

**EVALUATING
ACADEMIC READINESS
FOR APPRENTICESHIP TRAINING**
Revised for
ACCESS TO APPRENTICESHIP

**COMMUNICATIONS SKILLS
CLASSIFICATION OF INFORMATION**

**AN ACADEMIC SKILLS MANUAL
for**

The Construction Trades: Structures

This trade group includes the following trades:
Drywall & Acoustical Applicator, General Carpenter,
Mason (Stone and Brick & Restoration), Reinforcing Rod Worker,
Glazier & Metal Mechanic, Roofer, and
Terrazzo, Tile & Marble Mechanic

*Workplace Support Services Branch
Ontario Ministry of Training, Colleges and Universities*

Revised 2011

In preparing these Academic Skills Manuals we have used passages, diagrams and questions similar to those an apprentice might find in a text, guide or trade manual.

This trade related material is not intended to instruct you in your trade. It is used only to demonstrate how understanding an academic skill will help you find and use the information you need.

COMMUNICATIONS SKILLS

CLASSIFICATION OF INFORMATION

*An academic skill required for the study of the
Construction Trades: Structures*

INTRODUCTION

Classification of information is a system that groups items together based on shared qualities or features, or uses. When information is divided into topics, when tools are stored by how they are to be used or when lumber is sorted by size, each collection is classified into a group according to characteristics they have in common.

Classification indicates an underlying similarity in grouped items. If you recognize features in a new material or tool that are similar to features you are familiar with, you will find it easier to figure out how it works and where to use it. By classifying information you learn to see common patterns in the different techniques you are learning. Being able to classify new information assists you in organizing things, finding material, and making good choices.

In this skill sheet, we look at the following aspects of classification:

- ◆ Classifying into Categories
- ◆ Using Categories to Get Organized
- ◆ Using Classification

PART I

CLASSIFYING INTO CATEGORIES

Let's look more closely at what **classification** means.

Belonging to a group

The word "equipment" covers a large category of items. The word "Tool" is a less general term than equipment but it still represents a broad group or category. If someone asked for a tool, you could hand over any tool from a hammer to a hacksaw. You couldn't make a wrong choice because *any* tool fits the category.

Example:

If someone asked for a screwdriver (a type or class of tool), you'd choose a screwdriver. *Screwdrivers* are a smaller, more specific category, so you would choose a screwdriver and exclude every other tool.

If someone asked for a screwdriver and there were dozens to choose from, you would have to ask, "Which one do you want?"

Which one?

When you ask *which one*, you are asking for more information. To select the right tool, you need a *list of features* or *criteria* that describes the tool. The answer to your question will give you a name or list of features that describes the precise screwdriver needed. It will be something like this, “I need the Phillips, number 3, the one with the chipped, insulated handle.” With these words to guide you, you can match the screwdriver to the description and hand it over.

You can make the right choice. There is probably only one screwdriver that matches the list (the given criteria), chipped handle and all.

Note: We use the terms “given criteria” and “list of features” to mean the same thing.

From general to one

To make the right choice, we moved in three steps:

1. from a very broad category which included all types of tools;
2. to a narrower category which included screwdrivers only;
3. to a list of features that described one item: Phillips number 3, insulated, chipped handle.

Classification involves a process, moving from a broad category of information that gradually narrows to descriptions that apply only to one type or one item only.

Example: Classification may apply to a lesson about composite board in this way:

- **First**, you learn about the general category of product called composite board.
- **Next**, you focus on *types* and descriptions of composite board, such as hardboard, particleboard or wafer board.
- **Finally**, you look at still smaller categories that depend on specific details such as how it is used or various application techniques.

There is a good reason for these steps. Whether you are learning about drawing methods or caring for tools, you need to understand what to expect from a group of items so you can predict results. You need to understand what type of product is best suited to the job and what type is not appropriate. You need to know what is considered odd or unusual behavior in any group of products. This knowledge prepares you to react when something unexpected happens so you can look for the causes. It lets you work from broad patterns in a logical way.

