	R	NR	Adult and Continuing Education	R	NR
Elementary Education	R	NR	Professional Training	R	NR
Secondary and Vocational Education	R	NR	Other(s) _____		
			(Please specify)		

24. English Language

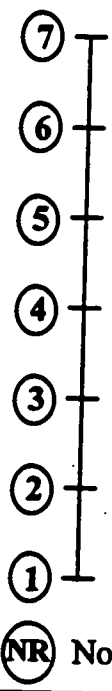
Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Level

What level of this knowledge is needed to perform this job?

Requires fluent knowledge of advanced English vocabulary, complex grammatical rules, and pronunciation.

Requires elementary knowledge of English vocabulary, grammar, and pronunciation.

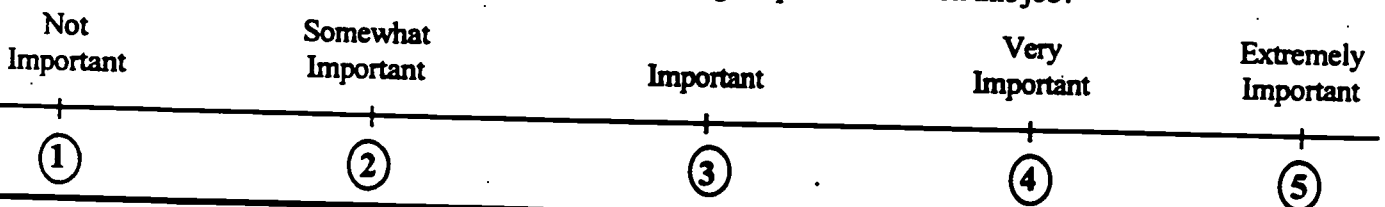


- ← Teaching a college English class.
- ← Editing a feature article in a local newspaper.
- ← Reading a complicated historical novel.
- ← Writing a thank-you note.

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Editing	R NR	Journalistic Writing	R NR
English Literature	R NR	Linguistics	R NR
Creative Writing	R NR	Technical and Business Writing	R NR
		Other(s) _____	
		(Please specify)	

25. Foreign Language

Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation.

Level

What level of this knowledge is needed to perform this job?

Requires fluent knowledge of advanced foreign language (non-English) vocabulary, complex grammatical rules, and pronunciation.

Requires elementary knowledge of vocabulary, grammar, and pronunciation in a foreign (non-English) language.

⑦

← Providing spoken translation of a political speech while listening to it at an international meeting.

⑥

← Writing an English language review of a book written in a foreign language.

⑤

④

← Using a foreign language dictionary to translate a business letter.

③

← Asking directions in a foreign city.

②

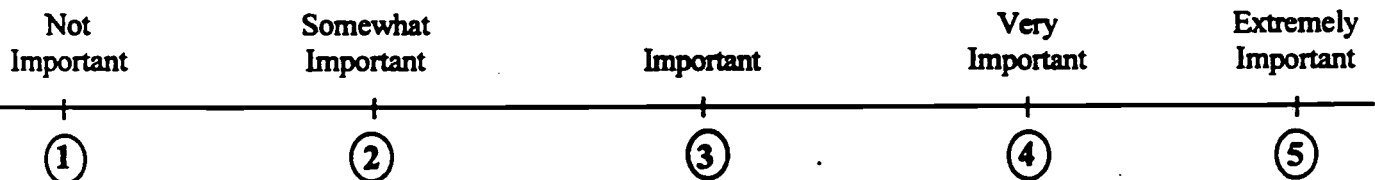
← Saying "please" and "thank you" in a foreign language.

①

Ⓝ Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Foreign Language Interpretation

R NR

Specify Language(s) required _____

Foreign Language Literature

R NR

Foreign Language Translation

R NR

Linguistics

R NR

Other(s) _____
(Please specify)

26. Fine Arts

Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture.

Level

What level of this knowledge is needed to perform this job?

Requires in-depth knowledge of advanced artistic theory and techniques required to create, perform, or critique major works of art, music, dance, or drama.

7

6

5

4

3

2

1

← *Composing a symphony.*

← *Designing an artistic display for a major trade show.*

← *Playing a minor part in a local theater play.*

← *Teaching students how to mix primary colors.*

← *Attending a popular music concert.*

(NR) Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
1	2	3	4	5

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Arts and Crafts	R	NR	Film-Video Making and Cinematography	R	NR
Dance	R	NR	Music	R	NR
Dramatic and Theatrical Arts	R	NR	Photography	R	NR
			Other(s) _____		
			(Please specify)		

28. Philosophy and Theology

Knowledge of different philosophical systems and religions, including their basic principles, values, ethics, ways of thinking, customs, and practices, and their impact on human culture.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex philosophical positions and their impact on culture and thought.

⑦

⑥

⑤

④

③

②

①

← *Comparing the teachings of major philosophers.*

← *Understanding another culture's religious practices.*

← *Watching a TV program on family values.*

Requires knowledge of popular philosophical ideas and thought

① Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Ministry	R	NR		Philosophy	R	NR
Missions and Missionary Studies	R	NR		Religious Education	R	NR
Pastoral Counseling	R	NR		Theology	R	NR
				Other(s) _____		
				(Please specify)		

29. Public Safety and Security

Knowledge of weaponry, public safety, and security operations, rules, regulations, precautions, prevention, and the protection of people, data, and property.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of advanced safety rules and procedures, security needs and operations, and use of complicated weapons systems.

Requires knowledge of basic safety rules and procedures, security operations, and use of simple weapons.

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← *Commanding a military operation.*

← *Securing a crime scene.*

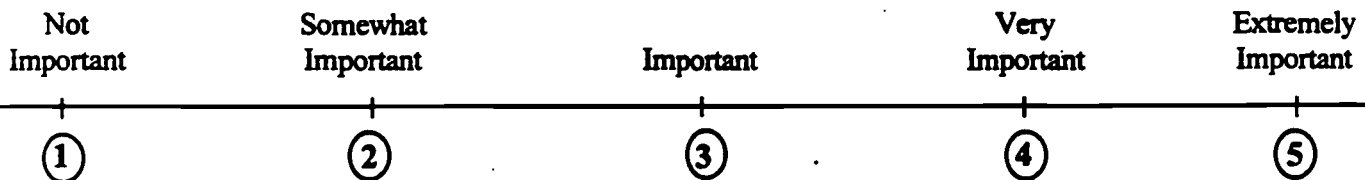
← *Inspecting a building site for safety violations.*

← *Loading and shooting a weapon.*

← *Using a seatbelt.*

Importance

How important is this knowledge to performance on this job?



Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Corrections	R	NR	Military Technologies	R	NR
Criminal Investigation	R	NR	Police Patrol	R	NR
Fire Fighting	R	NR	Security Services	R	NR
Fire Inspection and Investigation	R	NR	Other(s) _____		
			(Please specify)		

30. Law, Government and Jurisprudence

Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex federal, state, and local laws and government regulations; judiciary precedents and procedures; and political organizations and processes.

⑦

⑥

⑤

④

③

②

①

Ⓝ

← *Being a judge in a federal court.*

← *Arguing a criminal case in court.*

← *Lobbying for political support of a new bill.*

← *Preparing documents and title papers for the purchase of a house.*

← *Registering to vote in a national election.*

Ⓝ Not relevant at all for performance on this job

Requires knowledge of basic rights, laws, and political processes.

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Jurisprudence	R	NR	Paralegal and Legal Support Services	R	NR
Legal Representation	R	NR	Political Science and Government	R	NR
			Other(s) _____		
			(Please specify)		

33. Transportation

Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including their relative costs, advantages, and limitations.

Level

What level of this knowledge is needed to perform this job?

Requires knowledge of complex transportation systems consisting of multiple methods for moving people or goods throughout the world.

Requires knowledge of basic modes of transportation for moving people or goods within a local area

⑦

⑥ ← Controlling air traffic at a major airport.

⑤ ← Steering a large freighter through a busy harbor.

④

③ ← Selecting the best way to transport senior citizens to shopping areas.
Arranging to transport a large crate from the US to Asia.

② ← Taking a train to work.

①

Ⓝ Not relevant at all for performance on this job

Importance

How important is this knowledge to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Job Specialty Requirements

Which of the following specialties are relevant to this job? (Mark "R" for Relevant and "NR" for Not Relevant.)

Airplane piloting	R	NR	Truck and Bus Transportation	R	NR
Air Traffic Control	R	NR	Water Transportation	R	NR
Railroad Operations	R	NR	Other(s) _____		
			(Please specify)		

APPENDIX C

**TRAINING, EDUCATION, LICENSURE,
AND EXPERIENCE QUESTIONNAIRE**

**Training, Education, Licensure and
Experience Questionnaire**

**Instructions for Making Training, Education,
Licensure, and Experience Ratings**

In this questionnaire you will be asked about the training, education, licensure, and experience requirements of the job you are describing.

Read each question carefully. Read the rating scale or response options that follow the question. Mark through the number for the response that best describes the requirements of this job.

Turn the page to begin the Training, Education, Licensure, and Experience Questionnaire.

LEVEL OF EDUCATION REQUIRED TO PERFORM THIS JOB

1. Please place an "X" next to the level of education required to perform this job. Note that this does not mean the education that you personally have obtained.
- a. **Less than a High School Diploma**
 - b. **High School Diploma (or High School Equivalence Certificate)**
 - c. **Post-Secondary Certificate** – awarded for training completed after high school (e.g., in Personal Services, Engineering-Related Technologies, Vocational Home Economics, Construction Trades, Mechanics and Repairers, Precision Production Trades)
 - d. **Some College Courses**
 - e. **Associate's Degree (or other 2-year degree)**
 - f. **Bachelor's Degree**
 - g. **Post-Baccalaureate Certificate** – awarded for completion of an organized program of study requiring 30 credit hours beyond the Bachelor's degree; designed for persons who have completed a Baccalaureate degree, but do not meet the requirements of academic degrees carrying the title of Master.
 - h. **Master's Degree**
 - i. **Post-Master's Certificate** – awarded for completion of an organized program of study of 60 credit hours beyond the Master's degree, but does not meet the requirements of academic degrees at the Doctoral level.
 - j. **First Professional Degree** – awarded for completion of a program that:
 - requires at least 2 years of college work before entrance into the program,
 - includes a total of at least 6 academic years of college work to complete, and
 - provides all remaining academic requirements to begin practice in a profession
 - k. **Doctoral Degree**
 - l. **Post-Doctoral Certificate**

INSTRUCTIONAL PROGRAM REQUIRED

2. Please indicate the instructional program that is required for this job by placing an "X" next to the appropriate area.

- | | | | |
|--------------------------|---|--------------------------|--|
| <input type="checkbox"/> | 01. Agricultural Business and Production | <input type="checkbox"/> | 25. Military Technologies |
| <input type="checkbox"/> | 02. Agricultural Sciences | <input type="checkbox"/> | 26. Multi/interdisciplinary Studies |
| <input type="checkbox"/> | 03. Architecture and Related Programs | <input type="checkbox"/> | 27. Parks, Recreation, Leisure, and Fitness Studies |
| <input type="checkbox"/> | 04. Area, Ethnic, and Cultural Studies | <input type="checkbox"/> | 28. Personal and Miscellaneous Services (preparation to provide services including gaming and sports officiating, funeral services/mortuary science, cosmetic services, and culinary arts) |
| <input type="checkbox"/> | 05. Biological Sciences/Life Sciences | <input type="checkbox"/> | 29. Philosophy and Religion |
| <input type="checkbox"/> | 06. Business Management and Administrative Services | <input type="checkbox"/> | 30. Physical Sciences |
| <input type="checkbox"/> | 07. Communications | <input type="checkbox"/> | 31. Precision Production Trades |
| <input type="checkbox"/> | 08. Communications Technologies (preparation to provide technical service in areas including educational/instructional media, photography, and radio/TV broadcasting) | <input type="checkbox"/> | 32. Protective Services |
| <input type="checkbox"/> | 09. Computer and Information Sciences | <input type="checkbox"/> | 33. Psychology |
| <input type="checkbox"/> | 10. Conservation and Renewable Natural Resources | <input type="checkbox"/> | 34. Public Administration and Services |
| <input type="checkbox"/> | 11. Construction Trades | <input type="checkbox"/> | 35. Reserve Officers' Training Corps (ROTC) |
| <input type="checkbox"/> | 12. Education | <input type="checkbox"/> | 36. Science Technologies (preparation to provide technical service in the following technologies: biological, nuclear/industrial, and physical science) |
| <input type="checkbox"/> | 13. Engineering | <input type="checkbox"/> | 37. Social Sciences and History |
| <input type="checkbox"/> | 14. Engineering-Related Technologies | <input type="checkbox"/> | 38. Theological Studies and Religious Vocations |
| <input type="checkbox"/> | 15. English Language and Literature/Letters | <input type="checkbox"/> | 39. Transportation and Materials Moving |
| <input type="checkbox"/> | 16. Foreign Languages and Literatures | <input type="checkbox"/> | 40. Visual and Performing Arts |
| <input type="checkbox"/> | 17. Health Professions and Related Sciences | <input type="checkbox"/> | 41. Vocational Home Economics (preparation to provide services related to child care, clothing apparel/textiles, institutional food, home furnishings, and custodial/housekeeping) |
| <input type="checkbox"/> | 18. Home Economics, General | <input type="checkbox"/> | |
| <input type="checkbox"/> | 19. Law and Legal Studies | <input type="checkbox"/> | |
| <input type="checkbox"/> | 20. Liberal Arts and Sciences, General Studies and Humanities | <input type="checkbox"/> | |
| <input type="checkbox"/> | 21. Library Science | <input type="checkbox"/> | |
| <input type="checkbox"/> | 22. Marketing Operations/Marketing and Distribution | <input type="checkbox"/> | |
| <input type="checkbox"/> | 23. Mathematics | <input type="checkbox"/> | |
| <input type="checkbox"/> | 24. Mechanics and Repairers | <input type="checkbox"/> | 99. No specific course major is required or preferred. |

LEVEL OF EDUCATION REQUIRED IN SPECIFIC SUBJECT AREAS

3. Below is a list of 15 educational subject areas.

Instructions:

- Read each subject area title, the definition, and the example courses.
- For each subject area, determine the highest level of educational coursework that is required for entry into this job.

- Place an "X" over the most appropriate value using the following scale:

0 = not required

1 = high school

2 = post-secondary technical training

3 = college

4 = graduate school or other post undergraduate training

#	Subject Area	Definition: Courses focus on ...	Example Courses	Highest level of educational coursework required for entry into this job
1.	Technical Vocational	non-business technical skills	Agriculture; Industrial Arts; Auto-Shop; Electronics	① ① ② ③ ④
2.	Business Vocational	basic business skills	Word Processing; Filing; Book Keeping/Basic Accounting	① ① ② ③ ④
3.	English/language Arts	reading, interpretation, and writing	Reading; Literature; Composition; Journalism; Creative Writing	① ① ② ③ ④
4.	Oral Communication	oral communication and speech	Oral Communication; Speech; Interpersonal Communication	① ① ② ③ ④
5.	Languages	reading, writing, and/or speaking languages other than English	French; Chinese; German; Japanese; Latin; Russian; Spanish	① ① ② ③ ④
6.	Basic Math	basic and applied math	General Math; Business Math	① ① ② ③ ④
7.	Advanced Math	advanced topics in math	Algebra; Geometry; Calculus; Statistics	① ① ② ③ ④
8.	Physical Science	the study of matter and/or energy	Physics; Chemistry; Astronomy	① ① ② ③ ④
9.	Computer Science	computers and their uses	Programming; Information Systems Management; Software Applications	① ① ② ③ ④
10.	Biological Science	the study of life and living beings	Life Science; Biology; Anatomy; Physiology	① ① ② ③ ④
11.	Applied Science	the application of Science	Engineering; Health; Medicine	① ① ② ③ ④
12.	Social Science	the behavioral sciences	Social Studies; Economics; History; Psychology; Sociology	① ① ② ③ ④
13.	Arts	visual and performing arts	Arts & Crafts; Music; Painting; Sculpture; Theater; Voice	① ① ② ③ ④
14.	Humanities	cultural and philosophical aspects of humans	Minority Studies; Philosophy; Religion	① ① ② ③ ④
15.	Physical Education	physical fitness and sports	Aerobics; Jogging; Weight Lifting; Specific Sports	① ① ② ③ ④

LICENSURE, CERTIFICATION, AND REGISTRATION

Licenses, certificates, and registrations are awarded to show that a job holder has gained certain skills. Some organizations that use licenses, registration, and certification include federal, state, and local governments, unions, guilds, and professional associations (examples include: Board of Certified Safety Professionals [BCSP] certification; Certified Public Accountant [CPA] certification; Registered Nurse [RN] licensure; American Production and Inventory Control Society [APICS] certification; and Academy of Certified Social Workers [ACSW] certification).

Instructions:

- Place an "X" next to the best answer.
- When asked to do so, write your answers in the spaces provided.

1. Is a commercial vehicle operator's license required to perform this job?

- a. yes
 b. no

2. Is a license, certificate, or registration (other than a driver's or vehicle operator's license) required to perform this job?

- a. yes
 b. no (skip questions 3, 4, and 5)

3. Name all licenses, certificates, or registrations that are required to perform this job:

4. Which of the following are required to receive these licenses, certificates, or registrations? • Place an "X" for Yes (Y) or No (N) for each one	X one	
	Y	N
Post-Secondary Degree (e.g., Associate's degree, Bachelor's degree)		
Graduate Degree (e.g., Master's degree, Doctoral degree)		
On-the-Job Training (including apprenticeships, internships, and other supervised experience)		
Examination (including written, oral, and performance assessments)		
One or more character references		

5. To retain a license, certification, or registration, is it necessary to take additional coursework?

- a. yes
- b. no

6. To perform this job, does the law (federal, state, or local law) require you to possess one or more licenses, certificates, or registrations?

- a. yes
- b. no

7. To perform this job, are you required by your employer to possess a license, certificate, or registration?

- a. yes
- b. no

8. Does a job-related union, or professional association require you to possess a license, certificate, or registration?

- a. yes
- b. no

EXPERIENCE

Instructions:

- Determine the level of experience that is required for this job. Use the following scale:

- 0 = not applicable or none
- 1 = up to and including 1 month
- 2 = over 1 month, up to and including 3 months
- 3 = over 3 months, up to and including 6 months
- 4 = over 6 months, up to and including 1 year
- 5 = over 1 year, up to and including 2 years
- 6 = over 2 years, up to and including 4 years
- 7 = over 4 years, up to and including 6 years
- 8 = over 6 years, up to and including 8 years
- 9 = over 8 years, up to and including 10 years
- 10 = over 10 years

- Place an "X" over the most appropriate value.

If someone were being hired to perform this job, how much of the following would be required?

Required Amount of Experience

- | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. RELATED WORK EXPERIENCE
(other jobs that prepared you for this job) | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |
| 2. ON-SITE OR IN-PLANT TRAINING
(organized classroom study provided by the employer) | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |
| 3. ON-THE-JOB TRAINING (OJT)
(serving as a learner or trainee on the job under the instruction of a more experienced worker) | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |
| 4. APPRENTICESHIP (having served in a registered US Department of Labor apprenticeship program and received a certificate of completion) | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

APPENDIX D

**GENERALIZED WORK ACTIVITIES
QUESTIONNAIRE**

**Generalized Work Activities
Questionnaire**

Instructions for Making Generalized Work Activity Ratings

In this questionnaire you will be presented with a list of 42 Generalized Work Activities. A Generalized Work Activity is a grouping of similar actions that, when put together, form a work function that is performed in many different jobs.

For each activity, please make the following three ratings: **LEVEL**, **IMPORTANCE** and **FREQUENCY**.

(1) **LEVEL**. Ask yourself, "What level of this activity is needed to perform this job?" To help you make this judgment, the LEVEL scale includes descriptions of activities requiring high, medium, and low levels of the activity. These are only examples, so they may or may not apply to the specific job you are describing.

Use the example descriptions to select the number on the scale that indicates the activity level required by the job, and mark through the appropriate number, from 1 (indicating that a very low level of the activity is required) to 7 (indicating that a very high level of the activity is required) on the LEVEL scale. For example, the level of "Getting Information Needed To Do the Job" needed for one job might be much higher than that needed for another job.

THE NOT-RELEVANT (NR) RESPONSE. If the activity is NOT RELEVANT at all to performance on the job, mark through the NR circle that appears at the bottom of the LEVEL scale. Carefully read all of the level descriptions before selecting the NR option. If you select NR, however, there is no need to complete the IMPORTANCE and FREQUENCY ratings described below.

(2) **IMPORTANCE**. (Complete only if a 1 to 7 LEVEL rating was selected.) Ask yourself, "How important is this activity to performance on this job?" For example, "Developing Objectives and Strategies" might be very important for one job, but less important for a another job. For the second job, however, "Inspecting Equipment and Devices" might be very important.

Rate the IMPORTANCE of the activity for performance on the job by marking through the appropriate number, from 1 (indicating that the activity is of little or no importance) to 5 (indicating that the activity is very important) on the IMPORTANCE scale.

(3) **FREQUENCY**. (Complete only if a 1 to 7 LEVEL rating was selected.) Ask yourself, "How often is this activity performed on this job?" For example, "Performing General Physical Activities" might be an activity performed very frequently by an employee in a particular job, but less frequently by an employee in another job.

Rate the FREQUENCY with which an activity is performed by marking through the appropriate number, from 1 (indicating that the activity is performed once per year or less often) to 7 (indicating that the activity is performed hourly or more often) on the FREQUENCY scale.

Notice that the LEVEL of an activity and the IMPORTANCE of the activity are different. For example, "Getting Information" can be high in IMPORTANCE for two different jobs, but the LEVEL of "Getting Information" that an employee in one job needs is not as high as the LEVEL of "Getting Information" for an employee in another job. In addition, "Getting Information" may be an activity that is performed with similar FREQUENCY by both employees.

Below is an example completed by an employee in a particular job. For the LEVEL rating, this employee believes that a low-to-medium level of "Getting Information" is needed to perform this job, so the 3 is selected on the rating scale. For the IMPORTANCE rating, the employee believes that "Getting Information" is "Very Important" for performing this job, so the 4 is selected on the rating scale. For the FREQUENCY rating, this employee performs activities that involve "Getting Information" daily, so the 5 is selected on the FREQUENCY rating scale. These judgments are, of course, just examples. The job you are describing may be very different.

1. Getting Information Needed To Do The Job

Observing, receiving, and otherwise obtaining information from all relevant sources.

Level
What level of this activity is needed to perform this job?

Getting new information from many sources, often by actively interacting with the sources.	7		
	6		← Studying international tax laws. ← Reviewing the results of a large financial audit. ← Grading the performance of college students.
	5		
	4		← Following a wiring diagram. ← Reviewing a budget. ← Interviewing witnesses at a crime scene.
	3		
	2		← Feeling the smoothness of a sanded surface. ← Following a standard blueprint. ← Reading instructions to install clothes washers and dryers.
Making regular use of the same types of information from a single source.	1		
	NR		Not relevant at all for performance on this job

Importance
How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
1	2	3	4	5

Frequency
How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
1	2	3	4	5	6	7

Below is a second example completed by an employee in a different job. This employee does not believe that "Coordinating the Work and Activities of Others" is at all relevant for this job. Therefore, the NR option is selected at the bottom of the LEVEL rating scale. Notice that, because the NR option was selected, the IMPORTANCE and FREQUENCY ratings were not completed.

34. Coordinating the Work and Activities of Others

Coordinating members of a work group to accomplish tasks.

Level
What level of this activity is needed to perform this job?

Coordinating the work of many employees, where a complex sequencing of others' tasks is required.	⑦	←	Acting as general contractor for the building of a large industrial complex.
	⑥		
	⑤		
	④	←	Organizing the clean-up crew after a major sports event or political convention.
	③		
Needing to do little coordinating of others.	②	←	Exchanging information during shift change.
	①		
	NR		Not relevant at all for performance on this job

Importance
How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency
How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

Turn the page to begin the Generalized Work Activities Questionnaire.

1. Getting Information Needed To Do The Job

Observing, receiving, and otherwise obtaining information from all relevant sources.

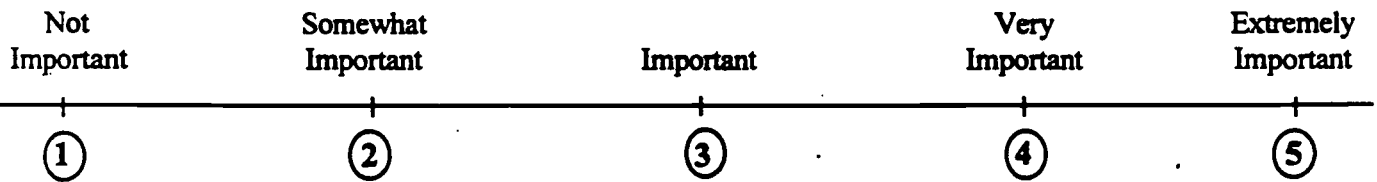
Level

What level of this activity is needed to perform this job?

Getting new information from many sources, often by actively interacting with the sources.	⑦	Studying international tax laws.
	⑥	← Reviewing the results of a large financial audit. Grading the performance of college students.
	⑤	Following a wiring diagram.
	④	← Reviewing a budget. Interviewing witnesses at a crime scene.
	③	
Making regular use of the same types of information from a single source.	②	← Feeling the smoothness of a sanded surface. Following a standard blueprint.
	①	Reading instructions to install clothes washers and dryers.
	(NR)	Not relevant at all for performance on this job

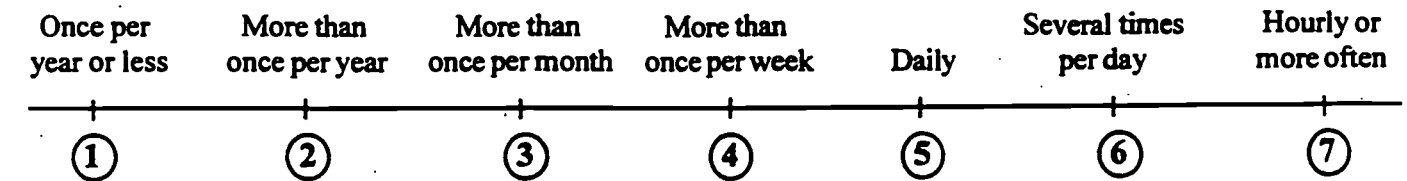
Importance

How important is this activity to performance on this job?