The process of classifying information helps you learn what situations a principle or technique applies to. You start to identify types of material and determine where they are used. You can note what procedures and products work for you and what doesn't.

Passage 1 below about composite board gives you an idea of how classification works. Note how the information starts with the large topic and then moves to more specific information.

Read the passage and answer the questions that follow. The answers are at the end of this skills manual.

Passage 1
Composite Board

Composite board (or panel) is manufactured by many different companies and has various trade names. The core of these panels is made of reconstituted wood with a thin veneer on either side. It is used in sheathing, sub-flooring, siding and interior wall surfaces. Some types are used for drawer bottoms, backs or concealed panels in fine furniture.

Hardboard is made of refined wood fibres which are pressed together to form a hard, dense material. It may be of two types: standard or tempered. *Tempered hardboard* is filled with oils and resins which make the finished product harder, heavier, darker and more water resistant than standard hardboard. It is available with one or both sides smooth, in a variety of thicknesses, in 4 foot widths by the standard 8, 10, 12 and 16 foot lengths.

Particleboard is made of wood flakes, chips and shavings that are bonded together with resins and adhesives. The layers may be made with different sized wood particles: large centre particles provide strength while fine surface particles provide surface smoothness. Its smooth, grain-free surface and stability make it suitable as a base for laminates such as counter tops. As it does not warp, it is a choice for doors and room dividers. Lighter than hardboard, it is available in thicker panels at 4 x 8 foot.

Wafer board is made from high quality flakes of wood bonded together under heat and pressure with a waterproof adhesive. Both sides have some textured surface that is slick. Special treatments can reduce this slickness. It is available in standard 4 x 8 foot panels and a range of thicknesses.

Questions:

1. Which of the following characteristics or uses don't apply to composite boards?
 - a) core made of reconstituted wood
 - b) used as a roofing material
 - c) available in range of thicknesses
 - d) used in making doors

2. Which composite boards would you choose if you wanted a continuous sheathing in a 12 foot length?
 - a) hardboard
 - b) particleboard
 - c) wafer board
 - d) all of the above

3. Which composite panels are waterproof?
 - a) tempered hardboard
 - b) particleboard
 - c) wafer board
 - d) none of the above

Classification leads us systematically; it starts with the main category then it divides information into smaller groupings with details. Here is how it works in Passage 1:

Paragraph one gives you general information about the general category – a building material. It tells:

- what it is and
- where it is used.

Paragraphs 2, 3 and 4 each describe one specific, category in the general category. These paragraphs tell you:

- how this type is made,
- specific features of each type,
- its advantages and disadvantages,
- what it might be best used for.

Why do you need to classify things like this? You do it so you know what to do with an item, machine, or product:

- when to use it,
- when **not** to use it,
- how long it will function, and
- what conditions are best or worst for it.

You are matching the characteristics of a tool or product to the right category (or situation) for its use.

Look from all angles

You often have to look at the right choice from two directions.

- You need to understand what a tool or product is designed to do to know the class of job it's correct for.
- You need to know the requirements of a job to know the class of tool or product that's correct.

This may sound like going in circles, but whichever way you look at it, making the right choice is essential to the quality of the completed project.

Sometimes you go through the process of finding information, only to discover you must compromise.

Example: The steel you want for a particular job is not available for six or eight weeks, and the price is going up. You know the requirements made you choose that material. After discussions with your supervisor, the supplier and, maybe, the client, you decide to make another choice.

But you need to understand your reasons for this choice – how “the next best thing” will perform, delivery time and what it will cost. You must be sure it suits all the conditions and the purpose.

Application

Depending on the job you are doing, you will choose the category (type or class) of product you need.

Example: You will use mild steel fasteners in some situations and alloy steel in others. Once you know about the category of fastener, you can decide on the specific item within that category. It might have a ½ or a ¼ inch diameter, or be a Class 1 or Class 2 fit.

Once you know the set of conditions, you can consult the right information or table for that category and for that specific project.

Classifying will give you a base of information to help you understand more about your topic and your purpose for reading. Classification groups similar things together so, you understand something in general terms first. Then you are ready to learn about the qualities and functions of individual items.

We’ve looked at the right choice from two directions.

1. When you understand what something is designed to do, you know where it can be correctly used.
2. When you know the specific requirements of a job, you can find the class of material that is best.

Whichever way you look at it, making the right choice is essential to the quality of the completed project.

Ask questions

The success of your efforts depends on information. Start with information about the job you are doing: like the type of fabrication and the conditions of the operation. Then choose the products and tools based on information about their characteristics. Understand which situation will call for which mortar, nails or adhesives. When you ask questions, you address all of the requirements.

PART II ***USING CATEGORIES TO GET ORGANIZED***

We all use classification to separate people, things and information into groups and categories. Sorting by categories tells us

1. where to find things – things that are alike are found together: socks are in the socks drawer, tools are in your toolbox, and instructions are in your blue manual;
2. how to use things;

3. how to make good choices; and,
4. how to set priorities.

Example: You have to work in a confined space, so you have to know what confined space means, in terms of the job you will do. Once you have a picture of the space and what angles you have to work at, you can deal with the details. These details include the choice of tools, equipment, safety gear and the types of materials for this situation.

Example: You have to rig a load to hoist material without damaging it. The information you need about *hoisting and rigging* forms a new category in your organization system. Within that category will be details such as safety, equipment and procedures.

When you classify things, you organize them in your mind and you get a sense of the big picture. You can start with a general idea – class or type – before dealing with each individual detail.

When you understand the demands of the project you are doing, you can choose the materials and techniques that match the job specifications. You may be hired to remodel a home. You ask questions to get information before you start. You will use the answers to many of these questions to classify different aspects of the project.

Example: You have been contracted to build a porch. Before you order lumber and select tools, you need some details. You ask questions like these:

- What is the price range?
- What is the scope of the renovation?
- What code requirements have to be considered?
- Is it a new or an older home? When was it built?
- What is the type of framing – platform or balloon?
- Etc.

Organize your thoughts

These questions can be organized into categories to help you keep track of the many choices and decisions that have to be made when starting a project. The classification for a home renovation might include categories such as:

- price estimates,
- code requirements,
- type of footings or foundation,
- framing materials,
- windows,
- finishing materials,
- final clean-up, and
- etc.

For each project, and each decision, you start by focusing on the larger categories and then narrowing in on the smaller details. If you decide to use stone for a floor, you then choose the specific type required within the category. You look at hardness, colours, and special needs.

The right choice

Passage 1 (*Composite Board*) is an example of how information can help you organize material into categories and then use that classification to make good choices. From the classifications made in Passage 1, you gained a sense the characteristics of different products, what to expect from a particular type, how they are similar to and different from each other and finally why a builder would choose one product over another.

Making the right choices at every stage of a project is essential to its successful completion. When your classification system is well organized, you can approach your decision- making from two directions:

1. When you understand what a product or tool is designed to do, you will know where it can be successfully used.
2. When you know the specific requirements or conditions of the job, you can find the product that's correct for the condition.

Before you are involved in hoisting, or any other tricky procedure, study informative material such as the passage below that provide details you need.

As you read Passage 2, take note of the pattern of *classifying*. Answer the questions that follow. Answers are at the end of this skills manual.

Passage 2 Rigging

Though professional riggers and engineers rig loads on a job site, other workers may also be involved in hoisting and landing material. Hoisting equipment should be operated only by trained personnel. All workers who prepare, use, work with hoisting or rigging equipment must be properly trained. Inspect rope regularly and always before using. Two categories of rope, fibre and wire, are used in these operations.

Fibre rope has both natural and synthetic fibre materials.

Manila rope (natural fibre) is not recommended for construction use and is illegal for some uses. The strength of the natural fibre is variable, and it will deteriorate from rot, mildew and chemicals.

Polypropylene (synthetic fibre) is the most common fibre rope used in rigging. It floats, does not absorb water and stretches less than nylon rope. It softens in heat and thus is not recommended where it will be exposed to high heat. It degrades in sunlight so should not be left outside for long periods.