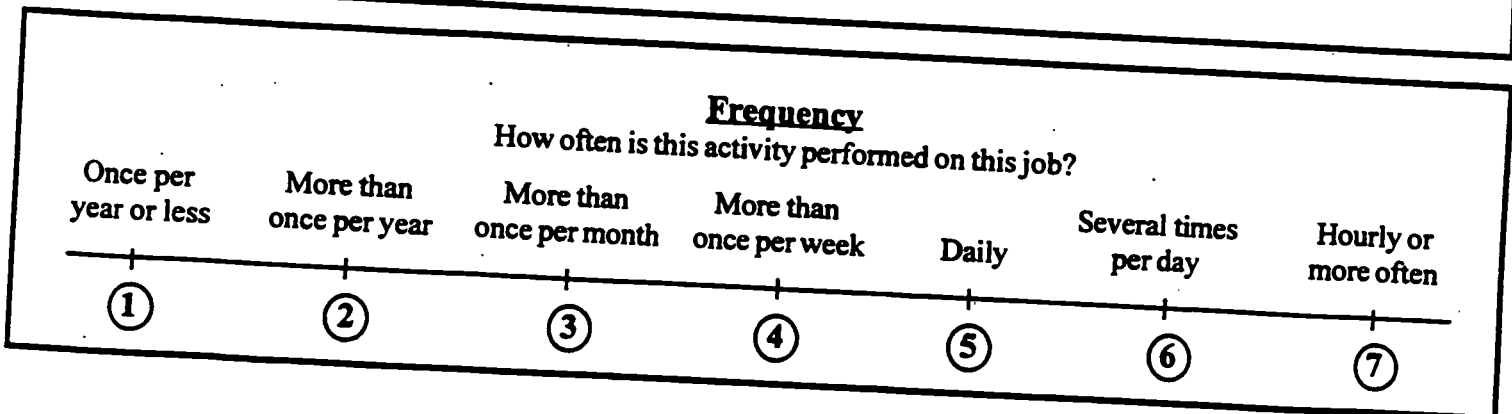
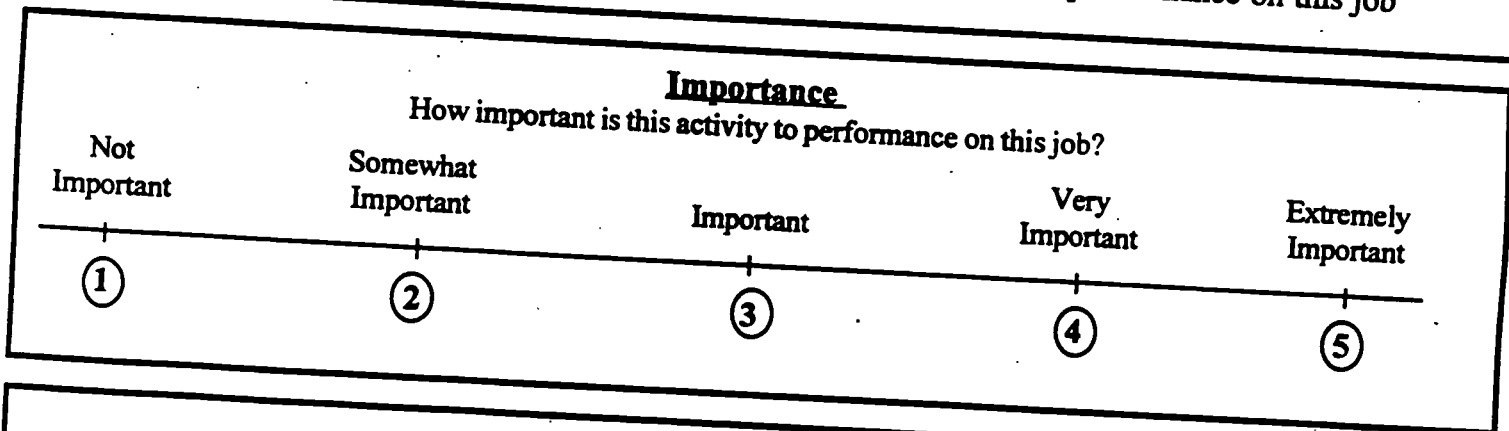
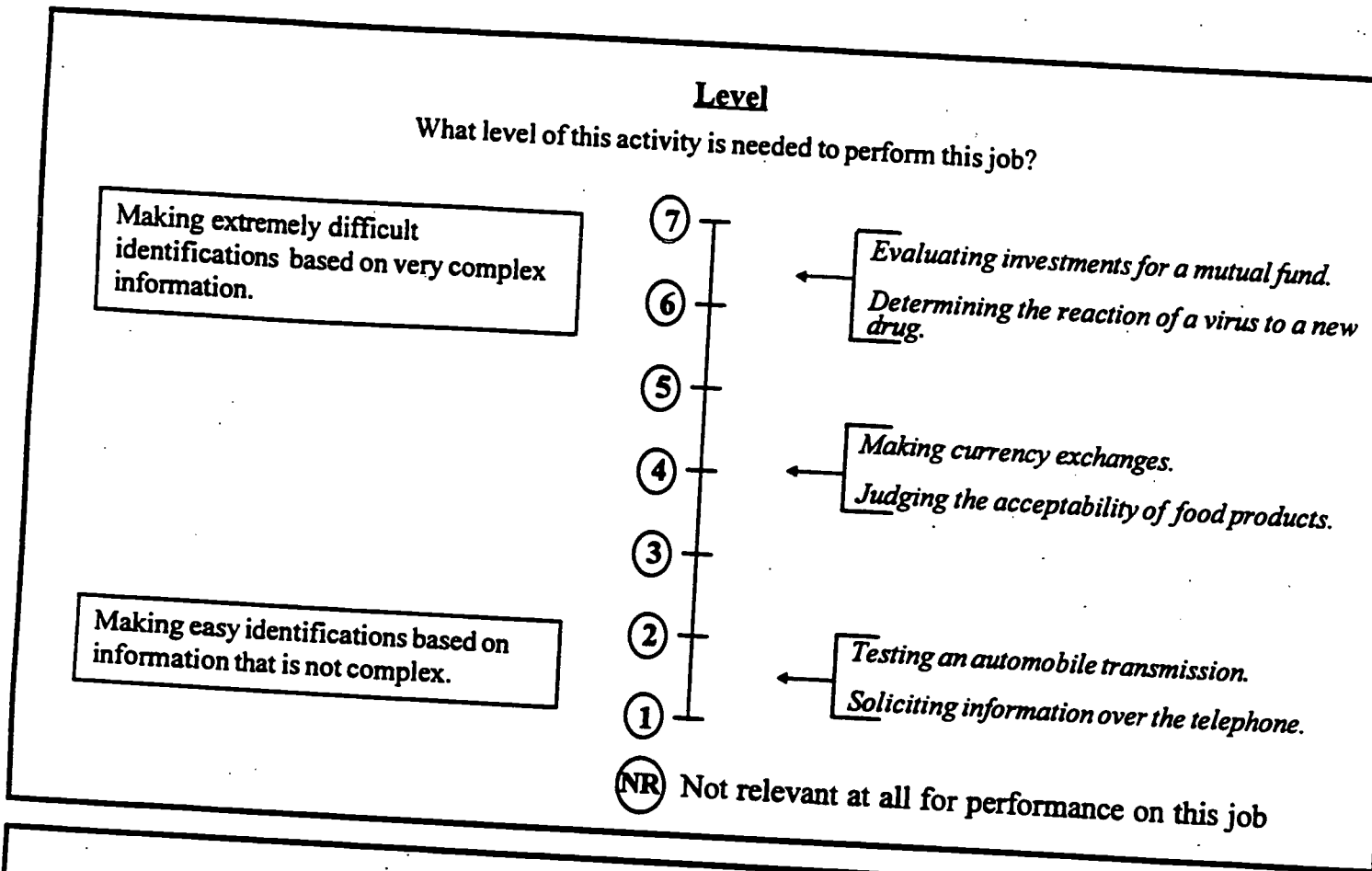
Frequency

How often is this activity performed on this job?



2. Identifying Objects, Actions, and Events

Identifying information received by making estimates or categorizations, recognizing differences or similarities, or sensing changes in circumstances or events.



3. Monitoring Processes, Materials, or Surroundings

Monitoring and reviewing information from materials, events, or the environment, often to detect problems or to find out when things are finished.

Level

What level of this activity is needed to perform this job?

Monitoring very complex processes, events, or circumstances.

Monitoring processes, events, or circumstances that are not complex.

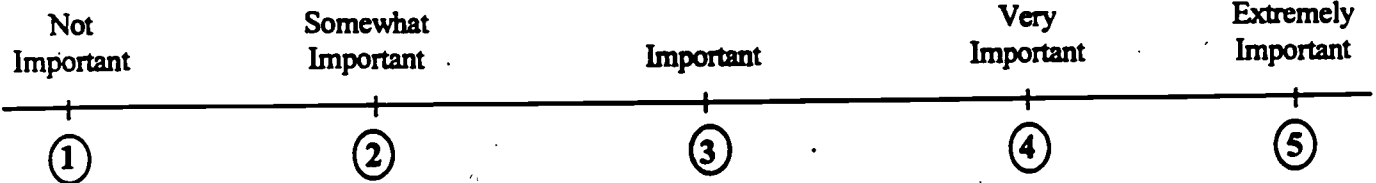
- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- Ⓝ NR

- ← *Watching aircraft instruments.*
- ← *Checking the status of a patient in critical medical care.*
- ← *Watching chemical reactions in laboratory test tubes.*
- ← *Testing electrical circuits.*
- ← *Checking to see if baking bread is done.*
- ← *Watching progress in digging a ditch.*

Ⓝ NR Not relevant at all for performance on this job

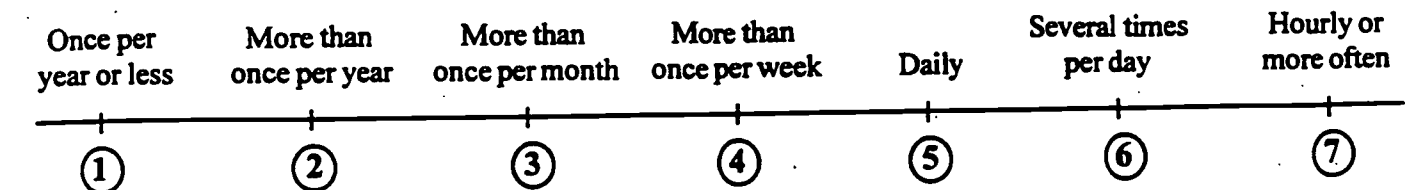
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



4. Inspecting Equipment, Structures, or Materials

Inspecting or diagnosing equipment, structures, or materials to identify the causes of errors or other problems or defects.

Level

What level of this activity is needed to perform this job?

Making inspections or diagnoses of a complex system that may have many interrelated parts, and determining whether conditions exist within a range of acceptable limits.

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Ⓝ Not relevant at all for performance on this job

← *Inspecting a nuclear reactor.*

← *Testing a space shuttle prior to takeoff.*

← *Testing computer circuits.*

← *Inspecting equipment in a chemical processing plant.*

← *Inspecting the production of paper cups.*

← *Checking that doors to a building are locked.*

Importance

How important is this activity to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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Frequency

How often is this activity performed on this job?

Once per year or less

More than once per year

More than once per month

More than once per week

Daily

Several times per day

Hourly or more often

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5. Estimating the Characteristics of Materials, Products, Events, or Information

Estimating sizes, distances, and quantities, or determining time, costs, resources, or materials needed to perform a work activity.

Level

What level of this activity is needed to perform this job?

Making very difficult estimates of characteristics, time, or resources where there is limited guidance or supporting information.

Making straightforward estimates of characteristics, time, or resources where there is considerable guidance and supporting information.

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NR

Not relevant at all for performance on this job

← Estimating the amount of natural resources that lie beneath the world's oceans.

← Estimating the time required to evacuate a sizable city in the event of a major disaster.

← Estimating the size of household furnishings to be crated.

← Determining the arrival time of cargo ships at a seaport.

Importance

How important is this activity to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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Frequency

How often is this activity performed on this job?

Once per year or less

More than once per year

More than once per month

More than once per week

Daily

Several times per day

Hourly or more often

1

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6. Judging the Qualities of Objects, Services, or Persons

Making judgments about or assessing the value, importance, or quality of things or people.

Level

What level of this activity is needed to perform this job?

Making very difficult judgments about the quality or importance of things or people for which there is limited guidance or supporting information.

Making easy judgments about the quality or importance of things or people when there are a lot of guidelines.

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Ⓝ Not relevant at all for performance on this job

← Trying to establish the value of a recently discovered ancient art work.

Determining the importance of a new mental health delivery program to the residents of a major city.

← Determining the value of property lost in a fire.

Judging the importance of a news story and where it should be located in a newspaper.

← Determining whether to remove a tree that has been damaged.

Judging the quality of writing paper.

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

7. Evaluating Information for Compliance to Standards

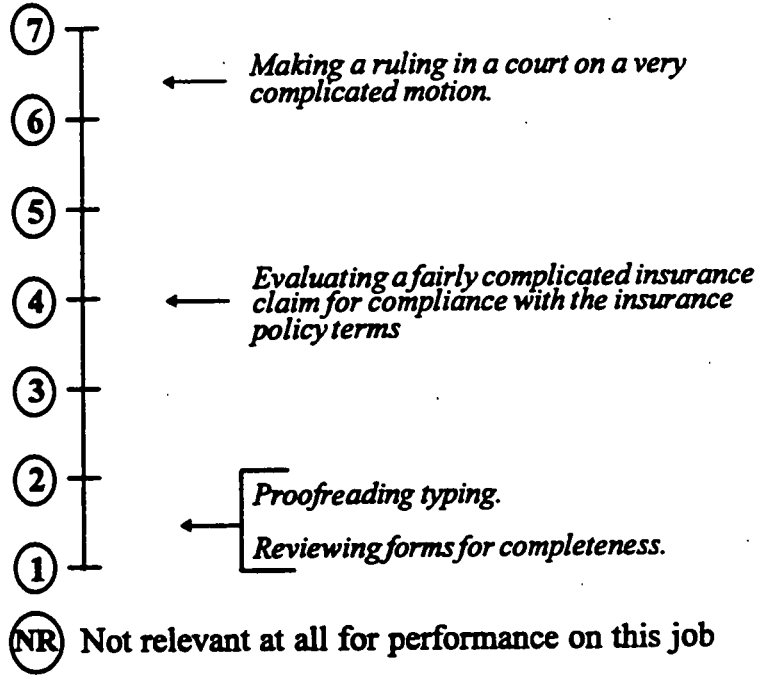
Evaluating information against a set of standards and verifying that it is correct.

Level

What level of this activity is needed to perform this job?

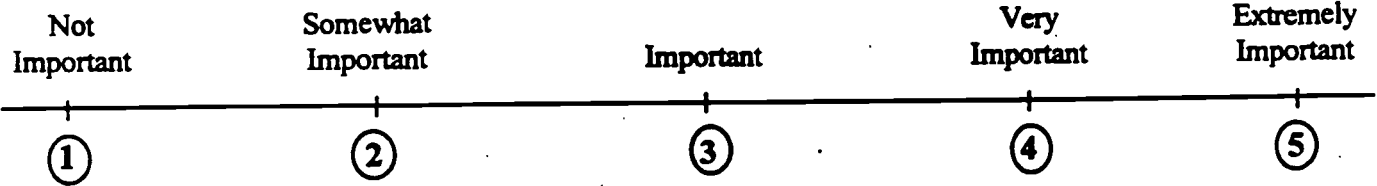
Evaluating complex information for compliance with regulations, laws, or technical criteria, where compliance decisions require significant interpretation or judgment.

Evaluating information against a simple criterion.



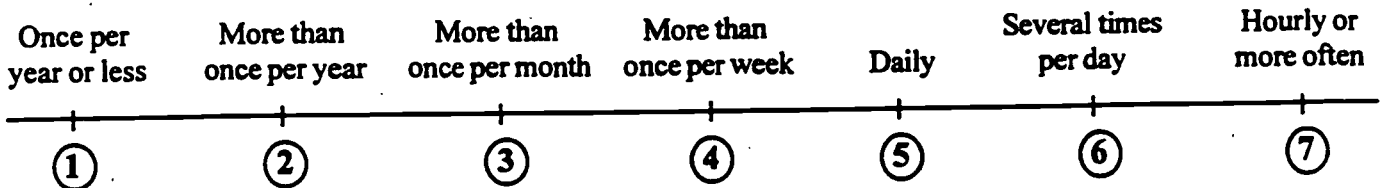
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



8. Processing Information

Compiling, coding, categorizing, calculating, tabulating, auditing, verifying, or processing information or data.

Level

What level of this activity is needed to perform this job?

Processing very different and complicated data or information, where there are several ways in which the information can be processed.

Processing data or information that is standardized and easy to understand, where there is only one way to process the information.

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(NR)

← Making a cost analysis for a nuclear power plant.

← Compiling data for a complex scientific report.

← Calculating the adjustments for insurance claims.

← Auditing quality control records for a drug manufacturer.

← Coding dental hygiene records.

← Tabulating costs of parcel deliveries.

(NR) Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

9. Analyzing Data or Information

Identifying underlying principles, reasons, or facts by breaking down information or data into separate parts.

Level

What level of this activity is needed to perform this job?

Analyzing very different and complicated data or information that can be used for making critical decisions.

Analyzing data or information that is easy to understand.

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Not relevant at all for performance on this job

Analyzing the statistical results for a scientific study of diseases.

Analyzing the cost of medical care services for all hospitals in a county.

Determining the interest costs for financing a new building.

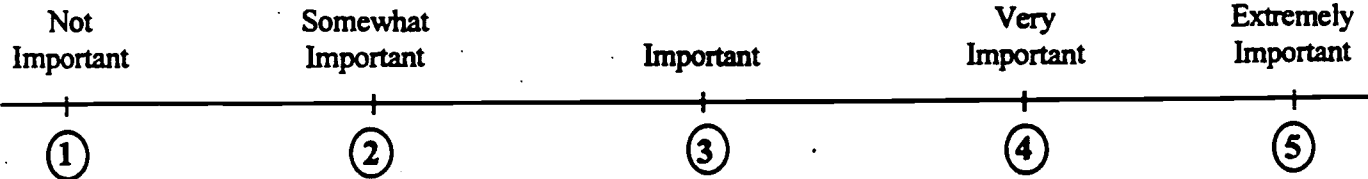
Determining the reasons for a loss in a retail store.

Selecting the correct optical power for a pair of contact lenses.

Determining the location of a lost order.

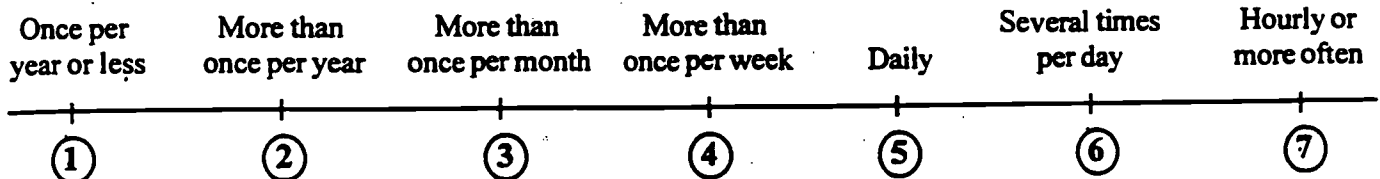
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



10. Making Decisions and Solving Problems

Combining, evaluating, and reasoning with information and data to make decisions and solve problems. These processes involve making decisions about the relative importance of information and choosing the best solution.

Level

What level of this activity is needed to perform this job?

Reaching conclusions after considering a large number of choices that are often ambiguous or abstract, where there are competing viewpoints and alternatives that must be considered before reaching final decisions and the solutions. Decided upon will have very significant impact.

Reaching conclusions after considering a few choices that are usually well defined, where there are a limited number of possible actions, and the decisions or solutions will have minor impact.

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Making the final decisions about a company's five-year strategic plan.

Determining the best way to perform brain surgery.

Deciding how to settle a moderate sized insurance claim.

Selecting the location for a major department store.

Routing truck deliveries.

Determining the meal selection for a cafeteria.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

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Frequency

How often is this activity performed on this job?

Once per year or less

More than once per year

More than once per month

More than once per week

Daily

Several times per day

Hourly or more often

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14. Scheduling Work and Activities

Scheduling events, programs, activities, as well as the work of others.

Level

What level of this activity is needed to perform this job?

Engaging in complex and difficult scheduling activities.

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NR

← *Scheduling a complex conference program with multiple, parallel sessions.*

← *Preparing the work schedule for salesclerks in a large retail store.*

← *Making appointments for patients, using a predetermined schedule.*

Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

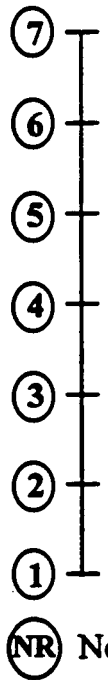
16. Performing General Physical Activities

Performing physical activities that require moving one's whole body, such as in climbing, lifting, balancing, walking, stooping, where the activities often also require considerable use of the arms and legs, such as in the physical handling of materials.

Level
What level of this activity is needed to perform this job?

Making repetitive and often fatiguing extensive use of the whole body in completing work activities that are done with or without the use of tools.

Making non-fatiguing use of the whole body in completing work activities that are done with or without the use of tools.

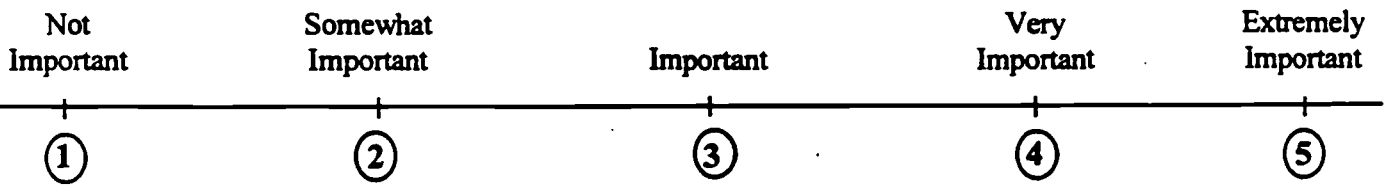


- ← 7 Climbing up and down poles to install electric wires.
- ← 6 Walking a mail delivery route.
- ← 4 Painting the outside of a house.
- ← 4 Caring for patients in a hospital.
- ← 2 Walking to and from work stations in a small office.
- ← 1 Taking inventory of small parts.

(NR) Not relevant at all for performance on this job

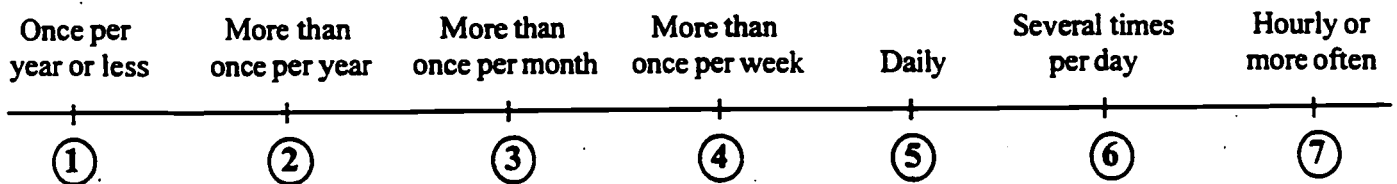
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



17. Handling and Moving Objects

Using one's own hands and arms in handling, installing, forming, positioning, and moving materials, or in manipulating things, including the use of keyboards.

Level

What level of this activity is needed to perform this job?

Using one's hands and arms to do the same functions almost continually.

Making little use of one's hands and arms.

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NR

Not relevant at all for performance on this job

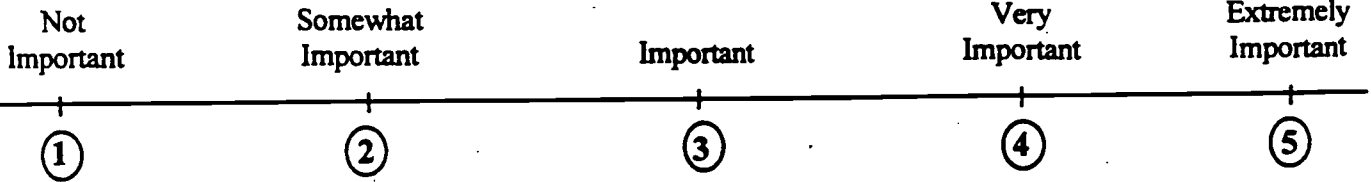
Continually sorting materials into bins.
Loading boxes on an assembly line.

Arranging books in a library.
Positioning materials in a machine.

Making minor adjustments to electronic testing equipment.
Changing settings on office reproduction machines.

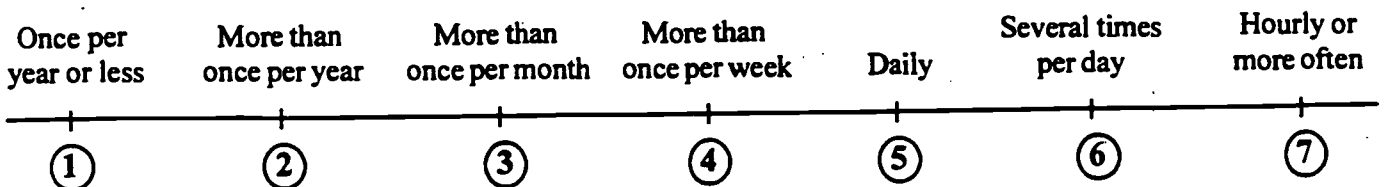
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



19. Interacting with Computers

Controlling computer functions by using programs, setting up functions, writing software, or otherwise communicating with computer systems.

Level

What level of this activity is needed to perform this job?

Using computers to develop very complex, high speed data linkages and operating systems.

Using computers to produce standard correspondence, graphic materials, and business related information.

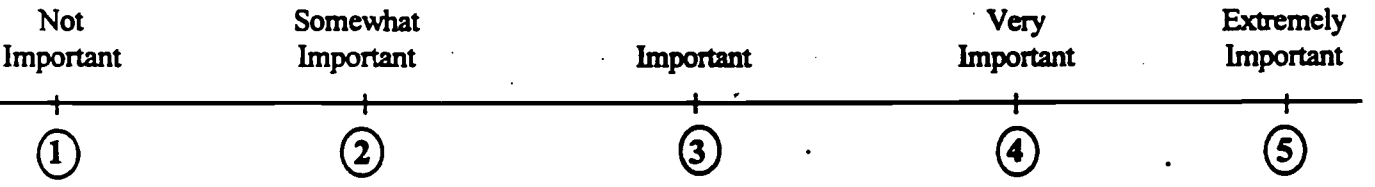


- ← *Setting up a new computer system for a large, multi-national company.*
- ← *Programming a high speed computer to evaluate scientific information.*
- ← *Writing software to keep track of parts in inventory.*
- ← *Setting up the payroll on computer for a large employer.*
- ← *Key entering employee personnel information.*
- ← *Editing correspondence on word processing equipment.*

(NR) Not relevant at all for performance on this job

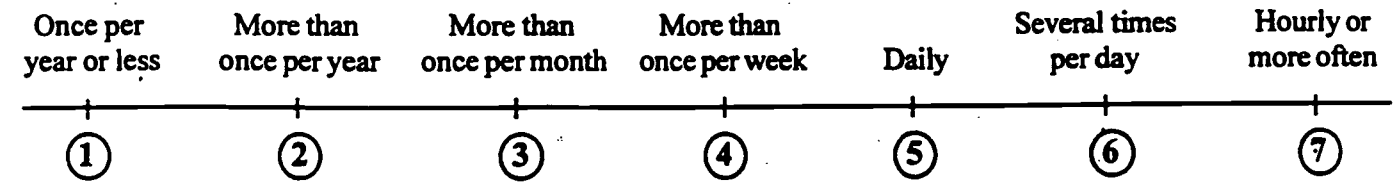
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



20. Operating Vehicles, Mechanized Devices, or Equipment

Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

Level

What level of this activity is needed to perform this job?

Operating equipment or vehicles that are very difficult to run.

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Ⓝ Not relevant at all for performance on this job

← *Hovering a helicopter in a strong wind.*

← *Running a power shovel in very hard or very soft ground.*

← *Operating a firefighting pumper truck.*

← *Driving an eighteen wheel moving van.*

← *Driving a car.*

← *Operating a grass mowing machine.*

Operating equipment or vehicles that are easy to run.

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

21. Drafting, Laying-Out, and Specifying Technical Devices, Parts, or Equipment

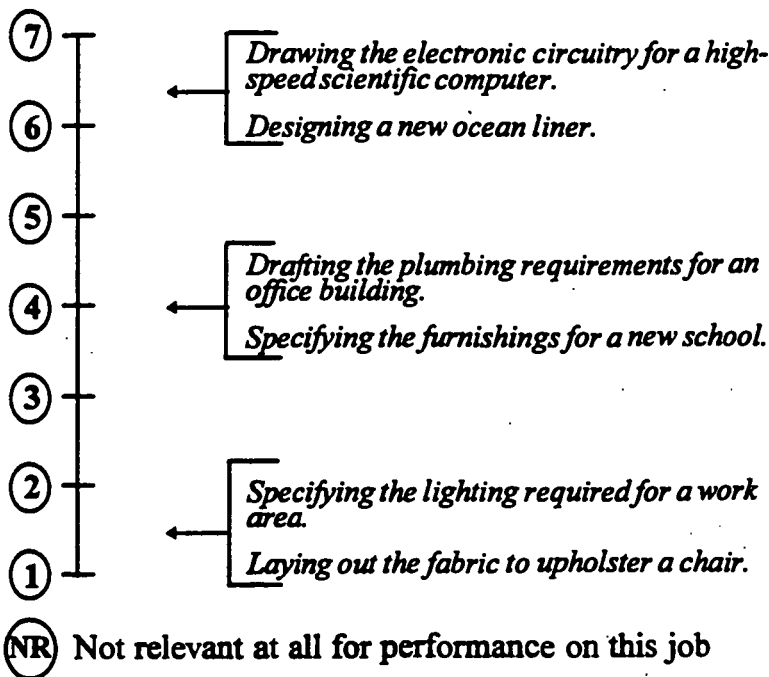
Providing documentation, detailed instructions, drawings, or specifications to inform others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.

Level

What level of this activity is needed to perform this job?