Nylon (synthetic fibre) rope is much stronger than polypropylene rope of a comparable size and construction. However, it stretches, loses strength when wet, and has low resistance to acids.

Polyester (synthetic) rope is stronger than polypropylene but not so strong as nylon.

Questions:

1. Which group of workers fit into the category of workers who **must** be trained when using hoisting equipment?
 - a) workers who check rope
 - b) carpenters
 - c) professional riggers
 - d) all of the above

2. Nylon rope is stronger than polyester rope.

T F

3. Which group of characteristics fit the category that describes polypropylene fibre rope?
 - a) absorbs water, stretches less than nylon rope, extended exposure to sunlight causes it no harm
 - b) deteriorates when exposed to acids or chemicals, suitable for use in high heat, degrades in sunlight
 - c) degrades in sunlight, softens in heat, does not absorb water

Let's look briefly at the first paragraph in **Passage 2**. Note the general category of those who must be trained before using hoisting or rigging equipment, and before inspecting rope - *all* classes of workers. This applies to professional riggers and engineers, and construction workers involved in handling, hoisting and landing material.

Because the category of workers who must be trained includes everyone involved with hoisting, you can guess that hoisting is probably a tricky procedure and that there are probably some safety issues you need to be aware of. You now know why you have to get the proper training if you want to be part of this broad group.

Which One to Choose?

The next section in the passage describes the different types of rope. You first learn two general categories: wire and fibre rope. You then read about the characteristics of each type of fibre rope used in rigging and hoisting.

This passage illustrates several of the advantages of classifying information. The passage moved from general to more specific information.

The successful completion of a project, such as lifting materials to where they are needed, depends on the choices you make at every stage of the project. Your choices depend on your understanding of the situation and the materials available, and on your skill and experience. Developing your understanding and skill depends on the kind of information you have available. Classification is a good method to organize and find that information.

Classification in Tables and Charts

Tables and charts are often used to classify information into categories.

Examples: You might see tables used in the following ways:

- to classify finishing material as regard to their quality, appearance and durability;
- to classify workplace hazards and protective equipment;
- to classify common problems, causes and their solutions; or,
- to compare uses of different materials.

Note: Read all the information related to a table or chart. Important or essential explanations and details are often placed above or below the listed details.

Example: Table 1 is about softwood plywood categories. We have omitted Groups 2 and 4. Notice that important details are sometimes placed directly above or below a table. Read them along with the table.

Table 1: Group Classification of Species

Group 1	Group 3	Group 5
Beech (American) Birch (Sweet & Yellow) Douglas Fir	Alder (Red) Birch (Paper) Hemlock (Eastern) Pine (Jack, Lodgepole)	Basswood Poplar (Balsam)

Table 1: Softwood plywoods are rated by species of wood for strength and stiffness. Group 1 lists the strongest woods. Group 5 indicates the weakest.

At a glance, you see which softwood plywood belongs in each category, which are organized according to strength and stiffness. You can quickly see which plywoods are in the strongest, category and which ones are in the weakest category. If you know the requirements of a given application, these ratings let you assess which plywoods will be suitable.

This table only classes plywood according to their strength and weakness. You will have to go to other sources to find information on features such price, veneer quality and performance rating.

The Language of Classification

The language of classification gives you valuable information. It indicates which category a material, design, or technique fits into. This will make some job decisions easier.

Classification is used to limit your choice to one type or category only. You may not know why you should only choose from a certain category or follow a particular procedure, but the directions tell you how to act.

Examples:

When mixing products, **always** choose products from the **same** manufacturer.

Caution! Do not clean, oil, adjust or repair *any* machine while it is running. Stop the machine and lock the power switch in the “off” position.

Classification can point you to what you should avoid. Restrictions like these direct you to only choose materials or techniques that are allowed and to comply with all relevant building or safety codes. You classify materials and operations so you can match codes and standards to appropriate actions.

Example:

Local building codes prohibit certain classes of materials because of fire hazards or their susceptibility to climate conditions.

Classification can instruct you in how to proceed. To follow directions, you need to know which things are included in the general classification term (solvents, breakers, flashing, or shingles) and which the details you need to classify. Then you can apply the instructions properly.

Examples:

Clean air regulations prohibit the use of some solvents. Check local regulations.

All electrical work must comply with up to date safety and building codes, applicable electrical and cabling standards. Tandem breakers are not permitted; electric cable must be ...

Rather than open valley flashing, some roofers prefer a woven or closed-cut valley design where the two sloping roofs meet.

Strip shingles are the *only* type of shingle that can be used for a woven design.

Classification can define a category of items, and what you must know about its use, safety, and handling etc.

Example:

Controlled products fall into six classes of hazards. Each class is identified by a symbol. For each class, identify uses, ingredients, hazards, clean up, etc...

Classification identifies problems and causes. Once you know where to look for the causes of a problem you can begin to classify specific details of the cause of a particular problem.

Examples:

Cracks and spalling in concrete can result from lack of strength in design and from poor construction practices.

If the process of gathering and organizing information seems long, remember the purpose: To make the right choices to meet the standards of your trade.

PART III

USING CLASSIFICATION

Use classification to get the right result. What are the results of a wrong or poor choice?

Example: What results can you expect from cutting tools if you use a lubricant only when you happen to think about it? What if you've stored the lubricant in a rusty container? To maintain the life and performance of tools, you need information about the right type of lubricant, how often to use it, and how to store it.

Getting the wrong information

If you are not using the right information the result of your choice could be very different from the desired one. Tools may be well designed and manufactured, but choosing the wrong lubricant could result in corrosion of metals and excessive wear to parts. In fact, it could result in tool failure.

Getting the right information

Understanding information often involves sorting out one set of details from another. When you read, pay attention to special instructions, manufacturer's directions or textbook directions that use classification to point out or tell you how to proceed.

Example:

Clean air regulations prohibit the use of some solvents. Check local regulations.

Solvents are a class of liquids. To follow the directions above, you need to know what liquids are included in the term *solvents*, and which ones are regulated by local codes (by-laws or ordinances). You then need to read the workplace regulations.

Examine it all to ensure you meet the criteria.

Examples: You are painting a house with wood siding. Before you get out the ladders, you need to decide what kind of paint to choose.

1. The paint must serve a variety of requirements. It should:
 - reduce decay and weathering of the wood,
 - be tough and durable,
 - be excellent in appearance, and
 - come in at the estimated cost,
2. You need to understand the conditions you are dealing with.
 - the type of climate conditions,
 - the condition of the surface to be painted, and
 - difficulty of reaching the area to be painted.

3. Relate the conditions to the types of paint.
 - Interior paint cannot be used for exterior work, so you can eliminate them.
 - You still have to investigate exterior paints for features such as:
 - toughness and durability,
 - ease of application,
 - cost.
4. Compare advantages and disadvantages of specific brands of paint.

As you read to understand characteristics of products and equipment, you will learn how to avoid defects. When you have collected and assessed information, you can find the right fit. You can investigate the range of choices and select the best one.

At some point, you will put two (or several) lists of information together to make a choice. You may also have to decide which feature on your list is the most or least important. Often, you will need one, two or more sources to complete your task.

What is the situation?

To make the right choices, assess the situation:

- ◆ look at a requirement or group of requirements;
- ◆ understand them; and
- ◆ choose a product or process to suit the requirements.

Example: You are to choose fasteners to join metal sections. Before you get out any tools, you need to understand the conditions and the specific job you have to do. You know that the right fastener installed with the right tool will ensure the right quality of joint. But, which type of fastener should you choose?

- What's being joined?
- Is the fastener required to connect different metals or the same metals but of a different thicknesses?
- Are there any tricks or problems?
- What's available?