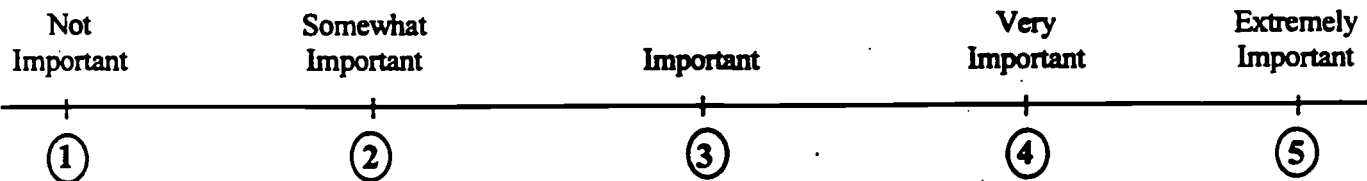
Drafting and specifying the components or technical relationships for complicated devices, parts, or equipment.

Drafting or specifying the components or technical relationships for devices, parts, or equipment that are easily understood.



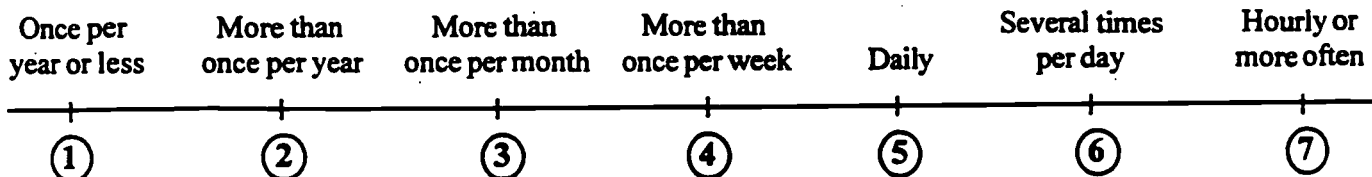
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



22. Implementing Ideas, Programs, Systems, or Products

Conducting or carrying out work procedures and activities in accord with one's own ideas or information provided through directions/instructions for purposes of installing, modifying, preparing, delivering, constructing, integrating, finishing, or completing programs, systems, structures, or products.

Level

What level of this activity is needed to perform this job?

Performing highly complex and very difficult work activities with very limited guidelines to follow.

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Ⓝ Not relevant at all for performance on this job

← Performing surgery in a rarely explored area of the brain.

← Building a health care system within a third world country.

← Building an electrical distribution system for a new industrial and commercial park.

← Completing the installation of a new radar guidance system for commercial aircraft.

← Setting up a retail store display.

← Installing new highway signs.

Performing activities that have clear cut directions and are easy to carry out.

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

23. Repairing and Maintaining Mechanical Equipment

Fixing, servicing, aligning, setting up, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.

Level

What level of this activity is needed to perform this job?

Performing complex or non-routine repair, maintenance, or adjustment of mechanical equipment, often involving overhauls or rebuilding.

Performing straightforward repair, maintenance, or adjustment of mechanical equipment using established, easy to understand procedures.

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NR

Rebuilding a high-performance engine.
Overhauling a power plant turbine.

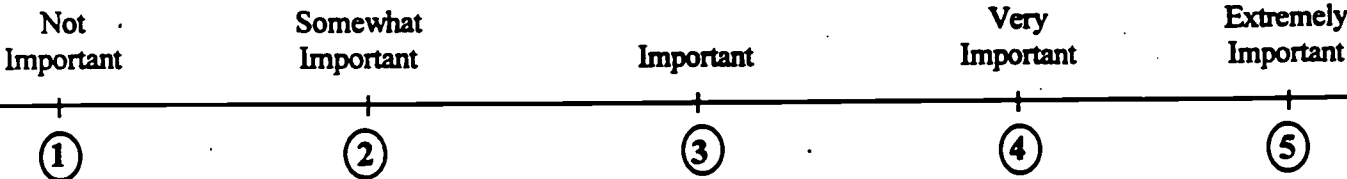
Removing and replacing broken parts in an automobile transmission.
Adjusting a grandfather clock.

Making routine preventive maintenance to a door lock.
Making simple, external adjustments to a door hinge with ordinary hand tools.

NR Not relevant at all for performance on this job

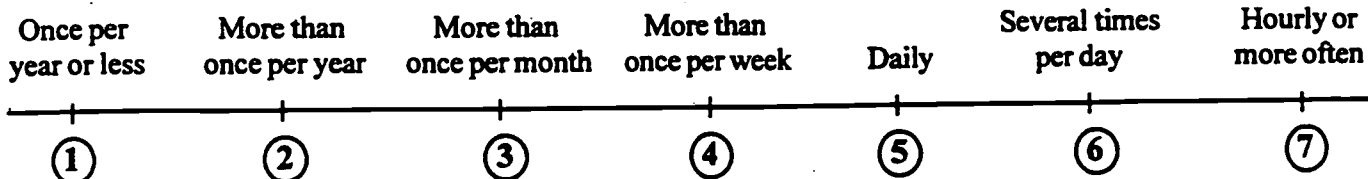
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



24. Repairing and Maintaining Electronic Equipment

Fixing, servicing, adjusting, regulating, calibrating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.

Level

What level of this activity is needed to perform this job?

Performing complex or non-routine repair, maintenance, or adjustment of electronic equipment, where repairs are often made to complex internal components or circuitry.

Performing straightforward repair, maintenance, or adjustment of electronic devices or equipment using established, easy to understand procedures.

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Making repairs or replacements of electrical components on circuit boards.

Using highly complex electronic test equipment, (e.g., meters, oscilloscopes) to calibrate and fine-tune electronic equipment.

Making repairs that consist primarily of swapping circuit boards among pieces of electronic equipment.

Using electronic test equipment, (e.g., meters) to calibrate and fine tune circuits and components.

Performing simple external adjustments to a television using knobs or dials, without the use of electronic test equipment.

(NR) Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

25. Documenting/ Recording Information

Entering, transcribing, recording, storing, or maintaining information in either written form or by electronic/magnetic recording.

Level

What level of this activity is needed to perform this job?

Documenting or recording very complex information using new, unstandardized procedures.

Documenting or recording straightforward information using predetermined forms and procedures.

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Ⓝ Not relevant at all for performance on this job

← Keeping records about the progress of a rare disease in a third world country.

← Maintaining information about the use of orbiting satellites for private industry communications.

← Recording the day shift operating results for a nuclear power generating plant.

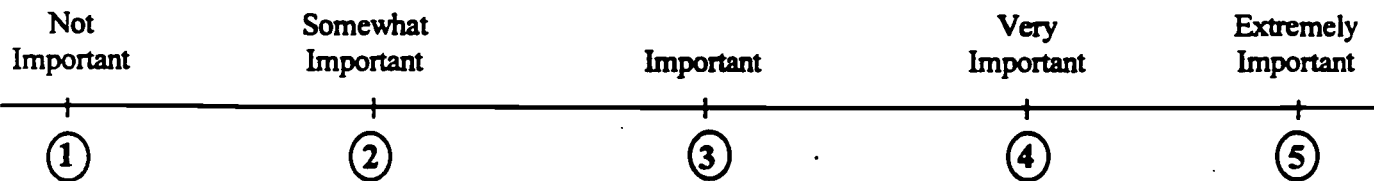
← Documenting the results of a major crime scene investigation.

← Recording the weights of trucks using the highways.

← Documenting the contents of rail cargo.

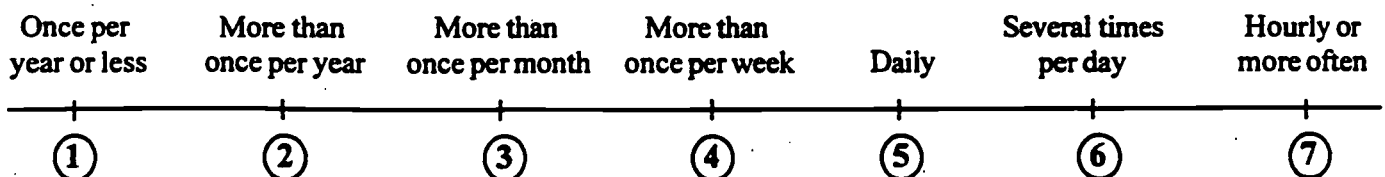
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



26. Interpreting the Meaning of Information for Others

Translating or explaining what information means and how it can be understood or used to support responses or feedback to others.

Level

What level of this activity is needed to perform this job?

Making very difficult interpretations of information with limited, if any, guidance to follow.

Making easy interpretations of information with a high degree of guidance to follow.

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← *Translating the inscriptions of a just discovered tribe of people living in isolation.*

← *Interpreting the results of experiments in quantum physics so they can be understood by most people.*

← *Translating a presentation made at an international scientific conference from French to English.*

← *Interpreting how foreign tax laws apply to U.S. exports.*

← *Interpreting the results of a blood pressure reading.*

← *Explaining how to use a bus schedule.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

27. Communicating with Supervisors, Peers, or Subordinates

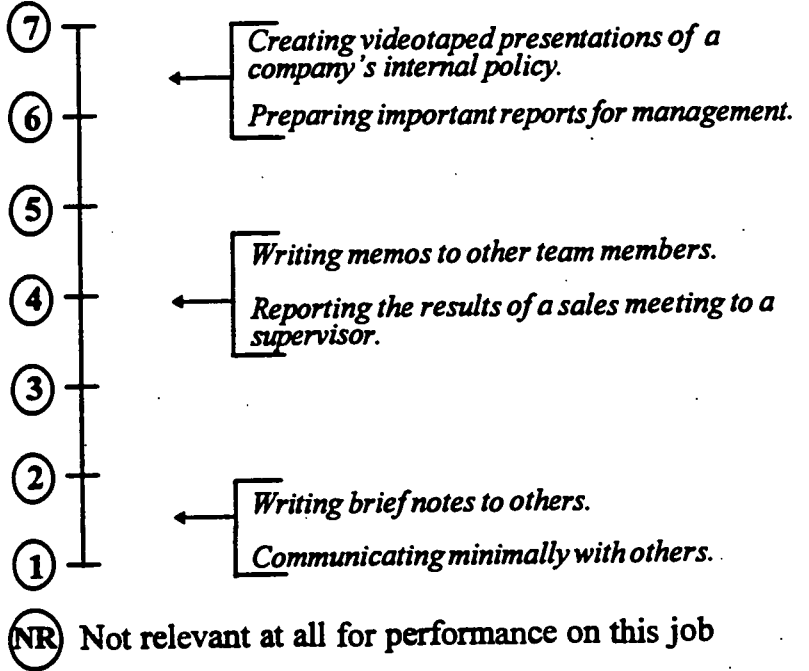
Providing information to supervisors, fellow workers, and subordinates. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.

Level

What level of this activity is needed to perform this job?

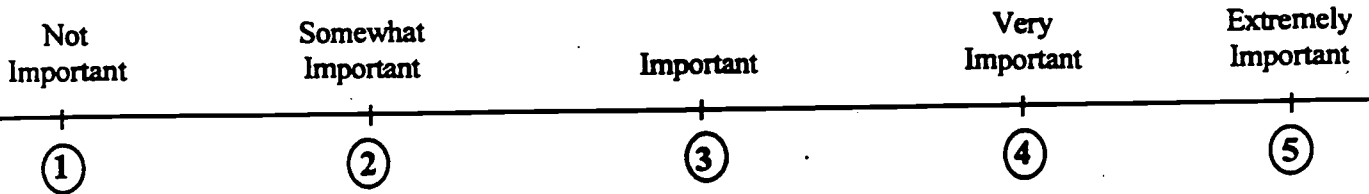
Providing complex oral and written communications to others in the organization.

Providing straightforward oral or written communications to others in the organization.



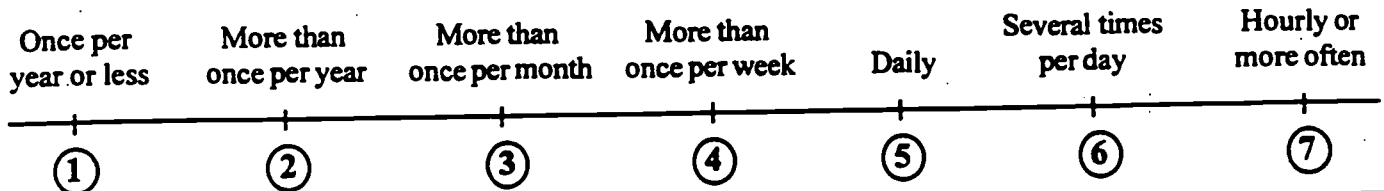
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



28. Communicating with Persons Outside the Organizations

Communicating with persons outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.

Level

What level of this activity is needed to perform this job?

Presenting complex oral and written communications to persons outside the organization.

Presenting routine and simple oral and written communications to persons outside the organization.

⑦

⑥

⑤

④

③

②

①

NR

Preparing or delivering press releases.

Presenting highly technical information to customers.

Making standard presentations about available services.

Writing ads for job openings in the organization.

Having little contact with individuals outside the organization.

NR Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

29. Establishing and Maintaining Interpersonal Relationships

Developing constructive and cooperative working relationships with others.

Level

What level of this activity is needed to perform this job?

Developing very good interpersonal relationships with highly diverse individuals or stakeholders in difficult situations.

Developing very few working relationships with others.

⑦

⑥

⑤

④

③

②

①

Ⓝ

Ⓝ Not relevant at all for performance on this job

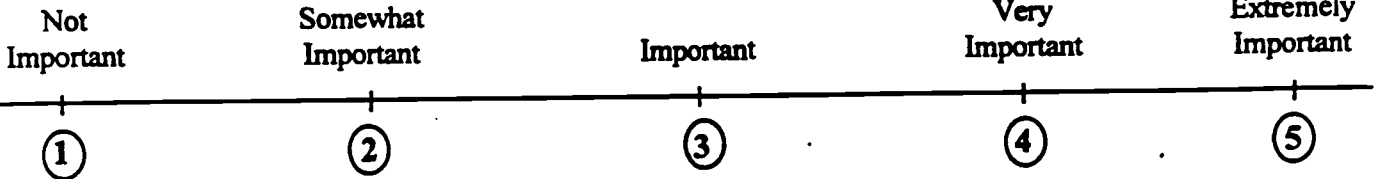
← Working with and gaining cooperation from a group of multinational/multicultural executives, initially hostile to your organization.

← Getting along well and maintaining good working relationships with almost all co-workers and clients.

← Exchanging greetings with a co-worker.

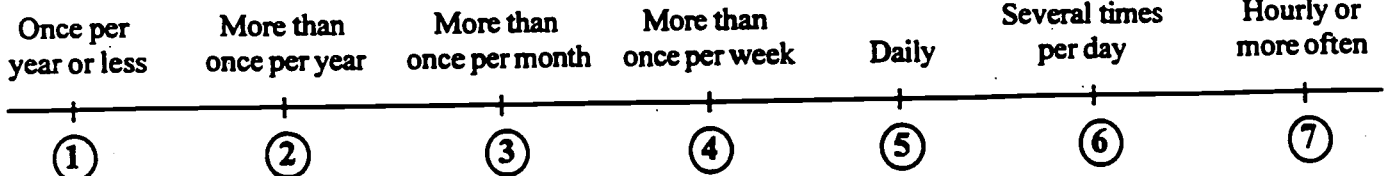
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



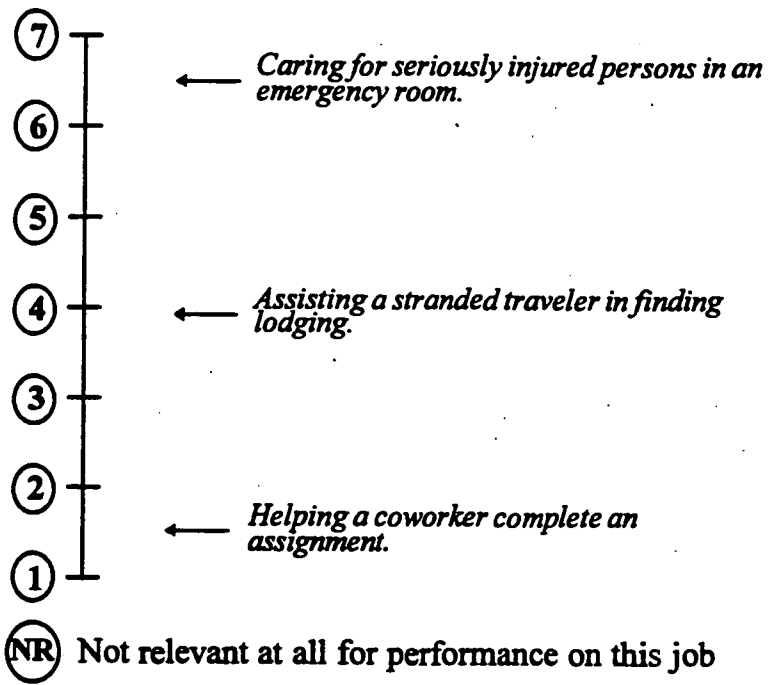
30. Assisting and Caring for Others

Providing assistance or personal care to others.

Level
What level of this activity is needed to perform this job?

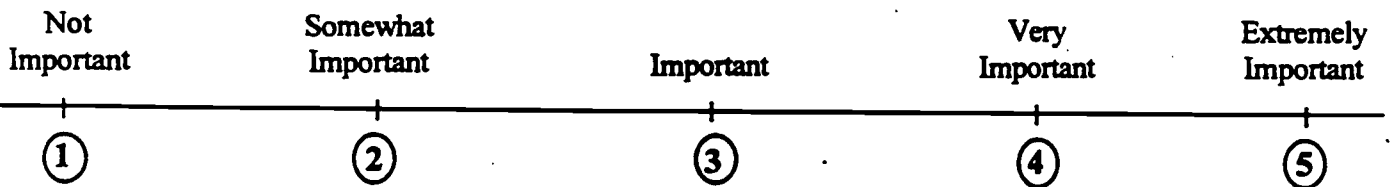
Providing care or assistance to others in highly stressful or difficult situations.

Needing to provide minimal help or assistance to others.



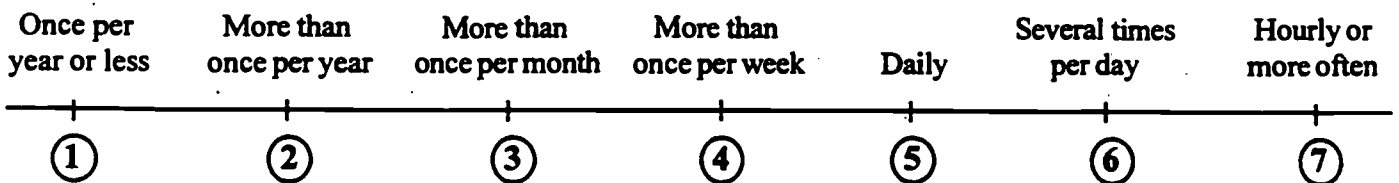
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



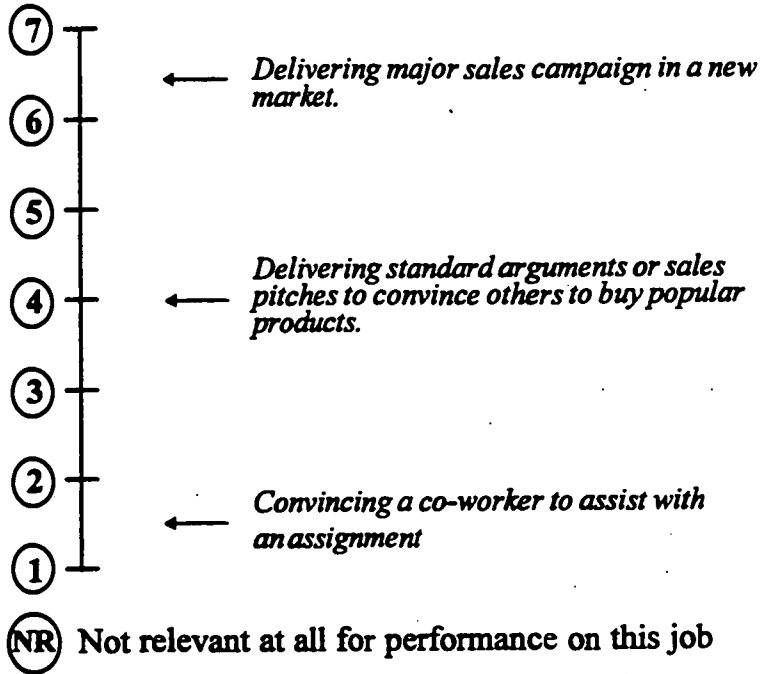
31. Selling or Influencing Others

Convincing others to buy merchandise/goods, or otherwise changing their minds or actions.

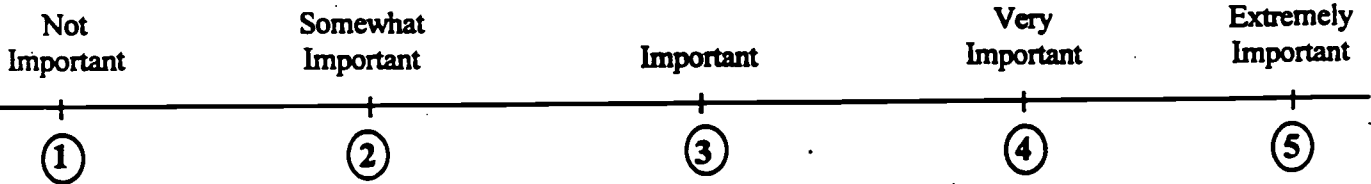
Level
What level of this activity is needed to perform this job?

Doing a lot of high-level persuading to accomplish work objectives, involving persuading a very difficult to convince audience.

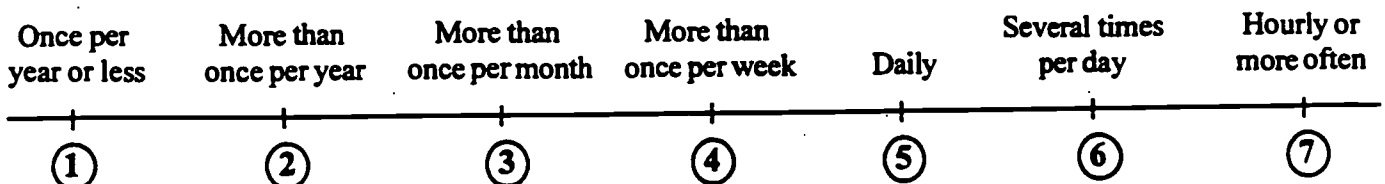
Doing little persuading to accomplish work objectives, because there is little need to convince others in any area.



Importance
How important is this activity to performance on this job?



Frequency
How often is this activity performed on this job?



32. Resolving Conflicts and Negotiating with Others

Handling complaints, arbitrating disputes, and resolving grievances, or otherwise negotiating with others.

Level

What level of this activity is needed to perform this job?

Handling complaints and negotiations in very challenging situations, involving complex matters and significant conflict and pressure.

⑦

⑥

⑤

④

③

②

①

(NR)

← *Negotiating a major labor-management contract.*

← *Getting two subordinates to agree on their vacation schedules.*

← *Apologizing to a customer who has complained about being kept waiting too long.*

(NR) Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

33. Performing For or Working Directly With the Public

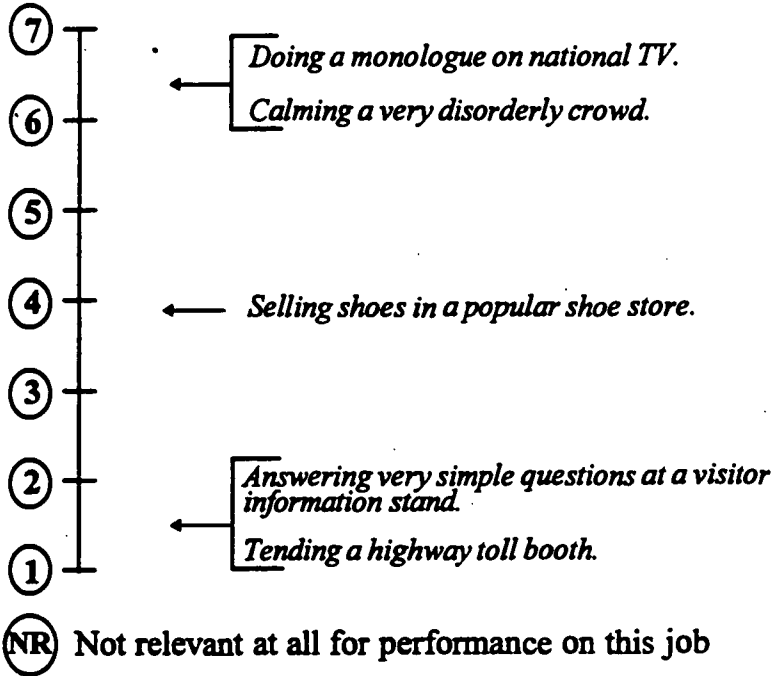
Performing for people or dealing directly with the public, including serving persons in restaurants and stores, and receiving clients or guests.

Level

What level of this activity is needed to perform this job?

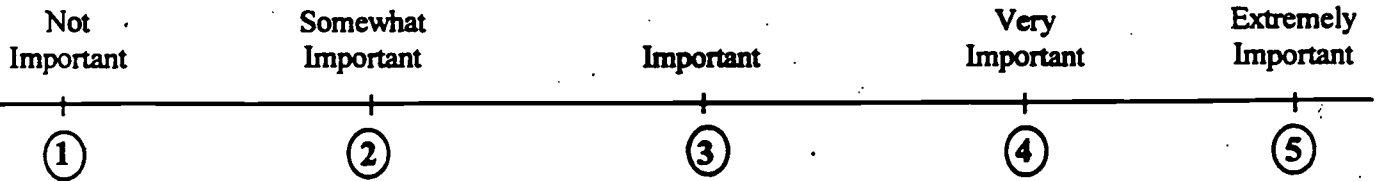
Handling interactions with the public, where the audience is hard to please or other conflict is involved.

Having little interaction with the public, or needing to have only brief interactions.



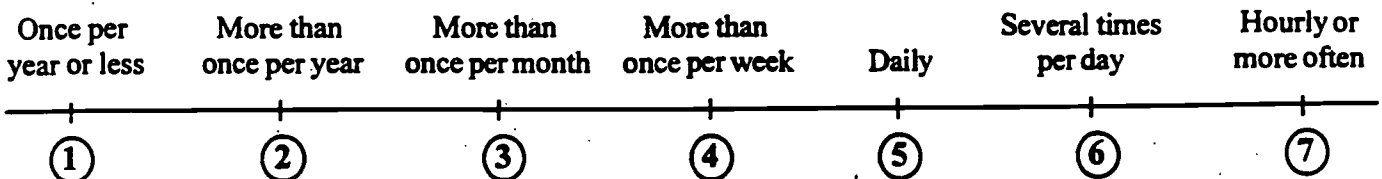
Importance

How important is this activity to performance on this job?



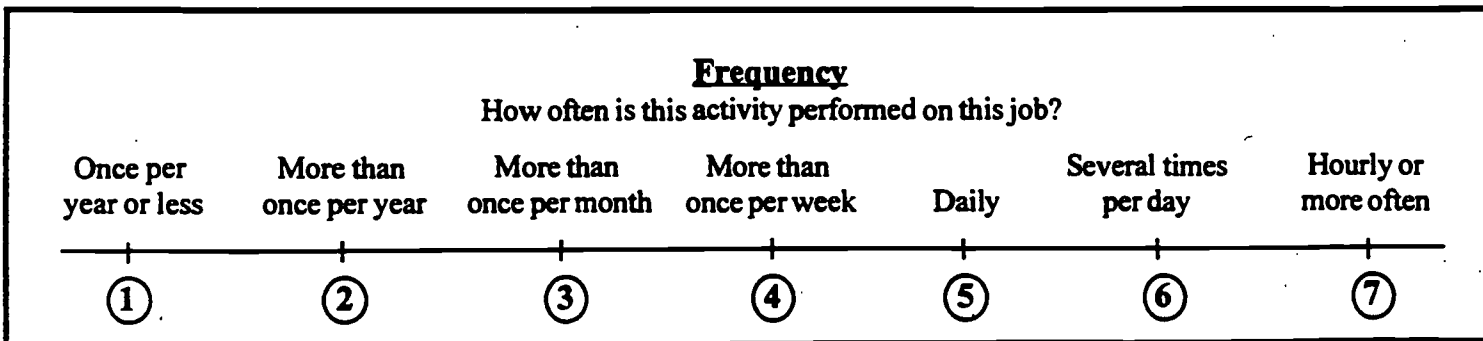
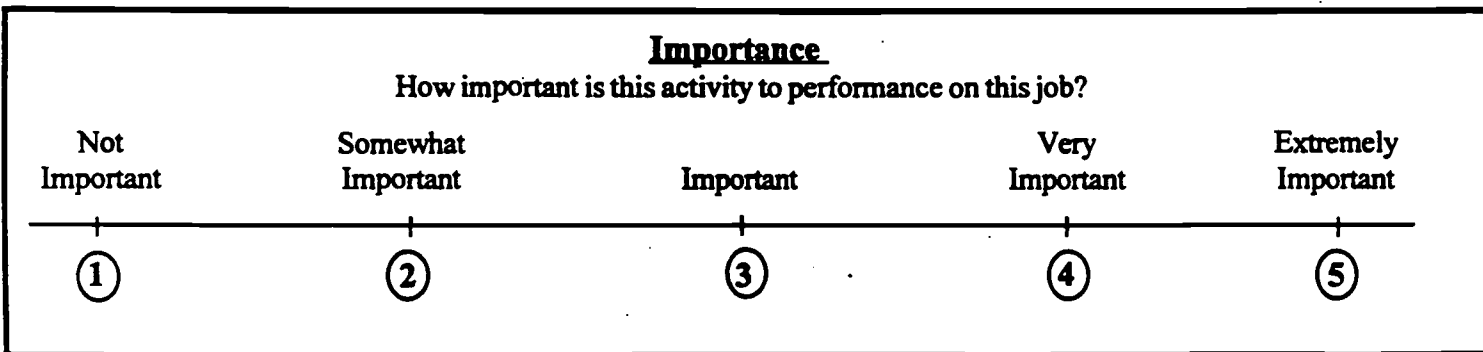
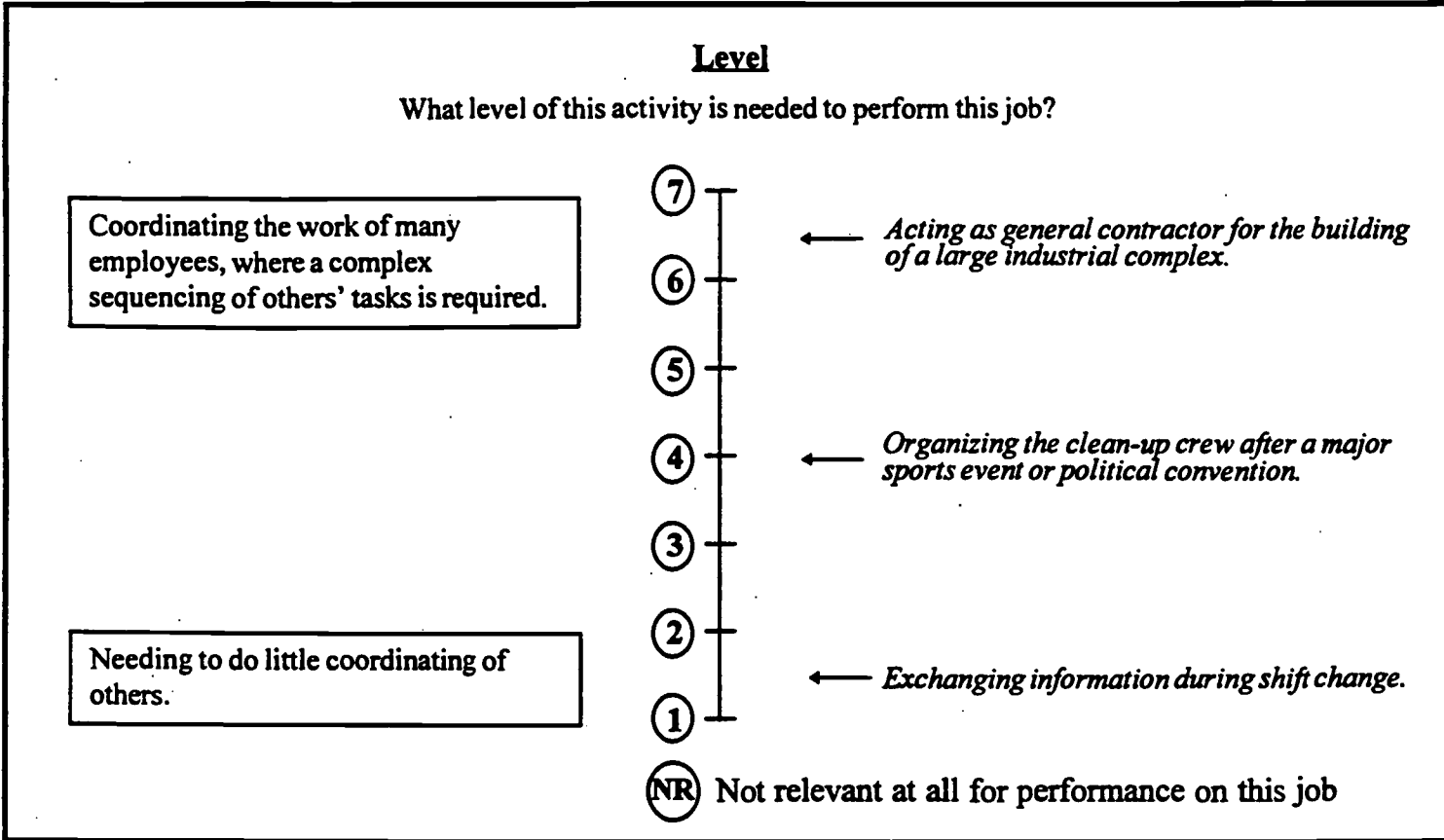
Frequency

How often is this activity performed on this job?



34. Coordinating the Work and Activities of Others

Coordinating members of a work group to accomplish tasks.



35. Developing and Building Teams

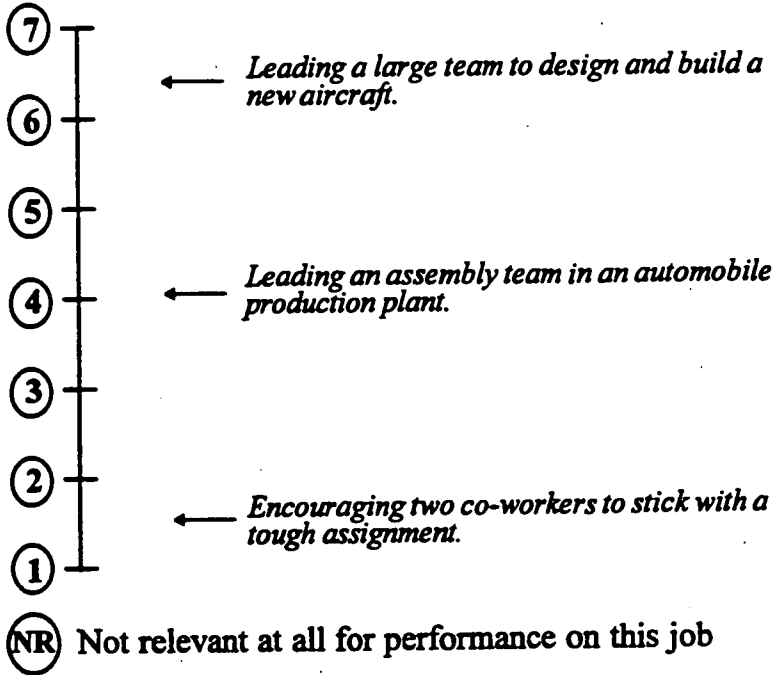
Encouraging and building mutual trust, respect, and cooperation among team members.

Level

What level of this activity is needed to perform this job?

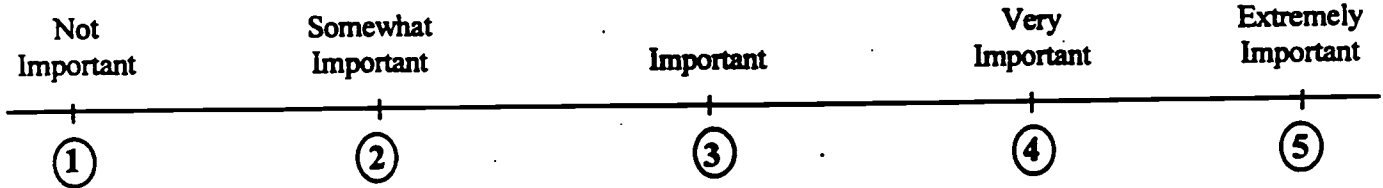
Managing large teams and building cooperation among diverse team members toward accomplishment of highly complex or poorly defined activities/projects.

Doing little team building.



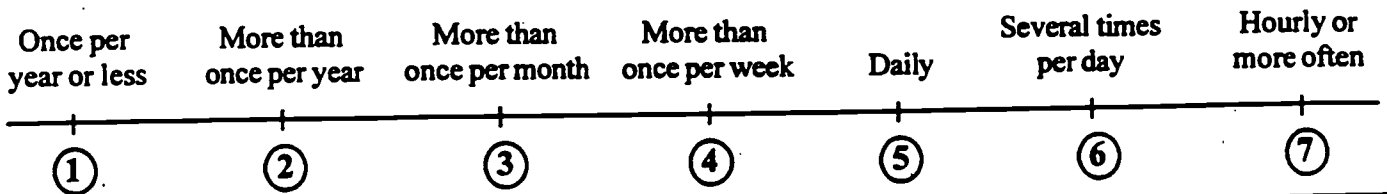
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



36. Teaching Others

Identifying educational needs, developing formal training programs or classes, and teaching or instructing others.

Level

What level of this activity is needed to perform this job?

Teaching and explaining difficult tasks, concepts, or material, and conducting complex training.

Doing little training or educating of others.

⑦

⑥

⑤

④

③

②

①

Ⓝ

← Developing and conducting training programs for a medical school.

← Teaching a social sciences course to high school students.

← Giving co-workers brief instructions on a simple procedural change.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Frequency

How often is this activity performed on this job?

Once per year or less

More than once per year

More than once per month

More than once per week

Daily

Several times per day

Hourly or more often

①

②

③

④

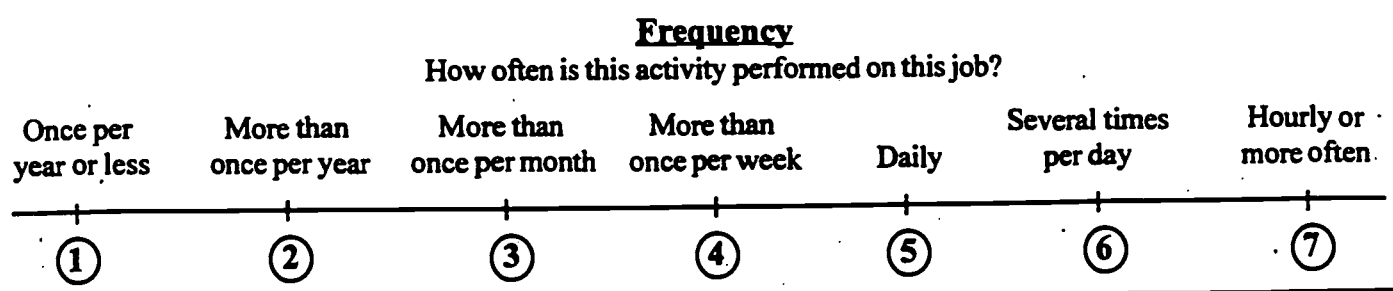
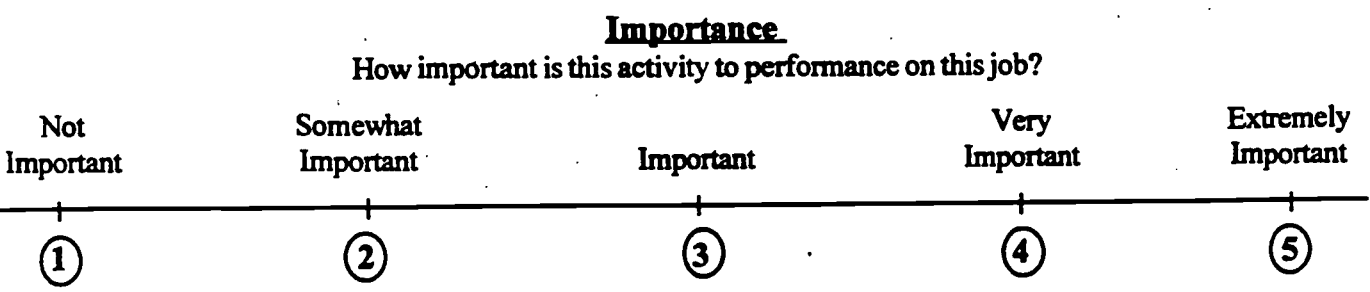
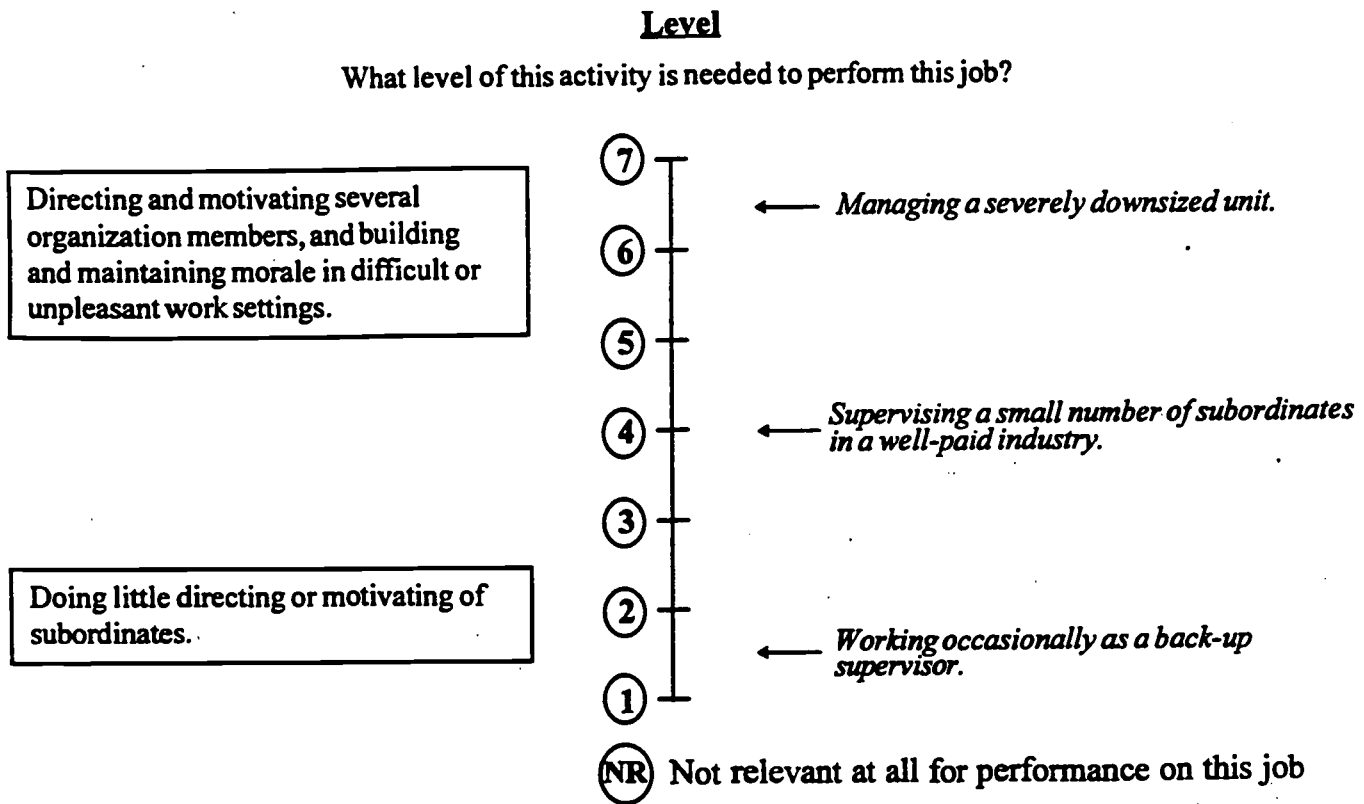
⑤

⑥

⑦

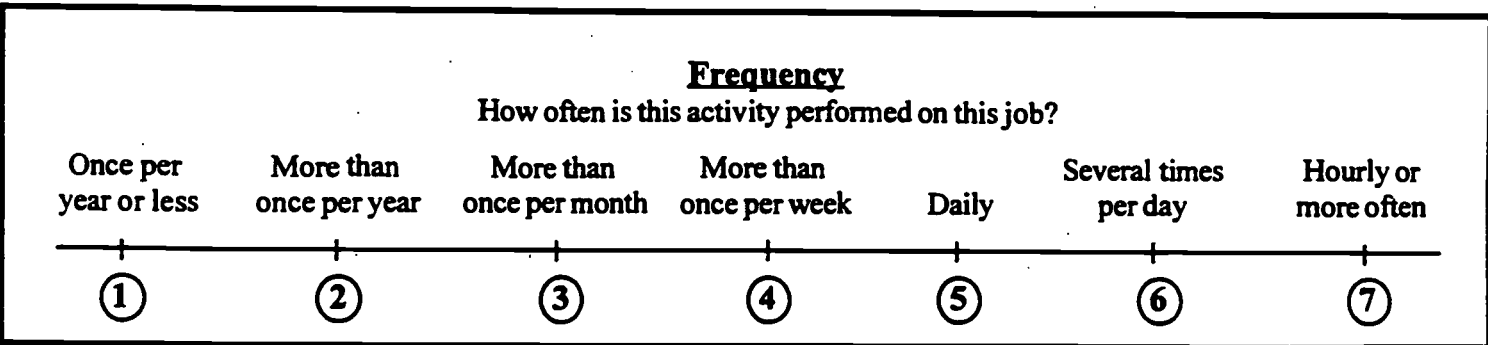
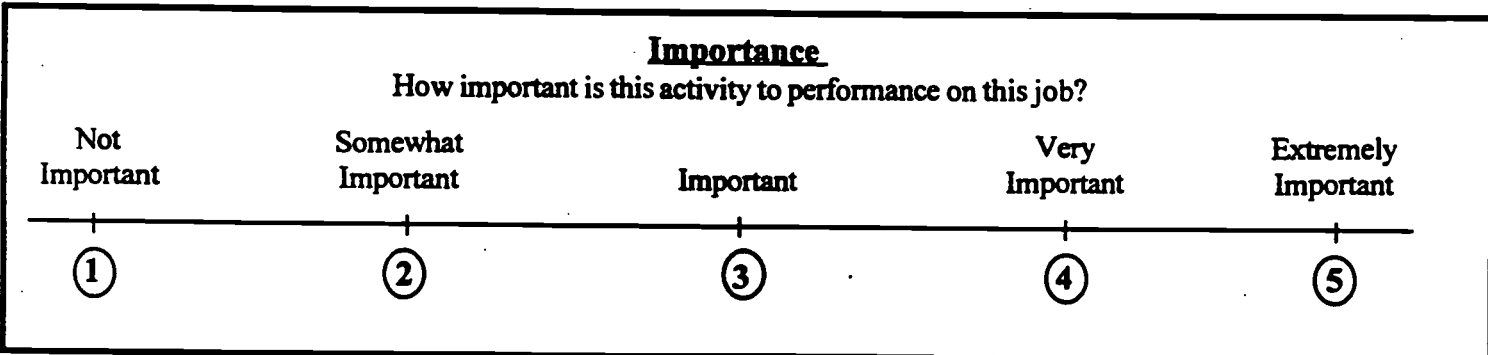
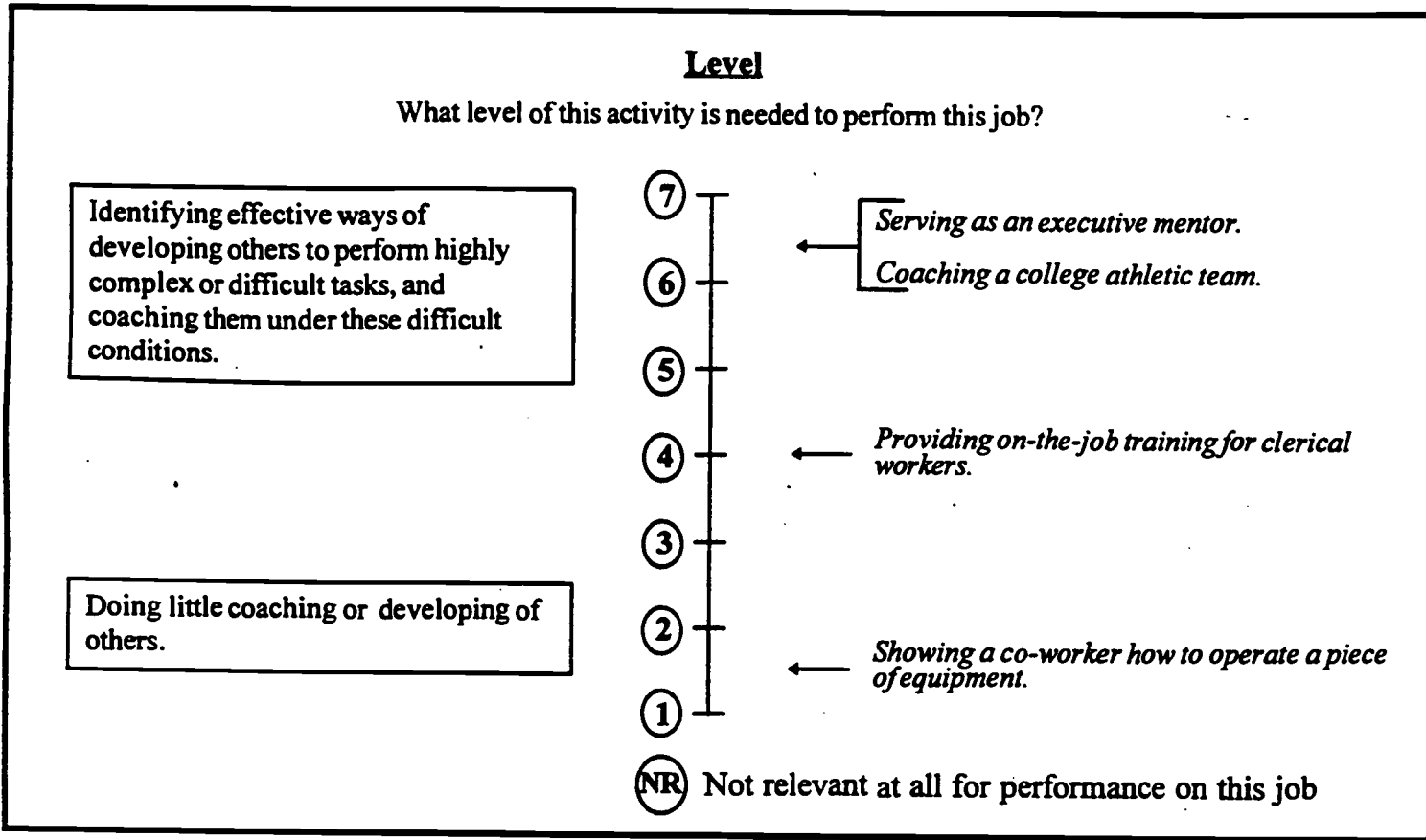
37. Guiding, Directing, and Motivating Subordinates

Providing guidance and direction to subordinates, including setting performance standards and monitoring subordinates.



38. Coaching and Developing Others

Identifying developmental needs of others and coaching or otherwise helping others to improve their knowledge or skills.



39. Providing Consultation and Advice to Others

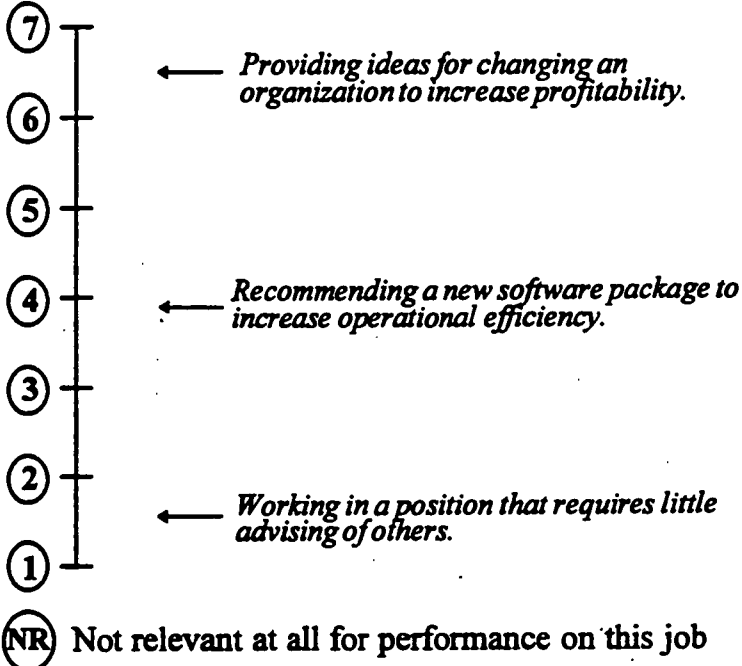
Providing consultation and expert advice to management or other groups on technical, systems-related, or process-related topics.

Level

What level of this activity is needed to perform this job?

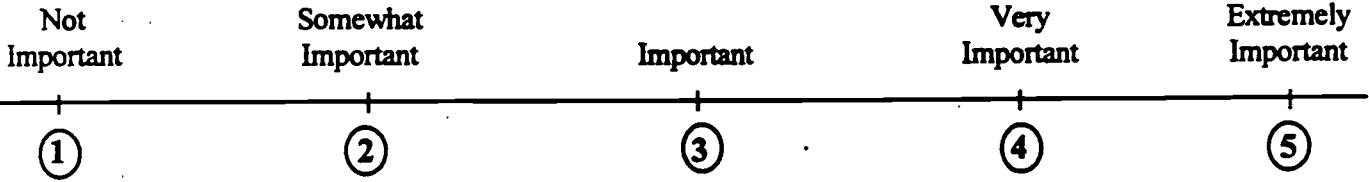
Providing expert guidance on complex matters regarding the design, development, or implementation of major programs.

Providing little advice or consultation to others.



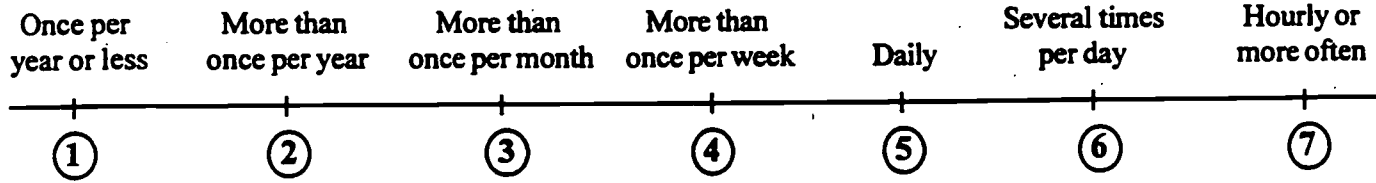
Importance

How important is this activity to performance on this job?



Frequency

How often is this activity performed on this job?



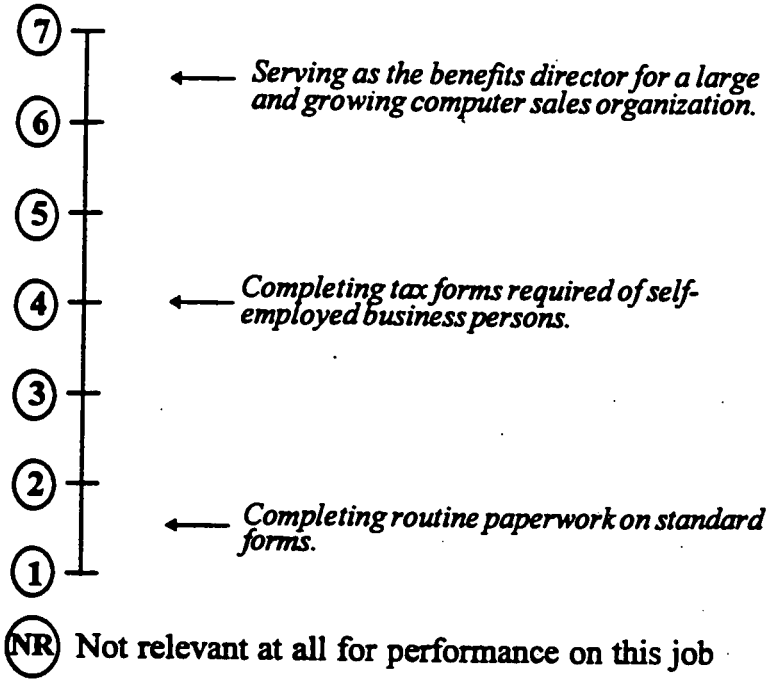
40. Performing Administrative Activities

Approving requests, handling paperwork, and performing day-to-day administrative tasks.

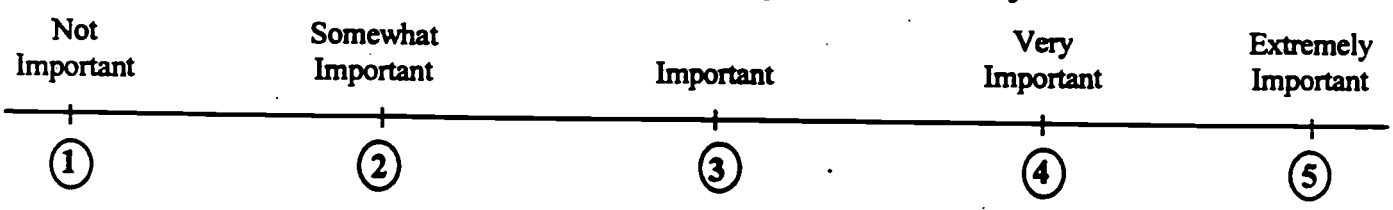
Level
What level of this activity is needed to perform this job?

Overseeing administrative activities for a large workforce, with a complex set of administrative procedures.

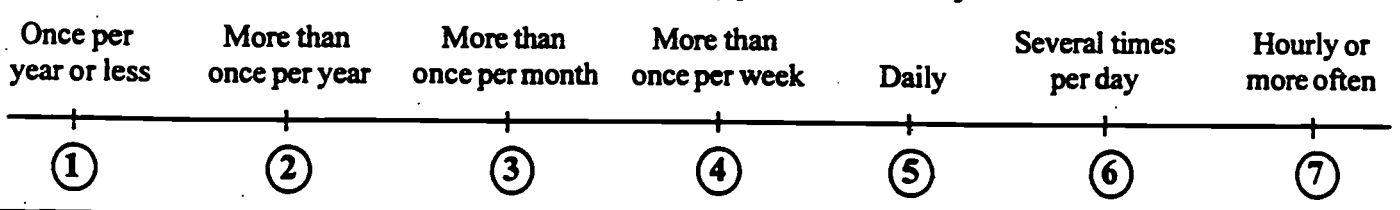
Doing very straightforward administrative activities.



Importance
How important is this activity to performance on this job?



Frequency
How often is this activity performed on this job?



41. Staffing Organizational Units

Recruiting, interviewing, selecting, hiring, and promoting persons for an organization.

Level

What level of this activity is needed to perform this job?

Overseeing the staff of a large and diverse workforce, with complex staffing needs.

Doing very straightforward staffing activities.

⑦

⑥

⑤

④

③

②

①

(NR)

← Directing a large recruitment and employment testing program for an international manufacturing organization.

← Interviewing candidates for a sales position and making a hiring recommendation.

← Working in a position that has minimal staffing requirements.

Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

Frequency

How often is this activity performed on this job?

Once per year or less

More than once per year

More than once per month

More than once per week

Daily

Several times per day

Hourly or more often

①

②

③

④

⑤

⑥

⑦

42. Monitoring and Controlling Resources

Monitoring and controlling resources and overseeing the spending of money.

Level

What level of this activity is needed to perform this job?

Monitoring and controlling a large number of resources, including managing a large budget.

⑦

⑥

⑤

④

③

②

①

← *Serving as a financial executive in charge of a large company's budget.*

← *Working as a chef responsible for ordering food for the menu.*

← *Working as a housekeeper responsible for keeping track of the linens.*

(NR) Not relevant at all for performance on this job

Importance

How important is this activity to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Frequency

How often is this activity performed on this job?

Once per year or less	More than once per year	More than once per month	More than once per week	Daily	Several times per day	Hourly or more often
①	②	③	④	⑤	⑥	⑦

APPENDIX E

WORK CONTEXT QUESTIONNAIRE

**Work Context
Questionnaire**

Instructions for Making Work Context Ratings

In this questionnaire you will be asked about your working conditions and the context in which you work. These questions are about your work setting and its possible hazards, the pace of your work, and your dealings with other people.

Read each question carefully. Read the rating scale or response options that follow the question. Mark through the number or letter for the response that best describes your job. In doing so, consider your job over a reasonable time period as it would be related to your work, such as a work day or week. You may wish to consider your work over a longer period (such as a month or more) if your job changes a great deal from week to week or is seasonal in nature.

Turn the page to begin the Work Context Questionnaire.

1. Formality of Communication

How formal is most of the job-related information that the worker gives and receives on this job?

<u>Very Informal</u> Casual conversation, or communication on a personal basis							<u>Very Formal</u> In writing as formal reports or official statements, or orally in formal presentations
①	②	③	④	⑤	⑥	⑦	

2. Communication Methods

How frequently does this job require the use of the following communication methods?

a. Face-to-Face (individuals)

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

b. Face-to-Face (group/team meetings)

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

c. Public Speaking

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

2. Communication Methods (continued)

How frequently does this job require the use of the following communication methods?

d. Video Conference

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

e. Voice Mail

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

f. Telephone

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

2. Communication Methods (continued)

How frequently does this job require the use of the following communication methods?

g. Interactive (same-time) computer communication

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

h. Electronic Mail

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

i. Handwritten Notes or Messages

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

2. Communication Methods (continued)

How frequently does this job require the use of the following communication methods?

j. Letters and Memos

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

k. Written Reports

Never or less than once a month	Once or more per month, but less than weekly	Once or more per week, but less than daily	Daily (once or twice a day)	Several times per day	Hourly	More than hourly	Continually
①	②	③	④	⑤	⑥	⑦	⑧

3. Objectivity vs. Subjectivity of Information Communicated

How objective or subjective is the information communicated in this job?

<u>Very Objective</u> Very concrete and deals with observable data, behaviors, or events	<u>Moderate Objectivity</u> Includes both concrete and subjective or judgmental information	<u>Very Subjective</u> Deals mostly with feelings, thoughts, or ideas
①	②	③
④	⑤	⑥
⑦		

4. Job-Required Social Interaction

How much does this job require the worker to be in contact (face-to-face, by telephone, or otherwise) with others in order to perform it?

<u>Very Little Contact</u> Almost no contact with others is required	<u>Moderate Contact</u> Some contact with others is required; about half of work time spent in contact with others	<u>Very Extensive Contact</u> Constant contact with others is required
①	②	③
④	⑤	⑥
⑦		

5. Privacy of Communications

To what extent can an individual's work materials and communications (face-to-face, phone, fax, E-mail, etc.) be monitored by others?

<u>Little Privacy</u> Most communications and materials are monitored by others	<u>Moderate Privacy</u> Communications and materials for this job are not monitored, but others can easily access communications (community printer, fax and/or materials)	<u>Substantial Privacy</u> No one has access to communications or materials for this job without the worker's consent
①	②	③
④	⑤	⑥
⑦		

6. Job Interactions

How important are interactions requiring the worker to:

a. Supervise, coach, train, or develop other employees?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	①	②	③	④	⑤

b. Persuade someone to a course of action (informally) or influence others to buy something (to sell)?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	①	②	③	④	⑤

c. Provide a service to others (e.g., customers)?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	①	②	③	④	⑤

d. Take a position opposed to coworkers or others?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	①	②	③	④	⑤

6. Job Interactions

How important are interactions requiring the worker to:

e. Work with or contribute to a work group or team to perform this job?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

f. Deal with external customers (e.g., retail sales) or the public in general (e.g., police work)?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

g. Coordinate or lead others in accomplishing work activities (not supervision)?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

7. Responsibility for Others' Health and Safety

How responsible is the worker for others' health and safety on this job?

<p>None No responsi- bility for the health and safety of others</p>	<p>Very Limited Responsibility Has little responsibility for others' health and safety</p>	<p>Moderate Responsibility Must be careful to avoid injury to others</p>	<p>Very Substantial Responsibility Others' health and safety depends almost entirely on actions of worker</p>			
①	②	③	④	⑤	⑥	⑦

8. Responsibility for Work Outcomes and Results

How responsible is the worker for work outcomes and results of other workers.

<p>None No responsi- bility for work results of others</p>	<p>Very Limited Responsibility Minimum responsibility for the work results of others</p>	<p>Intermediate Responsibility Considerable responsi- bility for the work results of others</p>	<p>Very Substantial Responsibility Complete responsibility for the work results of others</p>			
①	②	③	④	⑤	⑥	⑦

9. How frequently do the job requirements place the worker in conflict situations?

Never (or does not apply)	Almost Never	Sometimes	Often	Always
①	②	③	④	⑤

10. How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?

Never (or does not apply)	Almost Never	Sometimes	Often	Always
①	②	③	④	⑤

11. How frequently does this job require the worker to deal with physical aggression of violent individuals?

Never (or does not apply)	Almost Never	Sometimes	Often	Always
①	②	③	④	⑤

12. Work Setting

How frequently does this job require the worker to work:

a. Indoors, environmentally controlled?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Indoors, not environmentally controlled (e.g., warehouse without air conditioning)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

c. Outdoors, exposed to all weather conditions?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

12. Work Setting (continued)

How frequently does this job require the worker to work:

d. Outdoors, under cover (e.g., open shed)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

e. In an open vehicle or operating open equipment (e.g., tractor)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

f. In an enclosed vehicle or operating enclosed equipment (e.g., automobile)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

13. Privacy of Work Area

How private is the work area for this job?

Little Privacy

Work is with others in a non-private area, such as a typing pool, food preparation, or production area

Moderate Privacy

Work is conducted in a semi-private area, such as a cubicle

Substantial Privacy

Work is performed in a private work space or office

①

②

③

④

⑤

⑥

⑦

14. Physical Proximity

To what extent does this job require the worker to perform job tasks in close physical proximity to other people?

Not Close

Work does not require close physical contact with others (e.g., forest ranger)

Moderately Close

Work requires infrequent physical contact and allows some distance (e.g., sharing office space)

Very Close

Work design requires working very close to or in contact with others (e.g., commercial pilots in a cockpit)

①

②

③

④

⑤

⑥

⑦

15. Environmental Conditions

How often during a usual work period is the worker exposed to the following conditions:

a. Sounds and noise levels that are distracting and uncomfortable?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Very hot (above 90° F) or very cold (under 32° F) temperatures?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

c. Extremely bright or inadequate lighting conditions?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

15. Environmental Conditions (continued)

How often during a usual work period is the worker exposed to the following conditions:

d. Contaminants (pollutants, gases, dust, odors, etc.)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

e. Cramped work space that requires getting into awkward positions?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

f. Whole body vibration (e.g., operating a jackhammer or earth-moving equipment)?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

16. Exposure to Radiation

a. Frequency

How often does this job require the worker to be exposed to radiation?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to radiation while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to radiation, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

17. Exposure to Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)

a. Frequency

How often does this job require the worker to be exposed to diseases/infections?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to diseases/infections while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to diseases/infection, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

18. Exposure to High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)

a. Frequency

How often does this job require the worker to be exposed to high places?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to high places while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to high places, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

19. Exposure to Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations - see questions 20 and 21).

a. Frequency

How often does this job require the worker to be exposed to hazardous conditions?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to hazardous conditions while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to hazardous conditions, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

20. Exposure to Hazardous Equipment, (e.g., saws, machinery/mechanical parts; include exposure to vehicular traffic, but not driving a vehicle).

a. Frequency

How often does this job require the worker to be exposed to hazardous equipment?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to hazardous equipment while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to hazardous equipment, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

21. Exposure to Hazardous Situations involving likely cuts, bites, stings, or minor burns

a. Frequency

How often does this job require the worker to be exposed to hazardous situations?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

b. Likelihood of Injury

What is the likelihood that the worker would be injured as a result of being exposed to hazardous situations while performing this job?

No possibility	Almost no possibility	Very limited possibility	Limited possibility	Some possibility	Fairly high possibility	High possibility	Very high possibility
①	②	③	④	⑤	⑥	⑦	⑧

c. Degree of Injury

If injury, due to exposure to hazardous situations, were to occur while performing this job, how serious would be the likely outcome?

No treatment required	Injury requiring first aid	Injury resulting in loss of up to one work day	Injury resulting in loss of more than one work day	Injury resulting in permanent partial impairment	Injury resulting in permanent total impairment/death
①	②	③	④	⑤	⑥

22. Body Positioning

How much time in a usual work period does the worker spend:

a. Sitting?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	②	③	④	⑤	⑥

b. Standing?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	②	③	④	⑤	⑥

c. Climbing ladders, scaffolds, poles, etc.?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	②	③	④	⑤	⑥

d. Walking or running?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	②	③	④	⑤	⑥

22. Body Positioning (continued)

How much time in a usual work period does the worker spend:

e. Kneeling, crouching, stooping, or crawling?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	①	②	③	④	⑤

f. Keeping or regaining balance?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	①	②	③	④	⑤

g. Using hands to handle, control, or feel objects, tools or controls?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	①	②	③	④	⑤

h. Bending or twisting the body?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	①	②	③	④	⑤

22. Body Positioning (continued)

How much time in a usual work period does the worker spend:

i. Making repetitive motions?

Never (or does not apply)	Under 1/10 of the time	Between 1/10 and 1/3 of the time	Between 1/3 and 2/3 of the time	Over 2/3 of the time	Almost continually
①	②	③	④	⑤	⑥

23. Work Attire

How often does the worker wear:

a. Business clothes, such as neckties and dresses that are often worn in offices?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily
①	②	③	④	⑤	

b. A special uniform, such as that of a commercial pilot, nurse, police officer, or military personnel?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily
①	②	③	④	⑤	

c. Work clothing such as that worn by production or maintenance workers?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily
①	②	③	④	⑤	

23. Work Attire (continued)

How often does the worker wear:

d. Common protective or safety attire, such as safety shoes, glasses, gloves, hearing protection, hard-hat, or personal flotation device?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

e. Specialized protective or safety attire, such as a breathing apparatus, safety harness, full protection suit, or radiation protection?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

24. Consequences of Error

How serious would the result usually be if the worker made a mistake that was not readily correctable?

<u>Mildly Serious</u> Minimal loss of time or effort or minor inconvenience to customers		<u>Moderately Serious</u> Some loss of time, money, or damage to equipment		<u>Extremely Serious</u> Substantial costs, loss of reputation, damage to physical plant, or serious injury or death to self, other workers, or the public		
①	②	③	④	⑤	⑥	⑦

25. Impact of Decisions

a. Level

What results do the worker's decisions usually have on other people, the financial resources, and/or the image or reputation of the organization?

<u>Very Minor Results</u> Decisions do not affect others or the reputation of the organization		<u>Moderate Results</u> Decisions may affect some others		<u>Extreme Results</u> Decisions affect several departments and may result in large financial losses or gains		
①	②	③	④	⑤	⑥	⑦

b. Frequency

How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	

26. Responsibility/Accountability

To what extent is this job assigned accountability for final work outcomes or results?

<u>Very Limited</u> Responsible for immediate outcomes of specific tasks			<u>Intermediate</u> Moderate responsibility for effects of job performance on other individuals or related work groups			<u>Very Substantial</u> High responsibility for effects of job performance on the organization as a whole or beyond
①	②	③	④	⑤	⑥	⑦

27. Decision Latitude

Indicate the amount of freedom the worker has to make decisions without supervision.

<u>Very Little Freedom</u> All decisions must be approved by supervisor			<u>Some Freedom</u> May make some decisions using general guidelines; other decisions are subject to supervisor approval			<u>Extensive Freedom</u> May make any and all decisions without approval
①	②	③	④	⑤	⑥	⑦

28. Frustrating Circumstances

To what extent do frustrating circumstances ("road blocks" to work that are beyond the worker's control) hinder the accomplishment of this job?

<u>Low Extent</u> Few work activities are hindered		<u>Moderate Extent</u> Some work activities are delayed or interrupted			<u>High Extent</u> Important work activities cannot be completed	
①	②	③	④	⑤	⑥	⑦

29. Degree of Automation

Indicate the level of automation of this job.

<u>Low Automation</u> Minimal automation; tasks are performed manually or without automated machinery		<u>Moderate Automation</u> Some automation			<u>High Automation</u> Complete automation; tasks involve mainly monitoring and verifying machines or equipment	
①	②	③	④	⑤	⑥	⑦

30. Task Clarity

To what extent is the worker clear about what is to be done on this job and how work performance is to be evaluated?

<u>Low Clarity</u> Extreme uncertainty; tasks and expectations are very unclear		<u>Moderate Clarity</u> Some guidance is given, but some uncertainty about what is to be done exists			<u>High Clarity</u> All tasks and expectations are clear	
①	②	③	④	⑤	⑥	⑦

Work Context: Structural Job Characteristics: Routine vs. Challenging Work

31. How important is being very exact or highly accurate in performing this job?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

32. How important is it to be sure that all the details of this job are performed and everything is done completely?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

33. How important is being constantly aware of either frequently changing events (e.g., security guard watching for shoplifters) or infrequent events (e.g., radar operator watching for tornadoes) to performing this job?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

34. How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	

35. Structured vs. Unstructured Work

To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?

<u>Very Structured</u> Very fixed job activities with little chance to vary tasks, priorities, or goals		<u>Moderately Structured</u> Some leeway in work routine, but certain limits apply		<u>Very Unstructured</u> Extremely high flexibility in selecting methods, setting goals, and establishing priorities		
①	②	③	④	⑤	⑥	⑦

36. Level of Competition

To what extent does this job require the worker to compete or to be aware of competitive pressures?

Low Competition
Requires the worker to be generally aware of competitive pressures on the organization

Moderate Competition
Requires the worker to contribute to group effort to improve performance or efficiency to levels exceeding those attained by other groups within the organization

High Competition
Requires the worker to compete directly with coworkers or counterparts in other organizations for sales, customers, efficiency, productivity, new product development, or financial resources

①

②

③

④

⑤

⑥

⑦

37. Time Pressure

How often does this job require the worker to meet strict deadlines?

Never (or does not apply)	Once per year or less	More than once per year, but less than monthly	More than once per month, but less than weekly	More than once per week, but less than daily	Daily (once or twice per day)	Several times per day	Hourly or more often (including continually)
①	②	③	④	⑤	⑥	⑦	⑧

38. How important is working under frequent distractions or interruptions to performing this job?

Does not apply	Not important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	⑥

39. How important is it to this job that the pace is determined by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)

Does not apply	Minimally important	Somewhat important	Important	Very important	Extremely important
①	②	③	④	⑤	⑥

40. Please check the usual work schedule for this job. (Check only one.)
- a. Regular Work (established routine, with set schedule)
 - b. Irregular Work (subject to weather conditions, production demands, contract duration)
 - c. Seasonal Basis (only work during certain times of the year)
41. Please check the usual work shift for this job. (Check only one.)
- a. Day Shift
 - b. Other Than Day Shift (i.e., evening shift or night shift)
 - c. Split or Variable Shift (work busy times or shift changes due to staffing demands)
 - d. Rotating Shift (rotate days, evenings, nights)
42. Please check the usual work shift duration. (Check only one.)
- a. Paid for less than 8 hours
 - b. Paid for 8 hours
 - c. Paid for more than 8 hours
43. Please check the usual overtime work. (Check all that apply.)
- a. None
 - b. Overtime at request of employer
 - c. Available for call-in to work
 - d. Weekend work (not part of regular shift)
44. Please check the number of hours typically worked in one week. (Check only one.)
- a. Less than 40 hours
 - b. 40 hours
 - c. More than 40 hours

45. Please check the usual work cycle for this job. (Check only one.)

- a. 1 week
- b. 2 weeks
- c. 1 month (28 or more days)

46. Please check the number of days usually worked in the cycle. (Check only one.)

- a. Less than 3
- b. 3
- c. 4
- d. 5
- e. 6
- f. 7
- g. 8-10
- h. 11-14
- i. 15-20
- j. More than 20

APPENDIX F

ORGANIZATIONAL CONTEXT QUESTIONNAIRE

Organizational Context
Questionnaire

Instructions for Making Organizational Context Ratings.

In this questionnaire you will be asked about the organization in which you work.

Read each question carefully. Read the rating scale or response options that follow the question. Mark through the appropriate number for the response that best describes your organization.

Turn the page to begin the Organizational Context Questionnaire.

1. You have a great deal of control over what happens in your unit or department.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

2. You have a great deal of influence over decisions that are made in your unit or department.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

3. How much *autonomy* and freedom are there in your job? That is, to what extent does your job permit you to decide *on your own* how to go about doing your job?

Very Little Autonomy		Moderate Autonomy		Very Much Autonomy
①	②	③	④	⑤

4. To what extent does your job involve doing a “*whole*” and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small *part* of the overall piece of work, which is finished by other people or automatic machines? [If your job involves many different tasks or pieces of work, try to think about your typical tasks or the tasks you spend the most time on.]

My job is only part of the work		My job is a moderate sized “chunk” of the overall piece of work		My job involves doing a whole piece of work from start to finish
①	②	③	④	⑤

5. How much *variety* is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

Very Little Variety	Moderate Variety	Very Much Variety
①	②	③
④	⑤	

6. In general, how *significant or important* is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

Not very Significant	Moderately Significant	Highly Significant
①	②	③
④		⑤

7. To what extent does *doing the job itself* provide you with information about your work performance? That is, does the actual *work itself* provide clues about how well you are doing--aside from any "feedback" co-workers or supervisors may provide?

Very Little	A Moderate Amount	Very Much
①	②	③
④		⑤

8. Your job requires you to use a number of complex or high-level skills.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

9. Your job is arranged so that you can do an entire piece of work from beginning to end.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

10. Just doing the job provides many chances for you to figure out how well you are doing.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

11. Your job requires you to perform a variety of tasks.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

12. Your job is one where a lot of people can be affected by how well the work gets done.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

13. Your job gives you a chance to use your personal initiative and judgment in carrying out the work.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

14. Your job provides you a chance to completely finish the piece of work you began.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

15. After you finish a job, you know whether you performed well.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

16. Your job gives you considerable opportunity for independence and freedom in how you do your job.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

17. Your job itself is very significant and important in the broader scheme of things.

Very Inaccurate	Somewhat Inaccurate	Uncertain	Somewhat Accurate	Very Accurate
①	②	③	④	⑤

18. To what extent does your supervisor act in a friendly and supportive manner? For example, does he/she show concern for members of your work group and respect for your ideas?

Not at all	To a limited extent	To some extent	To a moderate extent	To a very great extent
①	②	③	④	⑤

19. To what extent does your supervisor take an active role in directing your work group's activities by setting goals, planning and scheduling work, assigning tasks, and making sure that each person knows what he/she should be doing?

Not at all	To a limited extent	To some extent	To a moderate extent	To a very great extent
①	②	③	④	⑤

20. To what extent does your supervisor provide members of your work group with a clear vision of where the group is going and keep everyone fully committed to the work at hand?

Not at all	To a limited extent	To some extent	To a moderate extent	To a very great extent
①	②	③	④	⑤

21. To what extent does your supervisor quickly and effectively solve problems, even difficult problems, that come up in your work group?

Not at all	To a limited extent	To some extent	To a moderate extent	To a very great extent
①	②	③	④	⑤

22. This item asks you about the values of the organization where you work. Please rate how important each of the following concepts is as a guiding principle for your organization as a whole.

	<i>Not Important</i>	<i>Somewhat Important</i>	<i>Important</i>	<i>Very Important</i>	<i>Extremely Important</i>
	①	②	③	④	⑤
A. Taking chances; going out on a limb.....	①	②	③	④	⑤
B. Fairness; justice.....	①	②	③	④	⑤
C. Precision; paying attention to even the smallest details.....	①	②	③	④	⑤
D. Stability; keeping things on an even keel.....	①	②	③	④	⑤
E. Getting things done; taking decisive or quick action.....	①	②	③	④	⑤
F. Caring about employees; showing concern for their well-being.....	①	②	③	④	⑤
G. Innovation; finding new and better ways of doing things; openness to new ideas.....	①	②	③	④	⑤
H. Aggressiveness; forcefully going after what you want.....	①	②	③	④	⑤
I. Valuing customers; emphasizing customer service.....	①	②	③	④	⑤
J. Providing high quality products or services; meeting high standards of excellence.....	①	②	③	④	⑤
K. Openness; honesty; keeping employees well informed.....	①	②	③	④	⑤
L. Flexibility, adapting to change.....	①	②	③	④	⑤

23. How many different supervisors have you had in the past year? (circle one answer)
- a. Only 1
 - b. 2
 - c. 3
 - d. 4 or more
 - e. Not applicable
24. Approximately how many *different* work teams have you belonged to during the past year? (circle one answer)
- a. None
 - b. 1
 - c. 2-3
 - d. 4-6
 - e. 7-10
 - f. 11 or more
25. In the past year, how many times has your primary work group gone through some kind of reorganization? (circle one answer)
- a. Never
 - b. Once
 - c. Twice
 - d. 3-5 times
 - e. 6 times or more
26. In the past year, how many times have the nature of your job duties changed dramatically? (circle one answer)
- a. Never
 - b. Once
 - c. Twice
 - d. 3-5 times
 - e. 6 times or more
27. You often receive conflicting requests from two or more people at work.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

28. You work with two or more groups who want you to focus on different things.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

29. You and your supervisor agree about what your job should be.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

30. Your supervisor often asks you to do two or more things that conflict (for example, save a large amount of money while at the same time dramatically increasing quality).

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

31. You receive assignments at work without adequate resources and materials to complete them properly.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

32. You are given enough time to do what is expected of you at work.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

33. It often seems like you have too much work for one person to do.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

34. You have negotiated changes in the nature of your role at work with your supervisor.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

35. You have significant input into the way you do your job.

Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
①	②	③	④	⑤

36. Realistically, the probability that you will achieve your most important individual work goal this year is:

You are not required to set individual goals	Less than 20%	21% to 40%	41% to 60%	61% to 80%	81% to 100%
①	②	③	④	⑤	

37. How many of your individual work goals are quantitative (e.g., selling \$100,000 worth of merchandise as opposed to selling as much merchandise as possible).

You are not required to set individual goals

	None	Few	Some	Most	All
①	②	③	④	⑤	

38. How many of your individual work goals are specific – that is, you will know exactly when you have achieved them.

You are not required to set individual goals

	None	Few	Some	Most	All
①	②	③	④	⑤	

39. How often do you get information regarding how close you are to achieving your most important individual work goal (for example, an interim financial report or data on number of units sold)?

Never	Once a year	Twice a year	Three times a year	Four times a year or more
①	②	③	④	

40. To what extent do you receive informal, job-relevant feedback from your supervisor?

Not at all	To a limited extent	To some extent	To a moderate extent	To a great extent
①	②	③	④	⑤

41. During the past year, how often have you met one-on-one with your immediate supervisor to discuss issues such as your performance, goals, training and development? (circle one answer)

- a. Never
- b. Once
- c. Twice
- d. 3-5 times
- e. 6 or more times

42. To what extent do you perform each of the following activities? Use the scale below to rate each activity. (fill in the blanks)

Not at all	To a limited extent	To some extent	To a moderate extent	To a great extent
①	②	③	④	⑤

43. Approximately what percentage of your time do you spend working in an *intact team*? By *intact team* we mean a group of 3 or more employees who are jointly responsible for whole work processes and work toward shared goals (e.g., production team, development team, project team). (circle one answer)

- a. None
- b. Less than 25%
- c. 25%-50%
- d. 51%-75%
- e. More than 75%

44. Which of the following is part of your compensation package (i.e., pay)? (check all that apply)

- Profit Sharing
- Gain Sharing
- Knowledge/Skill-based pay
- Pay based on your individual performance
- Pay based on the performance of your team
- Pay based on customer satisfaction
- Pay based on job tenure/seniority
- Pay based on job attributes (e.g., hazards involved, Hay points assigned)
- None of the above

45. Which of the following is part of your benefits? (check all that apply)

- Stock ownership in the organization
- Retirement plan [e.g., 401(k), pension plan, etc.]
- Major medical insurance
- Life insurance
- Disability insurance
- Flexible working hours
- Daycare
- Paid leave (i.e., holidays, vacation time, maternity leave, etc.)
- None of the above

46. In which of the following content areas have you received formal training in the last two years? (check all that apply)

- Diversity
- Team Skills
- Quality Control Skills (e.g., quality/statistical analysis)
- Basic Business or Economics (e.g., accounting, finance)
- Problem Solving Skills
- Leadership Skills
- Customer Service
- None of the above

47. In the last two years, how often have you attended company-sponsored job-related technical training (i.e., technical skills training)? (circle one answer)

- a. Never
- b. Only once
- c. Twice
- d. More than twice

48. Which of the following training methods have been used in company training courses you have attended in the last two years? (check all that apply)

- On-the-Job Training
- Case Study Exercises
- Conference Method (i.e., group discussions)
- Lectures with Questions
- Business Games
- Machine Simulators (e.g., flight simulators)
- Films/Videos
- Workbooks
- Role Plays
- Computer-Assisted Instruction
- Audiocassettes
- Interactive Videos
- None of the above

49. Which of the following assessment methods are used to select people for your current job? (check all that apply)

- Ability Tests
- Personality Inventories
- Biodata Questionnaires
- Weighted Application Blanks
- Technical Job Knowledge Tests
- Background Checks
- Interviews
- Simulations (e.g., in-baskets, role plays)
- Ratings by others (e.g., supervisors, peers)
- References
- Educational Records
- Employment Records
- Resumes
- None of the above
- Do not know or unsure

50. Which of the sources listed below are used to recruit people for your current job?
(check all that apply)

- Employee referrals
- Direct applications (i.e., unsolicited resumes)
- Employment agencies/Recruiting firms
- College placement offices
- Internships
- Recruiting booths at community functions
- Newspaper advertisements
- Professional journal advertisements
- Other advertisements
- Rehiring
- High school referrals
- In-house notices
- Radio
- Television
- In-house referrals
- Other (please specify _____)
- Do not know or unsure

51. Which statement best describes the job rotation practices in your job and your work group? (circle one answer)

- a. There is no job rotation – you are trained to do one job and do not usually rotate to other jobs.
- b. You rotate within your work group, but not usually outside your group.
- c. You rotate jobs within your work group and across work groups in your department, but not across departments.
- d. You rotate across work groups and across departments.

APPENDIX G
ABILITIES QUESTIONNAIRE

1003

Abilities Questionnaire

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Instructions for Making Ability Ratings

In this questionnaire you will be presented with a list of 52 abilities. An ability is an enduring attribute that influences performance on a variety of tasks. Examples include Cognitive Abilities such as Written and Oral Expression; Psychomotor Abilities such as Arm-Hand Steadiness and Speed of Limb Movement; Physical Abilities such as Stamina and Trunk Strength; and Sensory Abilities such as Night Vision and Hearing Sensitivity.

For each ability, please make two ratings: **LEVEL** and **IMPORTANCE**.

(1) **LEVEL**. Ask yourself, "What level of this ability is needed to perform this job?" To help you make this judgment, the **LEVEL** scale has three special features. First, each ability is named and then defined. Second, to the left of the scale are descriptions of high and low levels of the ability. Third, to the right of the scale are examples of specific tasks that require different levels of the ability. These are only examples, so they may or may not apply to the specific job you are describing. However, all of this information should help you make a judgement about the **LEVEL** of the ability required on the job you are describing. Please take the time to carefully read all of this information before making your ratings.

Use all of the information provided to select the number on the scale that indicates the ability level required by the job you are describing, and mark through the appropriate number, from 1 (indicating that a very low level of the ability is required) to 7 (indicating that a very high level of the ability is required) on the **LEVEL** scale. For example, the level of "Oral Expression" needed for one job might be much higher than that needed for another job.

THE NOT-RELEVANT (NR) RESPONSE. If the ability is **NOT RELEVANT** at all to performance on the job, mark through the **NR** circle that appears at the bottom of the **LEVEL** scale. Carefully read all of the level descriptions before selecting the **NR** option. If you select **NR**, however, there is no need to complete the **IMPORTANCE** rating described below.

(2) **IMPORTANCE**. (Complete only if a 1 to 7 **LEVEL** rating was selected.) Ask yourself, "How important is this ability to performance on this job?" For example, "Written Expression" might be very important for one job, but less important for another job. For the second job, however, "Oral Expression" might be very important.

Rate the **IMPORTANCE** of the ability for performance on the job by marking through the appropriate number, from 1 (indicating that the ability is of little or no importance) to 5 (indicating that the ability is very important) on the **IMPORTANCE** scale.

Notice that the **LEVEL** of an ability and the **IMPORTANCE** of the ability are different. For example, "Oral Expression" can be high in **IMPORTANCE** for two different jobs, but the **LEVEL** of "Oral Expression" that an employee in one job needs is not as high as the **LEVEL** of "Oral Expression" for an employee in another job.

Below is an example completed by an employee in a particular job. For the LEVEL rating, this employee believes that a low-to-medium level of "Written Expression" is needed to perform this job, so the 3 is selected on the LEVEL rating scale. For the IMPORTANCE rating, the employee believes that "Written Expression" is "Very Important" for performing this job, so the 4 is selected on the IMPORTANCE rating scale. These judgments are, of course, just examples. The job you are describing may be very different.

4. Written Expression

The ability to communicate information and ideas in writing so others will understand.

Level

What level of this ability is needed to perform this job?

Requires clear and well organized use of words and sentences to communicate complicated ideas to others in writing.

⑦

⑥

⑤

④

~~③~~

②

①

NR

← Writing an advanced economics textbook.

← Writing a job recommendation for a subordinate.

← Writing a note to remind someone to take something out of the freezer to thaw.

NR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

~~④~~

⑤

Below is a second example completed by an employee in a different job. This employee does not believe that "Originality" is at all relevant for this job. Therefore, the NR option is selected at the bottom of the LEVEL rating scale. Notice that, because the NR option was selected, the IMPORTANCE rating was not completed.

6. Originality

The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Level

What level of this ability is needed to perform this job?

Requires the production of extremely clever or creative ideas about an unusual topic or situation.

⑦

⑥

⑤

④

③

②

①

~~NR~~

← *Inventing a new type of a man-made fiber.*

← *Redesigning job tasks to be more interesting for employees.*

← *Using a credit card to open a locked door.*

~~NR~~ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Turn the page to begin the Abilities Questionnaire.

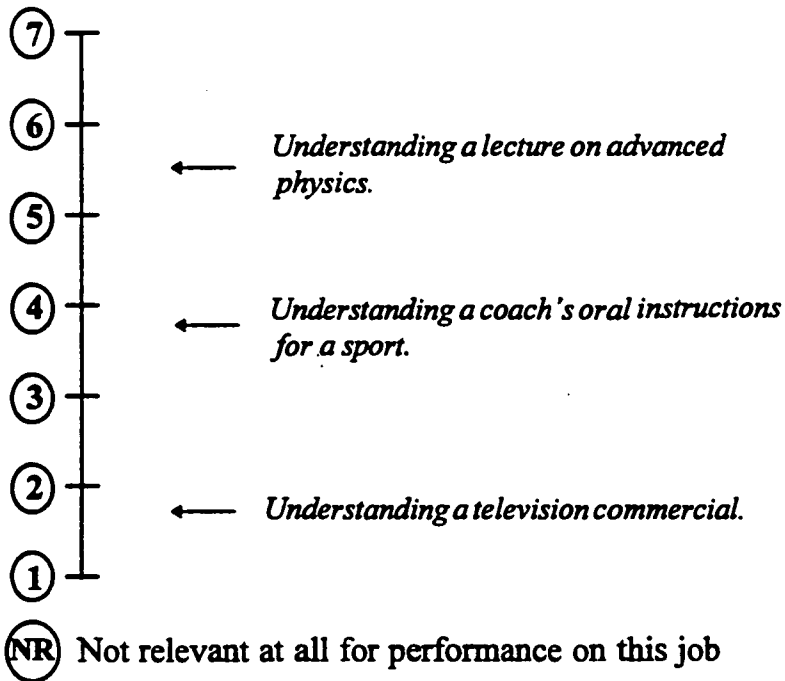
1. Oral Comprehension

The ability to listen to and understand information and ideas presented through spoken words and sentences.

Level
What level of this ability is needed to perform this job?

Requires understanding complex or detailed spoken sentences that contain unusual words and phrases.

Requires understanding short or simple spoken sentences that contain common words and phrases.



Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

(1)

(2)

(3)

(4)

(5)

2. Written Comprehension

The ability to read and understand information and ideas presented in writing.

Level

What level of this ability is needed to perform this job?

Requires understanding complex or detailed written sentences that contain unusual words and phrases.

(7)

(6)

(5)

(4)

(3)

(2)

(1)

(NR)

← *Understanding an instruction book on repairing a missile guidance system.*

← *Understanding an apartment lease.*

← *Understanding signs on the highway.*

(NR) Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

1

2

3

4

5

3. Oral Expression

The ability to communicate information and ideas in speaking so others will understand.

Level

What level of this ability is needed to perform this job?

Requires speaking in a clear and well organized way to communicate complicated ideas to others.

⑦

⑥

⑤

④

③

②

①

NR

← *Explaining advanced principles of genetics to college freshmen.*

← *Giving directions to a lost motorist.*

← *Canceling newspaper delivery by phone.*

① Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

4. Written Expression

The ability to communicate information and ideas in writing so others will understand.

Level

What level of this ability is needed to perform this job?

Requires clear and well organized use of words and sentences to communicate complicated ideas to others in writing.

Requires use of words and sentences to communicate simple ideas to others in writing.

⑦

⑥

⑤

④

③

②

①

NR

Not relevant at all for performance on this job

← Writing an advanced economics textbook.

← Writing a job recommendation for a subordinate.

← Writing a note to remind someone to take something out of the freezer to thaw.

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

5. Fluency of Ideas

The ability to come up with a number of ideas about a given topic. It concerns the number of ideas produced and not the quality, correctness, or creativity of the ideas.

Level

What level of this ability is needed to perform this job?

Requires the production of many ideas about a very specialized topic.

⑦

⑥

⑤

④

③

②

①

← Naming all the possible strategies for a particular military battle.

← Thinking of as many ideas as possible for the name of a new research firm.

← Naming four different uses for a screwdriver.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

6. Originality

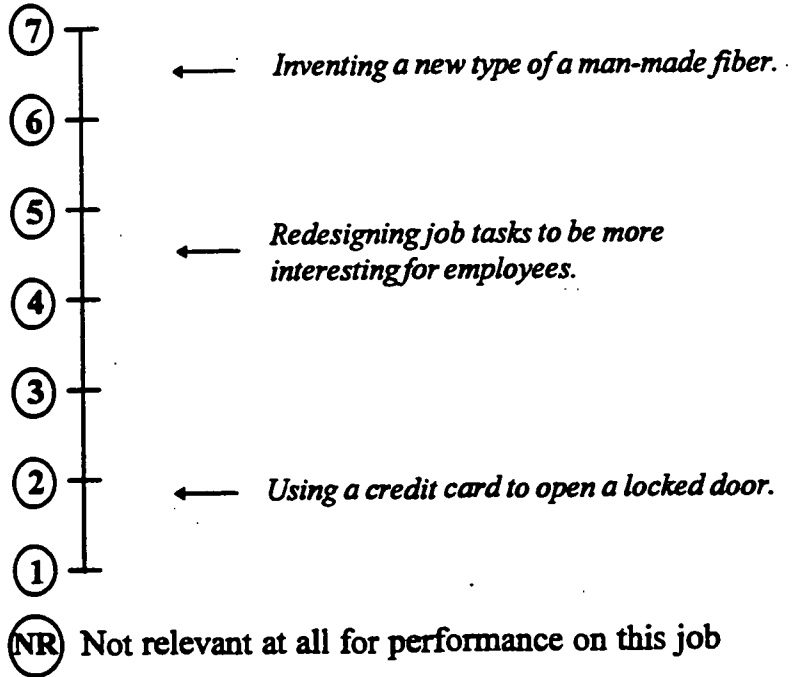
The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Level

What level of this ability is needed to perform this job?

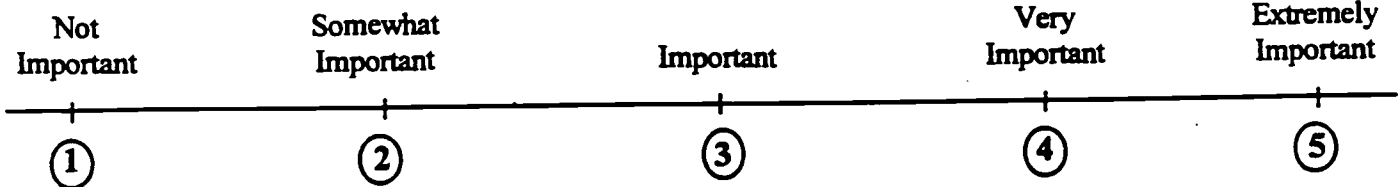
Requires the production of extremely clever or creative ideas about an unusual topic or situation.

Requires the production of one or two ideas showing little creativity about a common topic.



Importance

How important is this ability to performance on this job?



7. Problem Sensitivity

The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

Level

What level of this ability is needed to perform this job?

Requires recognizing very unusual or complex problems and identifying all elements of the problem.	7			
	6		←	<i>Recognizing an illness at an early stage of a disease when there are only a few symptoms.</i>
	5			
	4		←	<i>Recognizing from the mood of prisoners that a prison riot is likely to occur.</i>
	3			
Requires recognizing common or simple problems.	2			
	1		←	<i>Recognizing that an unplugged lamp won't work.</i>
	NR			Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
1	2	3	4	5

8. Deductive Reasoning

The ability to apply general rules to specific problems to come up with logical answers. It involves deciding if an answer makes sense.

Level

What level of this ability is needed to perform this job?

Requires many logical steps using general rules to arrive at answers to complex problems.

Requires only one or two steps, using one general rule, to arrive at an answer to a simple problem.

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← *Designing an aircraft wing using the principles of aerodynamics.*

← *Deciding what factors to consider in selecting stocks.*

← *Knowing that, due to the law of gravity, a stalled car can coast down the hill.*

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

9. Inductive Reasoning

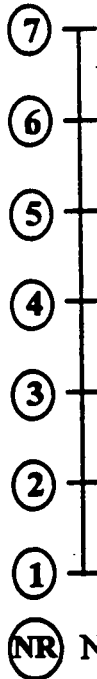
The ability to combine separate pieces of information, or specific answers to problems, to form general rules or conclusions. It includes coming up with a logical explanation for why a series of seemingly unrelated events occur together.

Level

What level of this ability is needed to perform this job?

Requires developing a rule or theory to explain how very different things or groups of things are related.

Requires developing a simple basic rule to explain how two similar things are related.



- ← *Diagnosing a disease using the results of many different lab tests.*
- ← *Determining the prime suspect based on evidence gathered at a crime scene.*
- ← *Determining clothing to wear based on the weather report.*

NR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

11. Category Flexibility

The ability to produce many rules so that each rule tells how to group (or combine) a set of things in a different way.

Level
What level of this ability is needed to perform this job?

Requires the production of a large number of rules to make many different groupings of unrelated things.

Requires the production of only one rule, and thus only one grouping of a set of very similar things.



← *Classifying man-made fibers in terms of their strength, cost, flexibility, melting points, etc.*

← *Classifying flowers according to size, color, smell, and uses.*

← *Sorting nails in a toolbox on the basis of length.*

Ⓝ **NR** Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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Ⓝ 5

12. Mathematical Reasoning

The ability to understand and organize a problem and then to select a mathematical method or formula to solve the problem.

Level

What level of this ability is needed to perform this job?

Requires understanding and organizing a very complex problem needing many detailed mathematical formulas and methods to solve the problem.

Requires understanding and organizing an easy problem needing only one or two simple mathematical steps.

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← *Determining the mathematics required to simulate a space craft landing on the moon.*

← *Deciding how to calculate profits to determine the amounts of yearly bonuses.*

← *Determining how much 10 oranges will cost when they are priced at 2 for 29 cents.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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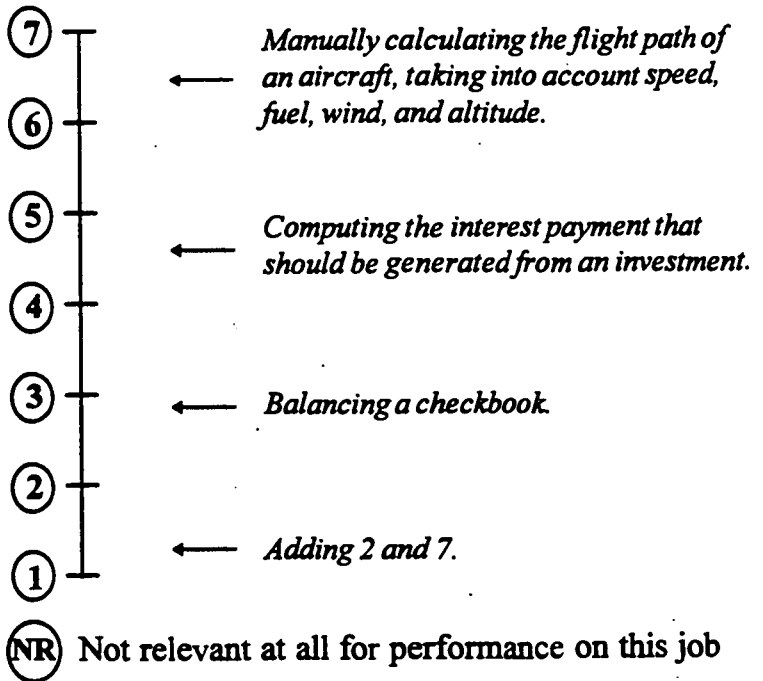
13. Number Facility

The ability to add, subtract, multiply, or divide quickly and correctly.

Level
What level of this ability is needed to perform this job?

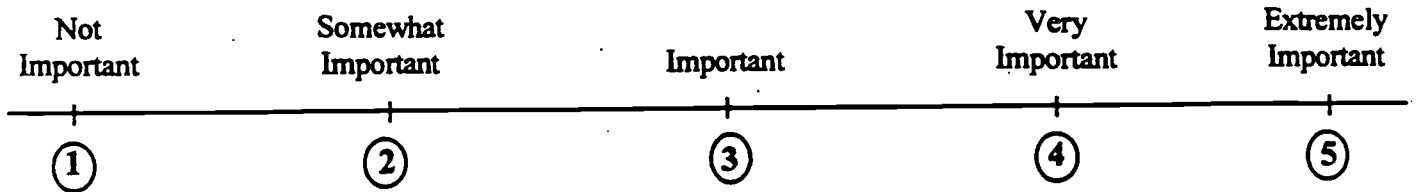
Requires fast and accurate calculations using many different operations, with complex numbers.

Requires simple calculations when more than enough time is available.



Importance

How important is this ability to performance on this job?



14. Memorization

The ability to remember information such as words, numbers, pictures, and procedures.

Level

What level of this ability is needed to perform this job?

Requires remembering a large amount of complex material over a long period of time.

Requires remembering a small amount of simple material for a short period of time.

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Not relevant at all for performance on this job

← *Reciting the Gettysburg Address after studying it for 15 minutes.*

← *Reciting the first names of the five people you just met.*

← *Remembering the number on your bus to be sure you get back on the right one.*

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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15. Speed of Closure

The ability to quickly make sense of information that seems to be without meaning or organization. It involves quickly combining and organizing different pieces of information into a meaningful pattern.

Level

What level of this ability is needed to perform this job?

Requires quick combination of many different pieces of information to identify a very complex and unusual pattern.

Requires the combination of two or three pieces of information into a simple pattern, when time is not very important.

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← *Interpreting the patterns on a weather radarscope to decide if the weather is changing.*

← *Making sense out of strange handwriting.*

← *Recognizing a song after hearing only the first few notes.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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16. Flexibility of Closure

The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.

Level

What level of this ability is needed to perform this job?

Requires detecting an unusual, complex pattern in highly complex, confusing, and distracting background material.

Requires detecting an easy-to-find pattern in simple background material.

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NR

Not relevant at all for performance on this job

← Identifying camouflaged tanks while flying in a high speed airplane.

← Looking for a golf ball in the rough.

← Tuning in a radio weather station in a noisy truck.

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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17. Perceptual Speed

The ability to quickly and accurately compare letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.

Level

What level of this ability is needed to perform this job?

Requires very quick and accurate comparisons of highly detailed pictures and patterns.

Requires accuracy and some quickness in comparing letters, numbers, or objects that are obviously the same or different from each other.

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← *Inspecting electrical parts for defects as they flow by on a fast-moving assembly line.*

← *Reading five temperature gauges in 10 seconds to make sure each temperature is within safe limits.*

← *Sorting mail according to zip codes with no time pressure.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

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Very Important

Extremely Important

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18. Spatial Orientation

The ability to know one's location in relation to the environment, or to know where other objects are in relation to one's self.

Level

What level of this ability is needed to perform this job?

Requires staying oriented in a changing environment.

Requires some orientation in an unchanging environment.



← Navigating an ocean voyage using only the positions of the sun and stars.

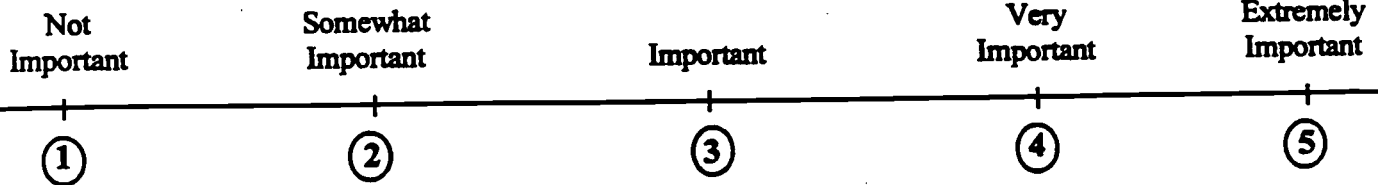
← Finding your way through a familiar room when the lights are out without bumping into anything.

← Using the floor plan to locate a store in a shopping mall.

NR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?



19. Visualization

The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.

Level

What level of this ability is needed to perform this job?

Requires imagining how something unusual will look after many complex changes in its position or in the arrangement of its parts.

Requires imagining how something familiar will look after one simple change in its position or in the arrangement of its parts.

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← *Anticipating opponent's as well as your own future moves in a chess game.*

← *Following a diagram to assemble a metal storage cabinet.*

← *Imagining how to put paper in the typewriter so the letterhead comes out at the top.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

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Very Important

Extremely Important

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20. Selective Attention

The ability to concentrate and not be distracted while performing a task over a period of time.

Level

What level of this ability is needed to perform this job?

Requires intense concentration on a complex task in the presence of a great deal of background distraction.

Requires enough attention to do a simple, routine task in the presence of a little background distraction.

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Not relevant at all for performance on this job

← Studying a technical manual in a noisy boiler room.

← Monitoring security TV screens for intruders throughout the night shift.

← Answering a business call with coworkers talking nearby.

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

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Very Important

Extremely Important

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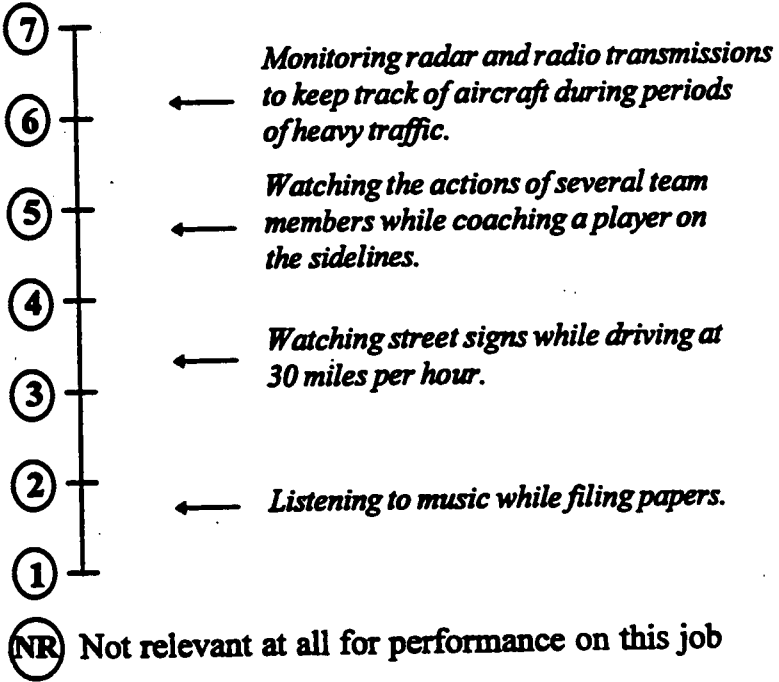
21. Time Sharing

The ability to efficiently shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).

Level
What level of this ability is needed to perform this job?

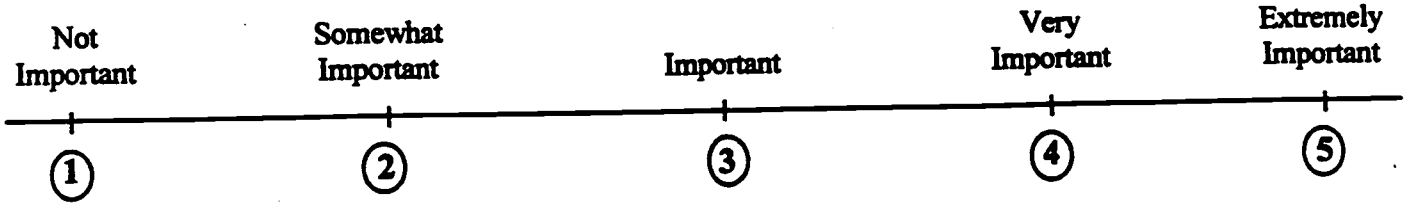
Requires using more than two sources to get complex information at a rapid rate.

Requires using two sources to get simple information at a slow pace.



Importance

How important is this ability to performance on this job?



22. Arm-Hand Steadiness

The ability to keep the hand and arm steady while making an arm movement or while holding the arm and hand in one position.

Level

What level of this ability is needed to perform this job?

Requires extreme steadiness to move the arm and hand or to hold them in position.

Requires only a little steadiness to move the arm and hand or to hold them in one position.

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Not relevant at all for performance on this job

← *Cutting facets in diamonds.*

← *Threading a needle.*

← *Lighting a candle.*

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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23. Manual Dexterity

The ability to quickly make coordinated movements of one hand, a hand together with the arm, or two hands to grasp, manipulate, or assemble objects.

Level

What level of this ability is needed to perform this job?

Requires very fast coordinated use of one hand, a hand and arms, or two hands to grasp, place, move, or assemble objects.

Requires some speed and coordination to grasp, place, move, or assemble objects with one hand, a hand and arm, or two hands.

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← *Performing open-heart surgery using surgical instruments.*

← *Packaging oranges in crates as quickly as possible.*

← *Screwing a light bulb into a lamp socket.*

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

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Very Important

Extremely Important

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24. Finger Dexterity

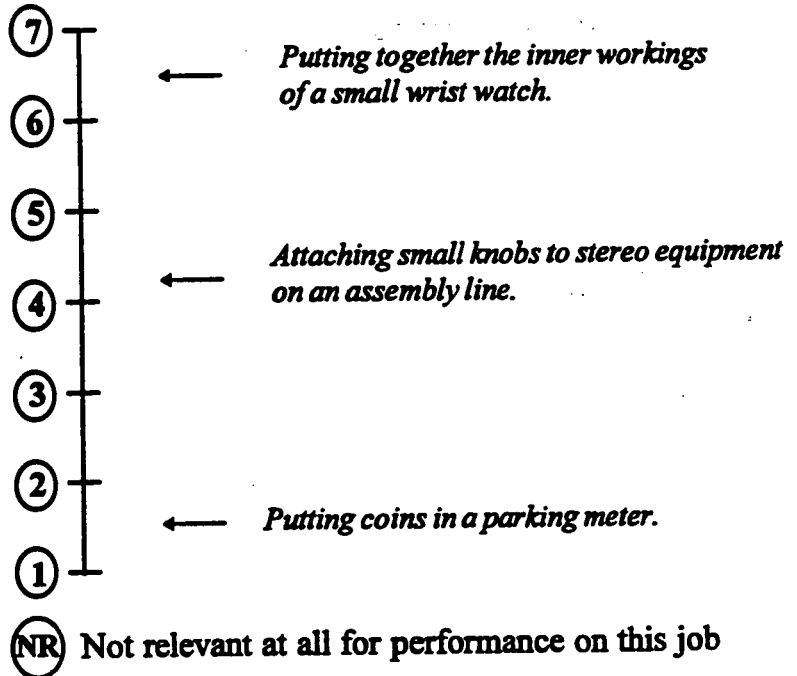
The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

Level

What level of this ability is needed to perform this job?

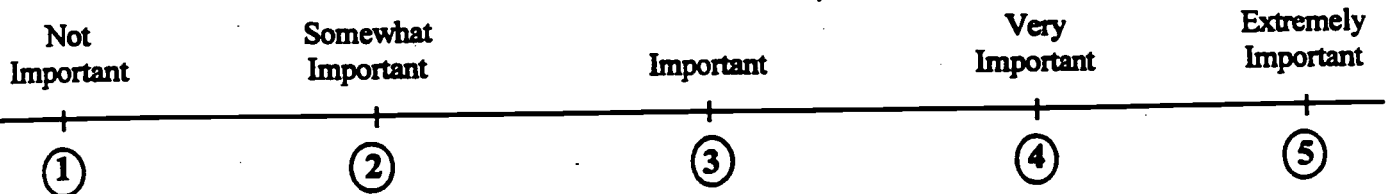
Requires very fast coordinated use of the fingers of one or both hands to grasp, place, move, or assemble very small objects.

Requires some speed and coordination to grasp, place, move, or assemble small objects with fingers of one or both hands.



Importance

How important is this ability to performance on this job?



25. Control Precision

The ability to quickly and repeatedly make precise adjustments in moving the controls of a machine or vehicle to exact positions.

Level

What level of this ability is needed to perform this job?

Requires extreme precision to quickly and repeatedly adjust very sensitive controls.

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← *Drilling a tooth.*

← *Adjusting farm tractor controls.*

← *Adjusting a room light with a dimmer switch.*

NR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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26. Multilimb Coordination

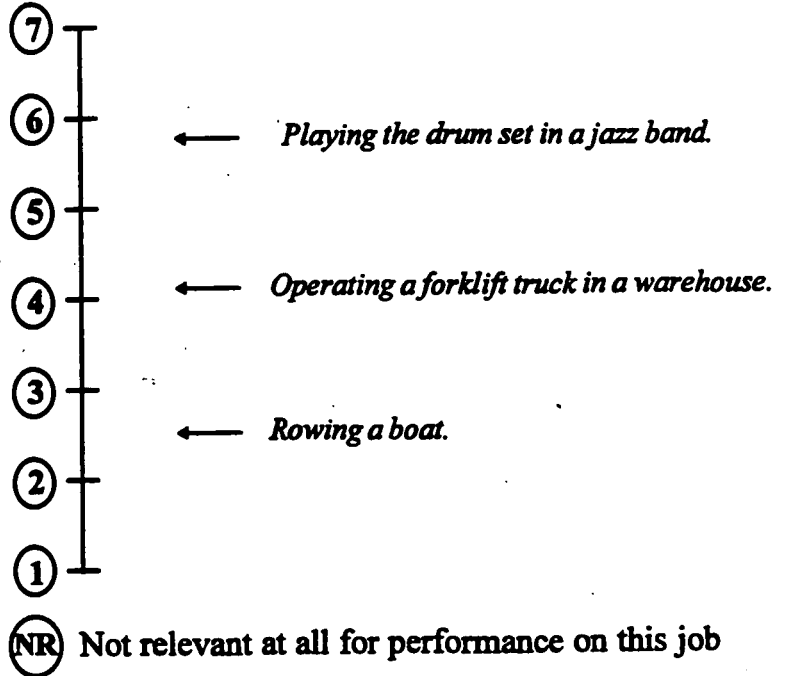
The ability to coordinate movements of two or more limbs together (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the body is in motion.

Level

What level of this ability is needed to perform this job?

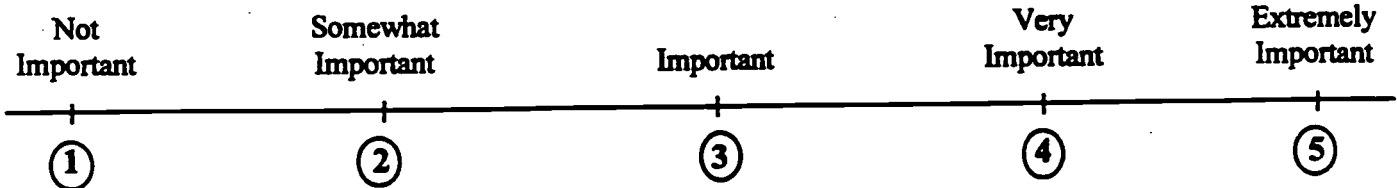
Requires a high degree of coordination to perform very complex movements involving the use of all four limbs together.

Requires a low degree of coordination to perform simple movements using two limbs at a time.



Importance

How important is this ability to performance on this job?



27. Response Orientation

The ability to choose quickly and correctly between *two or more movements* in response to *two or more different signals* (lights, sounds, pictures, etc.). It includes the *speed* with which the correct response is *started* with the hand, foot, or other body parts.

Level
What level of this ability is needed to perform this job?

Requires the extremely rapid selection of the correct movement when there are many signals and many response possibilities.

Requires some speed in selection of the correct movement when there are two signals or two response possibilities.



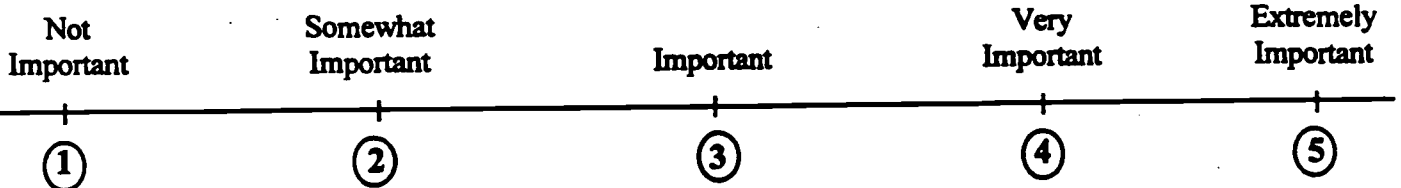
← *In a spacecraft which is out of control, reacting quickly to each malfunction with the correct control movements.*

← *Hitting either the automobile brake or gas pedal in a skid situation.*

← *When the doorbell and telephone ring at the same time, quickly selecting which to answer first.*

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NR Not relevant at all for performance on this job

Importance
How important is this ability to performance on this job?



28. Rate Control

The ability to time the adjustments of a movement or equipment control in anticipation of changes in the speed and/or direction of a continuously moving object or scene.

Level

What level of this ability is needed to perform this job?

Requires precisely timed control adjustments to random changes of a high-speed object moving in several directions.

Requires timed control adjustments to a slow-moving, almost predictable object moving in a single direction.

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- ⑦ ← *Operating aircraft controls used to land a jet on an aircraft carrier in rough weather.*
 - ⑥
 - ⑤ ← *Shooting a duck in flight.*
 - ④ ← *Keeping up with a car you are following when the speed of that car changes.*
 - ③ ← *Riding a bicycle alongside a jogger.*
 - ②
 - ①
 - Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

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- Not Important Somewhat Important Important Very Important Extremely Important
- ① ② ③ ④ ⑤

29. Reaction Time

The ability to quickly respond (with the hand, finger, or foot) to one signal (sound, light, picture, etc.) when it appears.

Level

What level of this ability is needed to perform this job?

Requires extreme quickness in starting the movement when a signal appears.

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← *Hitting the brake when a pedestrian steps in front of the car.*

← *Throwing a switch when a red warning light goes on.*

← *Starting to slow down the car when a traffic light turns yellow.*

(NR) Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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30. Wrist-Finger Speed

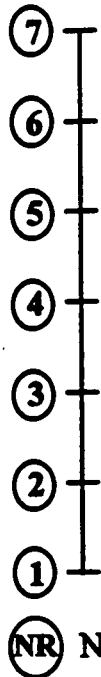
The ability to make *fast, simple, repeated movements* of the *fingers, hands, and wrists*.

Level

What level of this ability is needed to perform this job?

Requires movements of the fingers, hands, and wrists at an extremely fast pace.

Requires movement of the fingers, hands, and wrists at a slow pace.



← *Typing a document at the speed of 90 words per minute.*

← *Carving roast beef in a cafeteria.*

← *Using a manual pencil sharpener.*

(NR) Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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31. Speed of Limb Movement

The ability to *quickly* move the arms or legs.

Level

What level of this ability is needed to perform this job?

Requires very fast movements of the arms or legs when little time is allowed to complete the movement.

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Throwing punches in a boxing match.

Swatting a fly with a fly swatter.

Sawing through a thin piece of wood.

ⓃR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

①

Somewhat Important

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Very Important

④

Extremely Important

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32. Static Strength

The ability to exert maximum muscle force to lift, push, pull, or carry objects.

Level

What level of this ability is needed to perform this job?

Requires use of all the muscle force possible to lift, carry, push, or pull a very heavy object.

Requires use of a little muscle force to lift, carry, push, or pull a light object.

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Not relevant at all for performance on this job

← *Lifting 75-pound bags of cement onto a truck.*

← *Pulling a 40-pound sack of fertilizer across the lawn.*

← *Pushing an empty shopping cart.*

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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33. Explosive Strength

The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.

Level

What level of this ability is needed to perform this job?

Requires bursts of all the muscle force possible to propel one's own body weight or objects.

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(NR)

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←

Propelling (throwing) a shot-put in a track meet.

Running up a flight of stairs with fire equipment.

Jumping onto a 3-foot high platform.

Hitting a nail with a hammer.

Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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34. Dynamic Strength

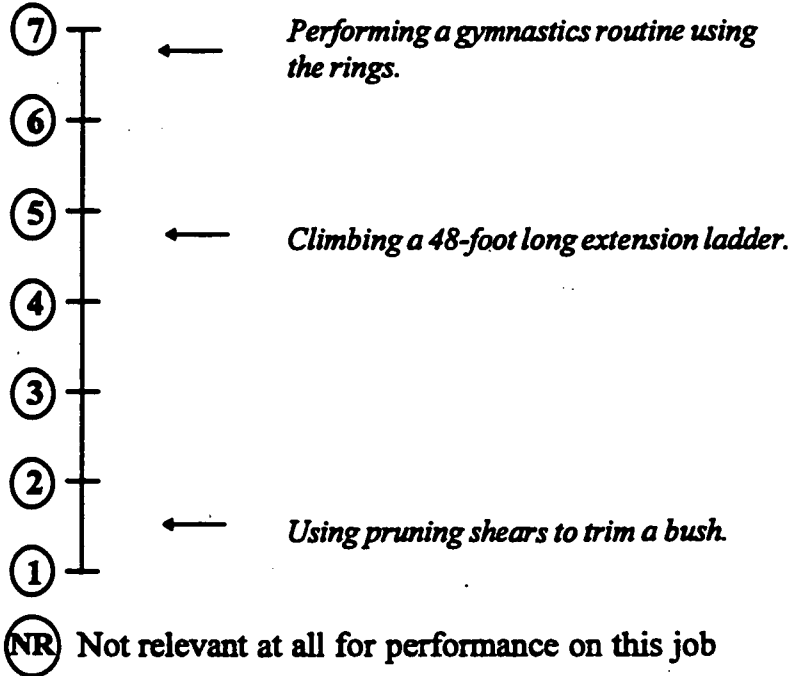
The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.

Level

What level of this ability is needed to perform this job?

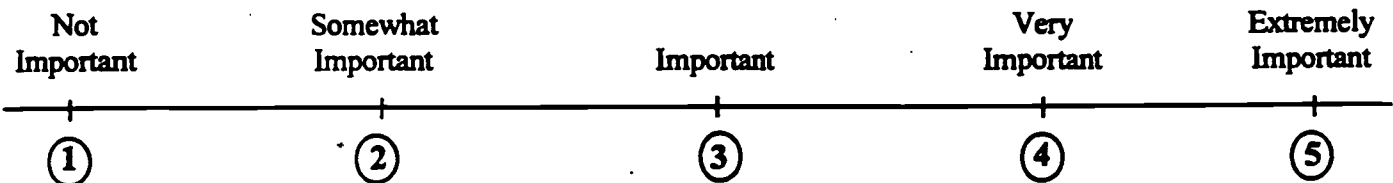
Requires use of all the muscle force possible to hold up or move the body weight or objects for a long period of time.

Requires use of a little muscle force to hold up or move the body weight or objects for a short time.



Importance

How important is this ability to performance on this job?



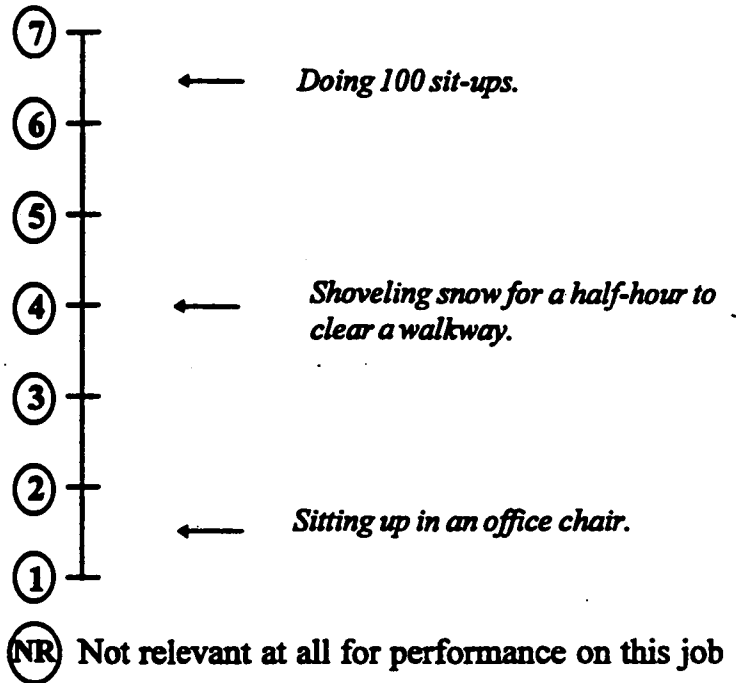
35. Trunk Strength

The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing.

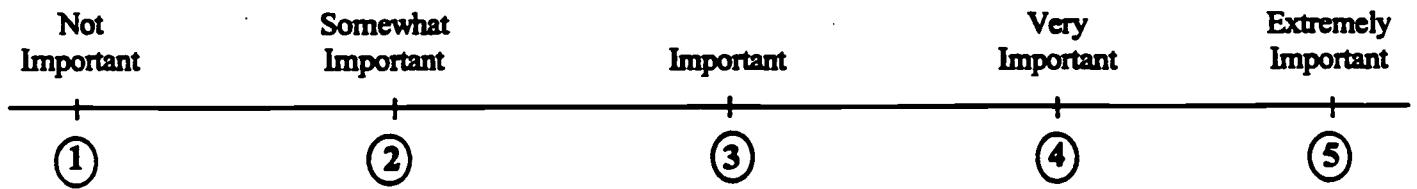
Level
What level of this ability is needed to perform this job?

Requires use of all the abdominal and lower back muscle force possible to hold up or move part of the body for a long period of time.

Requires use of a little abdominal and lower back muscle force to hold up or move part of the body for a short time.



Importance
How important is this ability to performance on this job?



36. Stamina

The ability to exert one's self physically over long periods of time without getting winded or out of breath.

Level

What level of this ability is needed to perform this job?

Requires physical activity of the whole body over a long time, with great strain on the heart and lungs.

Requires physical activity of the whole body over a short time, with little strain on the heart and lungs.

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Not relevant at all for performance on this job

← Running a 10 mile race.

← Climbing 6 flights of stairs.

← Walking a quarter of a mile to deliver a letter.

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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37. Extent Flexibility

The ability to bend, stretch, twist, or reach out with the body, arms, and/or legs.

Level

What level of this ability is needed to perform this job?

Requires a high degree of bending, stretching, twisting, or reaching out into unusual positions.

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← Working under a car dashboard to repair the heater.

← Reaching for a box on a high warehouse shelf.

← Reaching for a microphone in a patrol car.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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38. Dynamic Flexibility

The ability to quickly and repeatedly bend, stretch, twist, or reach out with the body, arms, and/or legs.

Level

What level of this ability is needed to perform this job?

Requires many fast and repeated body bending, twisting, or stretching movements.

Requires a few repeated bending, twisting, or stretching movements in which speed is not important.

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← *Maneuvering a kayak through swift rapids.*

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← *Performing a dance routine as part of a cheerleading squad.*

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← *Hand picking a bushel of apples from a tree.*

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Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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39. Gross Body Coordination

The ability to coordinate the *movement of the arms, legs, and torso together* in activities where the whole body is in motion.

Level

What level of this ability is needed to perform this job?

Requires a high degree of overall body coordination to do difficult sets of movements.

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(1)

(NR)

← Performing a ballet dance.

← Swimming the length of the pool.

← Getting in and out of a truck.

Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not
Important

Somewhat
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Important

Very
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Extremely
Important

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40. Gross Body Equilibrium

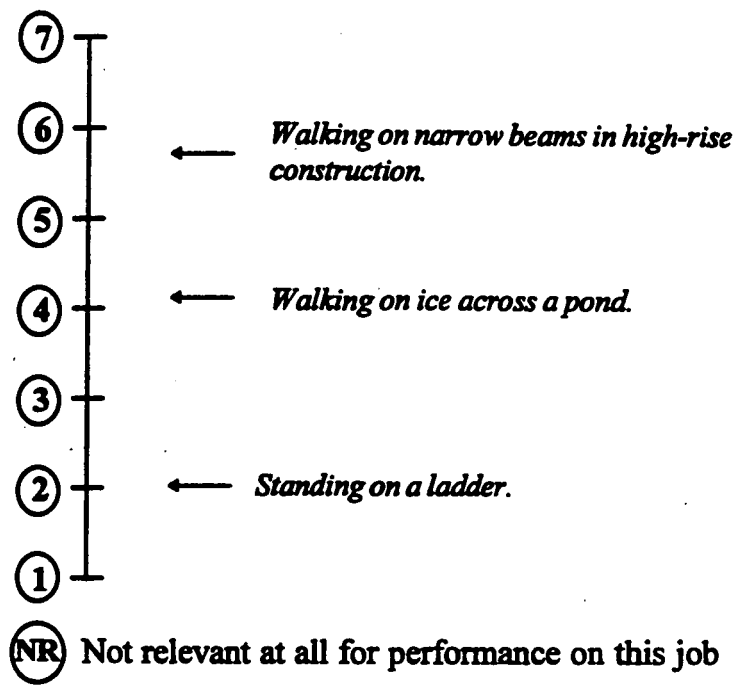
The ability to keep or regain one's body balance or stay upright when in an unstable position.

Level

What level of this ability is needed to perform this job?

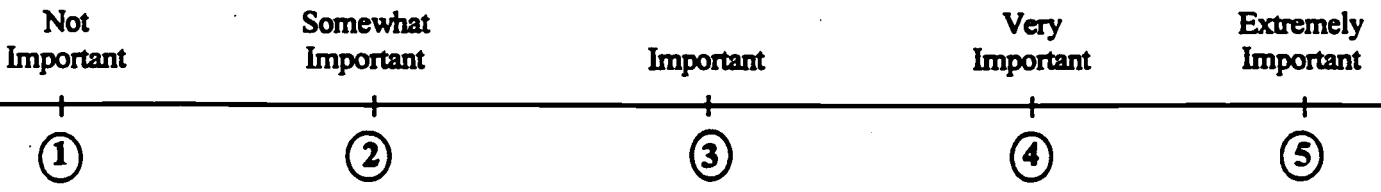
Requires keeping or getting back body balance when many forces are working against keeping body balance.

Requires keeping or getting back balance when a fairly weak force is working against keeping body balance.



Importance

How important is this ability to performance on this job?



41. Near Vision

The ability to see details of objects at a close range (within a few feet of the observer).

Level

What level of this ability is needed to perform this job?

Requires fine visual distinctions at a close range.

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(NR)

← Detecting minor defects in a diamond.

← Reading the fine print of a legal document.

← Reading dials on the car dashboard.

Requires gross visual distinctions at a close range.

(NR) Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

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42. Far Vision

The ability to see details at a distance.

Level

What level of this ability is needed to perform this job?

Requires fine visual distinctions at a distant range.

Requires gross visual distinctions at a distant range.

⑦

← *Detecting differences in ocean vessels on the horizon.*

⑥

⑤

④

← *Focusing a slide projector.*

③

← *Reading a roadside billboard.*

②

①

Ⓝ

Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

43. Visual Color Discrimination

The ability to match or detect differences between colors, including shades of color and brightness.

Level

What level of this ability is needed to perform this job?

Requires distinctions between a variety of colors that are closely related in terms of color, shade, and brightness.

Requires distinctions between a few colors that are very different in terms of color, shade, and brightness.



← *Painting a color portrait from a living subject.*

← *Tracing an electrical circuit which is marked by various colored wires.*

← *Separating laundry into colors and whites.*

(NR) Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

(1)

(2)

(3)

(4)

(5)

44. Night Vision

The ability to see under low light conditions.

Level

What level of this ability is needed to perform this job?

Requires visual detection and identification of detail under extremely low light conditions.

Requires some visual detection under nearly normal light conditions.

⑦

⑥

← *Finding your way through the woods on a moonless night.*

⑤

← *Taking notes during a slide presentation.*

④

③

②

← *Reading street signs when driving at dusk (just after the sun sets).*

①

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

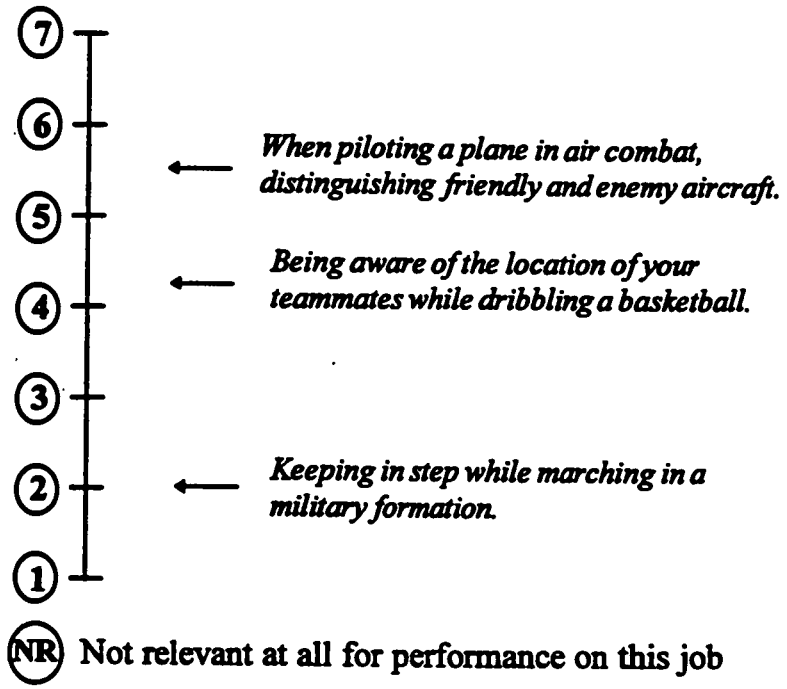
45. Peripheral Vision

The ability to see objects or movement of objects to one's side when the eyes are focused forward.

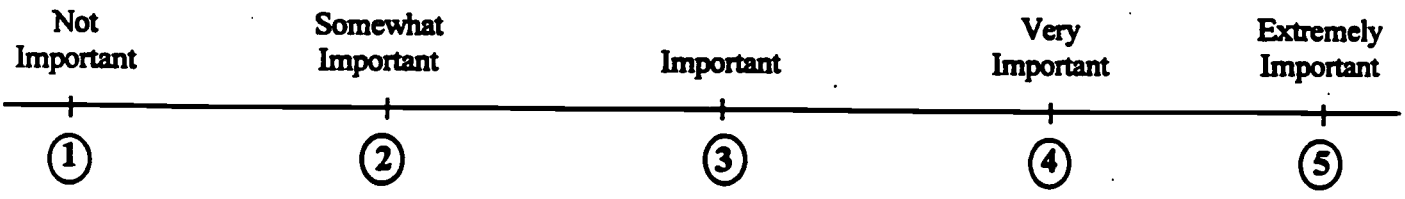
Level
What level of this ability is needed to perform this job?

Requires the detection of small objects or small movements at the edges of the field of vision.

Requires the general detection of relatively large objects or movements to the side.



Importance
How important is this ability to performance on this job?



46. Depth Perception

The ability to judge which of several objects is closer or farther away from the observer, or to judge the distance between an object and the observer.

Level

What level of this ability is needed to perform this job?

Requires the detection of small differences in distance.

Requires the general discrimination of relative positions of objects.

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← *Throwing a long pass to a teammate who is surrounded by opponents.*

← *Operating a crane to move materials from a truck bed to the ground.*

← *Merging a car into traffic on a city street.*

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

47. Glare Sensitivity

The ability to see objects in the presence of glare or bright lighting.

Level

What level of this ability is needed to perform this job?

Requires visual detection of fine detail in very high glare conditions.

⑦

⑥

⑤

④

③

②

①

NR

← Snow skiing in bright sunlight.

← Seeing boats on the horizon when sailing.

← Driving on a familiar roadway on a cloudy day.

① NR Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

48. Hearing Sensitivity

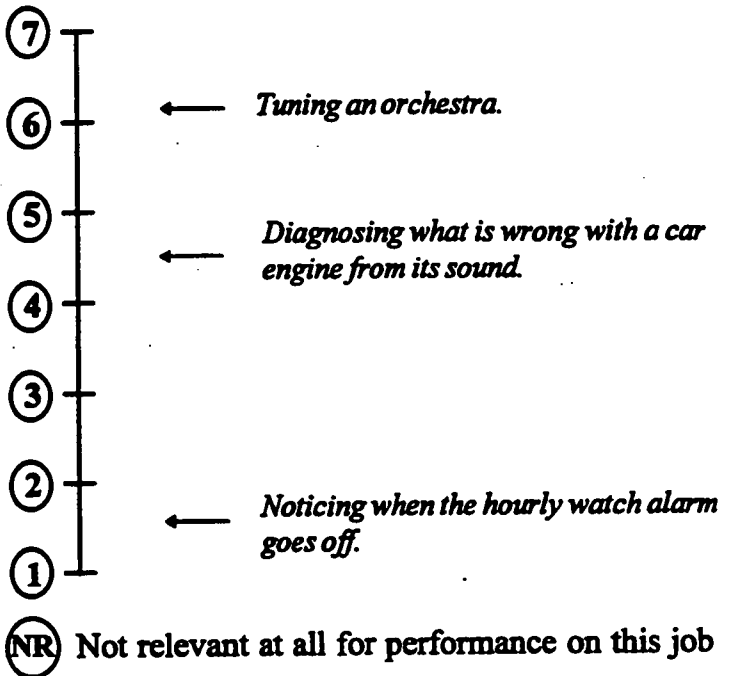
The ability to detect or tell the difference between sounds that vary over broad ranges of pitch and loudness.

Level

What level of this ability is needed to perform this job?

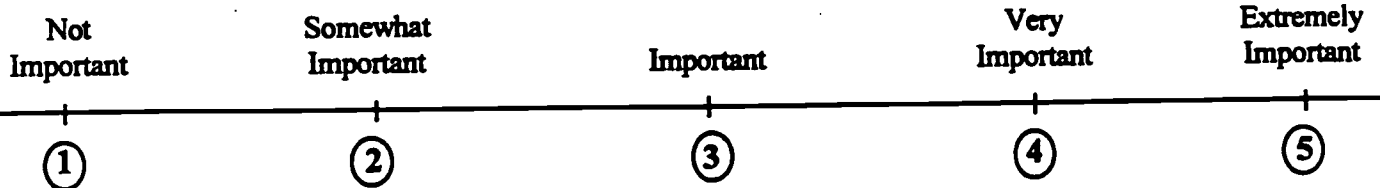
Requires making distinctions between sounds of very similar pitch or loudness and detecting sounds of low intensity.

Requires making distinctions between sounds that are very different in pitch or loudness and detecting sounds of moderate intensity.



Importance

How important is this ability to performance on this job?



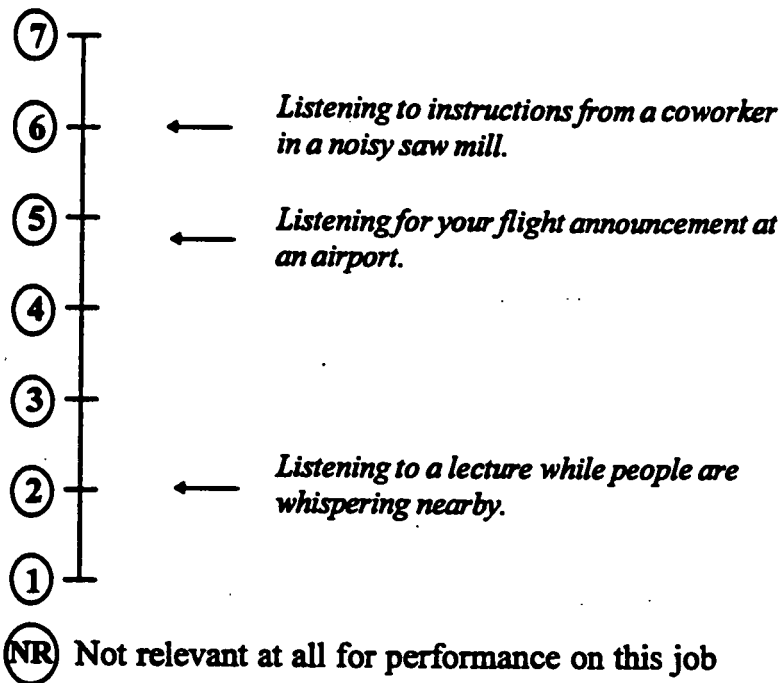
49. Auditory Attention

The ability to focus on a single source of auditory (hearing) information in the presence of other distracting sounds.

Level
What level of this ability is needed to perform this job?

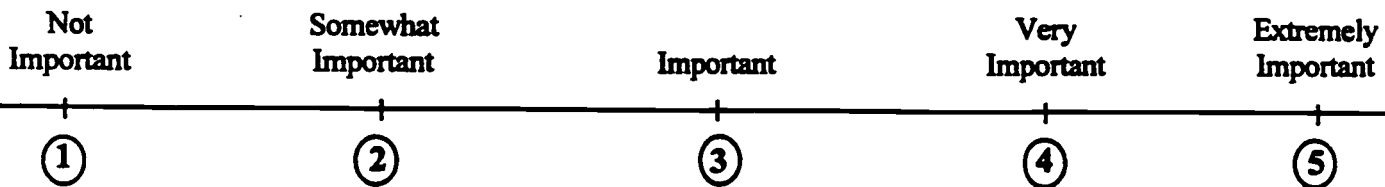
Requires highly focused attention to a complex target sound in the presence of many other distracting sounds.

Requires focusing on a simple target sound in an otherwise quiet situation.



Importance

How important is this ability to performance on this job?



50. Sound Localization

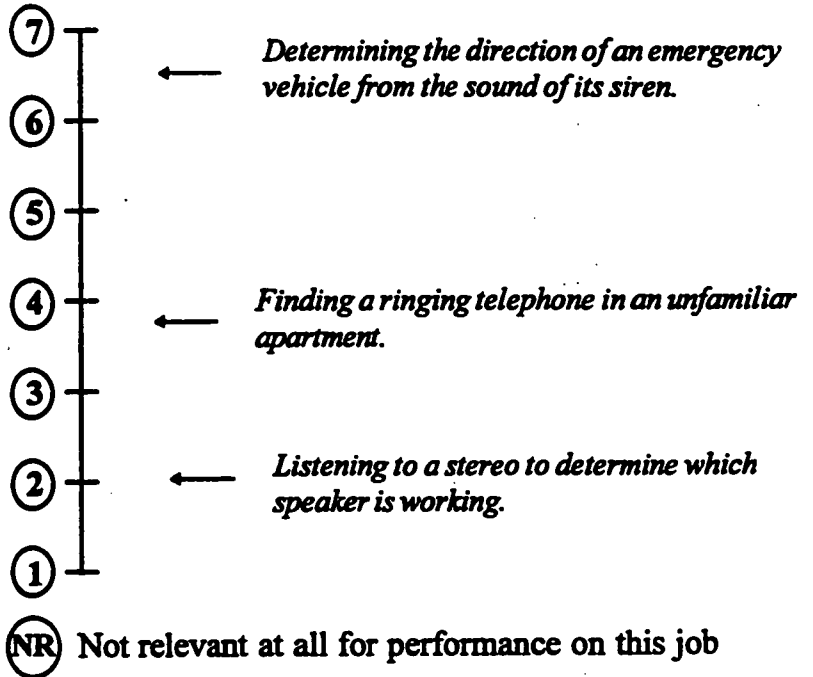
The ability to tell the direction from which a sound originated.

Level

What level of this ability is needed to perform this job?

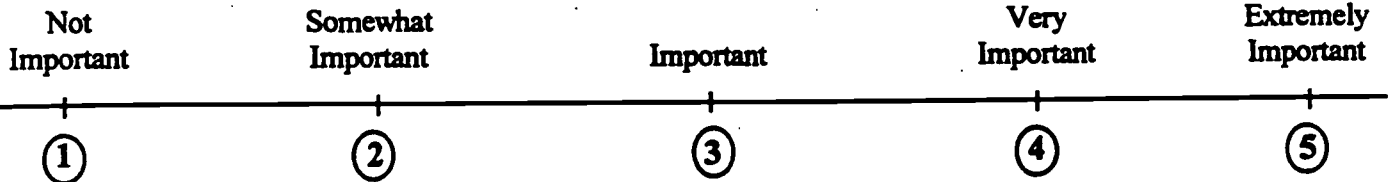
Requires determining the precise location of several sounds that may be faint or producing echoes.

Requires determining the general direction from which a sound originated.



Importance

How important is this ability to performance on this job?



52. Speech Clarity

The ability to speak clearly so that it is understandable to a listener.

Level

What level of this ability is needed to perform this job?

Requires speaking many complex words in a clear fashion.

Requires speaking a few simple words in a clear fashion.

⑦

⑥

← Giving a lecture to a large audience.

⑤

④

← Making announcements over the loud speaker at a sports event.

③

②

← Calling the numbers in a bingo game.

①

Ⓝ Not relevant at all for performance on this job

Importance

How important is this ability to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

APPENDIX H
OCCUPATIONAL VALUES QUESTIONNAIRE

1060

Occupational Values Questionnaire

Instructions for Making Occupational Value Ratings

In this questionnaire you will be presented with a list of 21 statements that describe jobs. Each statement begins "workers on this job;" by "workers on this job," we mean you or anyone else who might have your job in the future.

Read each statement and decide whether it describes your job. Make this judgment by marking through the appropriate number on the AGREEMENT scale. It is a 1 to 5-point scale where 1 indicates that you strongly disagree with the statement and 5 indicates that you strongly agree with the statement.

Below is an example completed by an employee in a particular job. The employee agrees with the statement, "Workers on this job make use of their individual abilities;" neither agrees nor disagrees with the statement, "Workers on this job get a feeling of accomplishment;" and strongly agrees with the statement, "Workers on this job are busy all the time." These judgments are, of course, just examples. The job you are describing may be very different.

EXAMPLE

For each statement, mark an **X** over the appropriate value.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Workers on this job make use of their individual abilities.	①	②	③	④ ^X	⑤
2. Workers on this job get a feeling of accomplishment.	①	②	③ ^X	④	⑤
3. Workers on this job are busy all the time.	①	②	③	④	⑤ ^X

Turn the page to begin the Occupational Values Questionnaire.

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For each statement, mark an **X** over the appropriate value.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. Workers on this job make use of their individual abilities.....	①	②	③	④	⑤
2. Workers on this job get a feeling of accomplishment.....	①	②	③	④	⑤
3. Workers on this job are busy all the time.....	①	②	③	④	⑤
4. Workers on this job have opportunities for advancement.....	①	②	③	④	⑤
5. Workers on this job give directions and instructions to others.....	①	②	③	④	⑤
6. Workers on this job are treated fairly by the company.....	①	②	③	④	⑤
7. Workers on this job are paid well in comparison with other workers.....	①	②	③	④	⑤
8. Workers on this job have co-workers who are easy to get along with.....	①	②	③	④	⑤
9. Workers on this job try out their own ideas.....	①	②	③	④	⑤
10. Workers on this job do their work alone.....	①	②	③	④	⑤
11. Workers on this job are never pressured to do things that go against their sense of right and wrong.....	①	②	③	④	⑤
12. Workers on this job receive recognition for the work they do.....	①	②	③	④	⑤
13. Workers on this job make decisions on their own.....	①	②	③	④	⑤
14. Workers on this job have steady employment.....	①	②	③	④	⑤
15. Workers on this job have work where they do things for other people.....	①	②	③	④	⑤
16. Workers on this job are looked up to by others in their company and their community.....	①	②	③	④	⑤
17. Workers on this job have supervisors who back up their workers with management.....	①	②	③	④	⑤
18. Workers on this job have supervisors who train their workers well.....	①	②	③	④	⑤
19. Workers on this job have something different to do every day.....	①	②	③	④	⑤
20. Workers on this job have good working conditions.....	①	②	③	④	⑤
21. Workers on this job plan their work with little supervision.....	①	②	③	④	⑤

APPENDIX I

WORK STYLES QUESTIONNAIRE

Work Styles Questionnaire

Instructions for Making Work Style Ratings

In this questionnaire you will be presented with a list of 17 work style characteristics.

For each characteristic, please make two ratings: **LEVEL** and **IMPORTANCE**.

(1) **LEVEL**. Ask yourself, "What level of this characteristic is needed to perform this job?" To help you make this judgment, the **LEVEL** scale includes descriptions of activities requiring high, medium, and low levels of the characteristic. These are only examples, so they may or may not apply to the specific job you are describing.

Use the example descriptions to select the number on the scale that indicates the work style characteristic level required by the job, and mark through the appropriate number, from 1 (indicating that a very low level of the characteristic is required) to 7 (indicating that a very high level of the characteristic is required) on the **LEVEL** scale. For example, the level of "Persistence" needed for one job might be much higher than that needed for another job.

THE NOT-RELEVANT (NR) RESPONSE. If the characteristic is **NOT RELEVANT** at all to performance on the job, mark through the **NR** circle that appears at the bottom of the **LEVEL** scale. Carefully read all of the level descriptions before selecting the **NR** option. If you select **NR**, however, there is no need to complete the **IMPORTANCE** rating described below.

(2) **IMPORTANCE**. (Complete only if a 1 to 7 **LEVEL** rating was selected.) Ask yourself, "How important is this characteristic to performance on this job?" For example, "Attention to Detail" might be very important for one job, but less important for another job. For the second job, however, "Innovation" might be very important.

Rate the **IMPORTANCE** of the work style characteristic for performance on the job by marking through the appropriate number, from 1 (indicating that the characteristic is of little or no importance) to 5 (indicating that the characteristic is very important) on the **IMPORTANCE** scale.

Notice that the **LEVEL** of a work style characteristic and the **IMPORTANCE** of the characteristic are different. For example, "Persistence" can be high in **IMPORTANCE** for two different jobs, but the **LEVEL** of "Persistence" that an employee in one job needs may not be as high as the **LEVEL** of "Persistence" for an employee in another job.

Below is an example completed by an employee in a particular job. For the LEVEL rating, this employee believes that a low-to-medium level of "Dependability" is needed to perform this job, so the 3 is selected on the rating scale. For the IMPORTANCE rating, the employee believes that "Dependability" is "Very Important" for performing this job, so the 4 is selected on the rating scale. These judgments are, of course, just examples. The job you are describing may be very different.

12. Dependability

Job requires being reliable, responsible, and dependable, and fulfilling obligations.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

~~③~~

②

①

NR

← Requires very high levels of responsibility and dependability in fulfilling job and work obligations.

← Requires moderate levels of responsibility and dependability in fulfilling job and work obligations.

← Requires minimal levels of responsibility and dependability in fulfilling job and work obligations.

NR Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Below is a second example completed by an employee in a different job. This employee does not believe that "Innovation" is at all relevant for this job. Therefore, the NR option is selected at the bottom of the LEVEL rating scale. Notice that, because the NR option was selected, the IMPORTANCE rating was not completed.

16. Innovation

Job requires creativity and alternative thinking to come up with new ideas for and answers to work-related problems.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Requires a lot of creative thinking and coming up with new ideas related to work, to address job and work issues or problems.

Requires moderate levels of creative thinking and coming up with ideas related to work to address job and work issues or problems.

Requires little creative thinking related to work issues and problems.

~~NR~~ Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

Turn the page to begin the Work Styles Questionnaire.

1. Achievement/ Effort

Job requires establishing and maintaining personally challenging achievement goals, and exerting effort toward task mastery.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

(NR)

← Requires continual extensive effort toward achievement of work goals.

← Requires sustained effort toward achievement of work goals.

← Requires moderate levels of effort toward achievement of work goals.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

①

②

③

④

⑤

2. Persistence

Job requires persistence in the face of obstacles on the job.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

NR

Not relevant at all for performance on this job

← Requires high levels of persistence when work becomes difficult.

← Requires moderate levels of persistence on the job.

← Requires little persistence on the job.

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

3. Initiative

Job requires being willing to take on responsibilities and challenges.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ Not relevant at all for performance on this job

← Requires taking on new or additional responsibilities and challenges.

← Requires considerable willingness to take on new work responsibilities and challenges.

← Requires some willingness to take on new work responsibilities or challenges.

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

4. Energy

Job requires the energy and stamina to accomplish work tasks.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Requires very high levels of energy to get tasks done.

← Requires moderate levels of energy to get tasks done.

← Requires little energy to get tasks done.

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

5. Leadership Orientation

Job requires a willingness to lead, take charge, and offer opinions and direction.

Level

What level of this characteristic is needed to perform this job?

HIGH	⑦	
	⑥	← Requires a strong preference for making decisions and leading or directing other organization members.
	⑤	
	④	← Requires some preference for making decisions and leading or directing other organization members.
	③	
	②	← Requires little leading or decision-making.
LOW	①	
	(NR)	Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important	Somewhat Important	Important	Very Important	Extremely Important
①	②	③	④	⑤

6. Cooperation

Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- (NR)

← Requires working very smoothly and cooperatively with others on the job.

← Generally requires working smoothly and cooperatively with others on the job.

← Requires little interaction with others.

(NR) Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

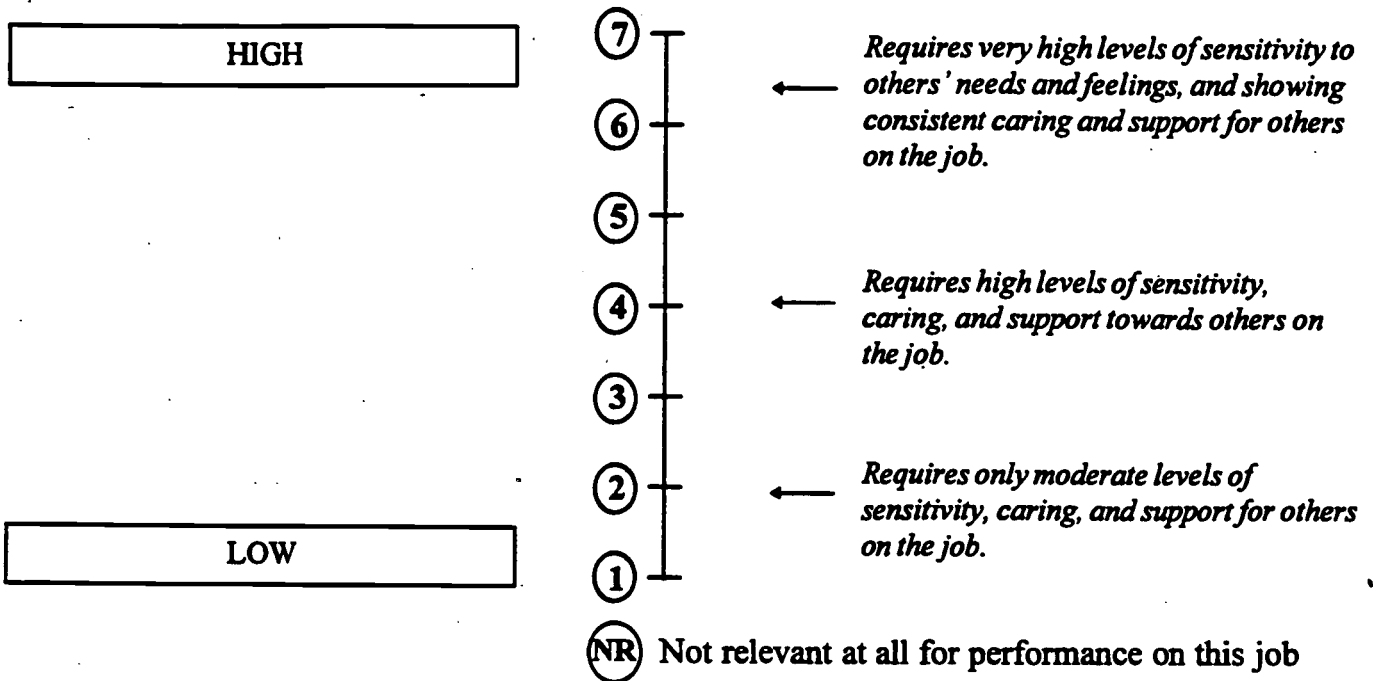
④

⑤

7. Concern for Others

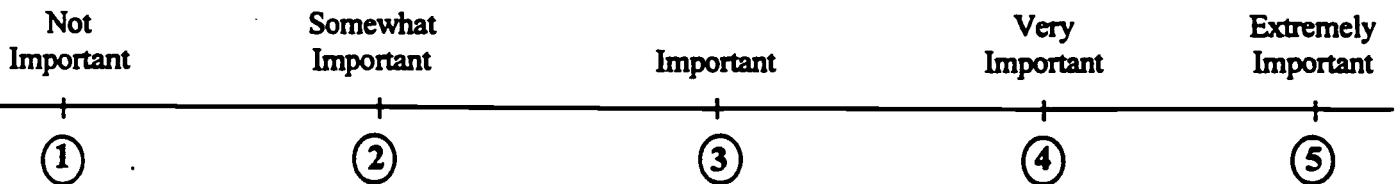
Job requires being sensitive to others' needs and feelings, and being understanding and helpful to others on the job.

Level
What level of this characteristic is needed to perform this job?



Importance

How important is this characteristic to performance on this job?



8. Social Orientation

Job requires preferring to work with others rather than alone and being personally connected with others on the job.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Not relevant at all for performance on this job

← Requires a high degree of participation and working closely with other organization members.

← Requires a moderate degree of participation and, at times, working closely with other organization members.

← Requires little participation with other organization members; usually works alone.

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

9. Self-Control

Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior even in very difficult situations.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

(NR)

← Requires a very high degree of self-control even in difficult situations.

← Requires a high degree of self-control.

← Requires a moderate degree of self-control.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

①

②

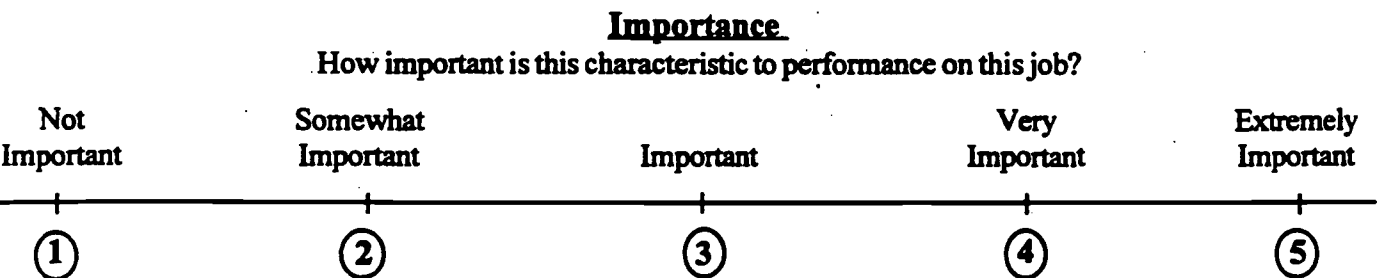
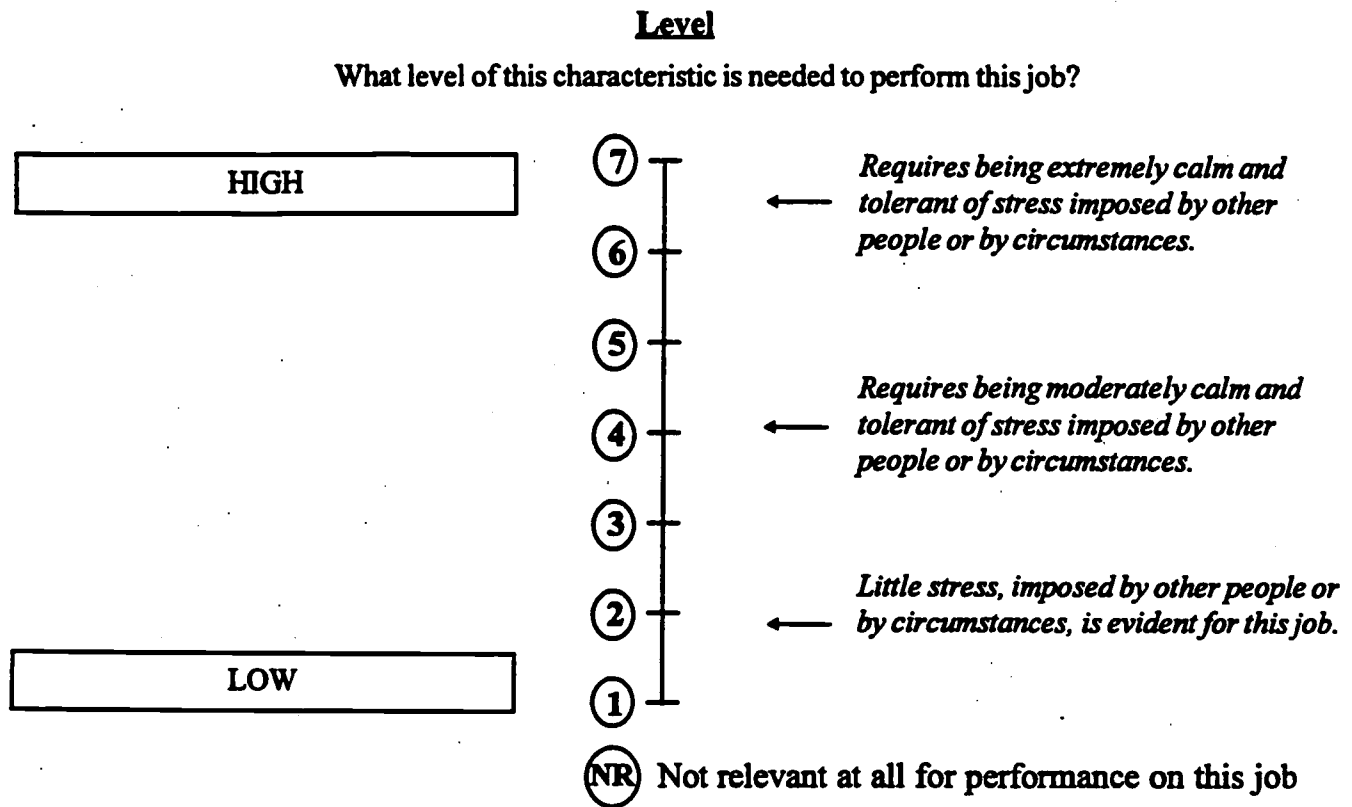
③

④

⑤

10. Stress Tolerance

Job requires accepting criticism and dealing calmly and effectively with high stress situations.



11. Adaptability/ Flexibility

Job requires being open to change (positive or negative) and to considerable variety in the workplace.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- (NR)

← Requires being highly flexible and adaptable even to rapidly changing work situations.

← Requires being moderately flexible and adaptable to changing work situations.

← Little flexibility or adaptability to changing work situations is required for this job.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

①

②

③

④

⑤

12. Dependability

Job requires being reliable, responsible, and dependable, and fulfilling obligations.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- ⓃR

← Requires very high levels of responsibility and dependability in fulfilling job and work obligations.

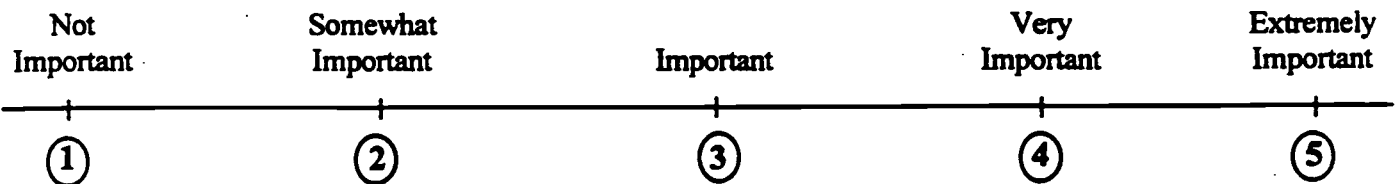
← Requires moderate levels of responsibility and dependability in fulfilling job and work obligations.

← Requires minimal levels of responsibility and dependability in fulfilling job and work obligations.

ⓃR Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?



13. Attention to Detail

Job requires being careful about detail and thorough in completing work tasks.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- (NR)

Requires a very high degree of care and thoroughness in handling details on the job.

Requires a moderate degree of care and attention to detail in handling job duties.

Requires little attention to detail in handling job duties.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not
Important

Somewhat
Important

Important

Very
Important

Extremely
Important

①

②

③

④

⑤

14. Integrity

Job requires being honest and avoiding unethical behavior.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- Ⓝ

← Requires a very high level of integrity and a willingness to abide by a strict code of ethics and behavior.

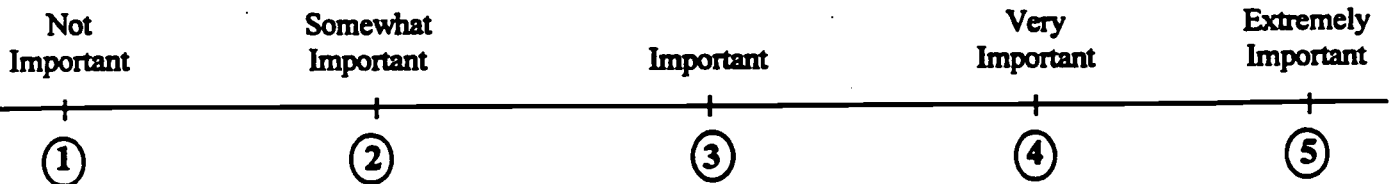
← Requires a high level of integrity and a willingness to abide by a standard code of ethics and behavior.

← Requires integrity, but this is not a central part of the job.

Ⓝ Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?



15. Independence

Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

Level

What level of this characteristic is needed to perform this job?

HIGH

⑦

⑥

⑤

④

③

②

①

(NR)

Requires a very high level of autonomy, with little or no dependence on supervisors or others to get the job done.

Requires a moderate level of autonomy, with some dependence on supervisors or others to get the job done.

Requires little autonomy; job activities are closely supervised.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤

16. Innovation

Job requires creativity and alternative thinking to come up with new ideas for and answers to work-related problems.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

- ⑦
- ⑥
- ⑤
- ④
- ③
- ②
- ①
- NR

← Requires a lot of creative thinking and coming up with new ideas related to work, to address job and work issues or problems.

← Requires moderate levels of creative thinking and coming up with ideas related to work to address job and work issues or problems.

← Requires little creative thinking related to work issues and problems.

NR Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

- Not Important
 - Somewhat Important
 - Important
 - Very Important
 - Extremely Important
-
- ①
 - ②
 - ③
 - ④
 - ⑤

17. Analytical Thinking

Job requires analyzing information, and using logic to address work or job issues and problems.

Level

What level of this characteristic is needed to perform this job?

HIGH

LOW

⑦

⑥

⑤

④

③

②

①

Ⓝ

Requires being very good at analyzing complex issues, data, or problems related to work, and consistently coming up with useful information.

Requires being generally good at analyzing complex issues, data, or problems related to work, and coming up with useful information.

Requires little analysis of issues, data, or problems related to work.

Not relevant at all for performance on this job

Importance

How important is this characteristic to performance on this job?

Not Important

Somewhat Important

Important

Very Important

Extremely Important

①

②

③

④

⑤