You need to be sure you create solutions, not problems. You will want to avoid:

- redoing the job
- damage to any part or tool
- creating safety risks
- finding yourself with the wrong tools or short of material

Passage 3 describes characteristics of various categories of different types of paint. This kind of information is used in choosing the appropriate variety of paint. **Read the passage and answer the questions that follow. Answers are at the end of this skills manual.**

Passage 3
Painting and Maintenance

When moisture content is too high, fungi will grow in wood siding and cause decay. The proper foundation and paint ensures that decay is not a problem. Prime the siding as soon as possible after it has been applied. If the wood has been wet by rain, wait until it has dried. The characteristics of oil, alkyd and emulsion types of paint are listed below.

Oil based: Mainly used on exteriors, it is very slow to dry and is strong smelling. Use in well ventilated areas; good adhesion on chalky surfaces. It is an oil vehicle thinned by solvents such as turpentine and mineral spirits.

Alkyd: Both interior and exterior, it is easy to apply, fast drying, with low odour and tough coating. Not resistant to chemicals, solvents or corrosives. An oil vehicle of resin known as alkyd. It is thinned by mineral spirits and cleans up easily.

Emulsion: Both interior and exterior, available in flat, gloss and semi-gloss. Very fast drying, paints over damp surfaces, low odour, alkalis resistant, unlikely to blister or peel, easy to clean up. Excellent cover and blending characteristics; poor adhesion on chalky surfaces. Special latex primers needed on bare wood. Paint at temperatures above 45 degrees F. Water based mixture: latex paints are in this category. The most common are vinyl (PVA) and acrylic.

Questions:

1. Which category of paint includes the characteristics of low odour, water-based and unlikely to peel?
 - a) oil based
 - b) alkyd
 - c) emulsion (latex)

2. Which are **not** characteristics of alkyd paints?
 - a) easy to clean; fast drying
 - b) slow to dry; strong smelling
 - c) easy to apply, thinned with mineral spirits

3. Which group of products would you choose to cover a chalky surface?
 - a) oil based
 - b) alkyd
 - c) emulsion

4. You could use emulsion paint over bare wood still damp from a sudden rain.

T F

In Passage 4, you had information in front of you from which to work. As you looked for answers, you may have underlined words or made notes in the margins to help you eliminate details that don't apply or to highlight something important. Regardless of how you approached this passage, your object is to match the given products and materials to the situation.

To make the right choice, you need to do the following:

- ◆ look at a requirement or group of requirements;
- ◆ understand them; and
- ◆ choose a product or process to suit the requirements.

To make good decisions, you need to know about each situation in detail. It is just as important to understand why you would **not** choose a product or procedure as it is to understand why you would choose it.

Organize the information

The process of pulling information together will help you make your decisions. Take the time to consider each factor and to understand it. Keep asking questions. Consider the details you would pull together to answer your supervisor's questions. Make sure you cover all possibilities to fit the requirements of a job.

Headings

Apply classification of information to your own notes to organize information. Underline or highlight what is relevant to your project or studies. Eliminate or set aside details that are not. Enter details under headings in a notebook. This is classification of information applied to your own notes.

Example: You can group information about conduits or types of fasteners together. As you proceed through a course, or a job, you can add to this information in a logical, ordered way. It will help you keep the big picture clearly in sight. As you develop the big picture, it is easier to sort out and understand the details about individual items.

Organize your thoughts

You need to organize information methodically. By classifying information, you can learn why a principle or technique applies to a group of situations or why it applies to one situation only. You can identify types of problems, determine their causes and find solutions. You understand and why a recommended welding technique failed to make a good weld. You can record what changed and whether or not you need to change a product or procedure.

CONCLUSION

Your job is to assemble information as thoroughly as possible to help answer the question: "Which is the best choice for this situation?" By starting from broad categories and working toward the specifics of single products, you can investigate the range of choices and select the best one.

Work from reliable sources found in text and trade books, tables, manufacturers, suppliers and the experts in your field. As you tackle a new topic or chapter, look at how *classification* teaches you your trade. Use it yourself to move from broad, general information (about welding or engines) that applies to all items in the category. Then move to information that focuses on and describes individual categories or types. Continue to learn in this way until all the details about each item are covered.

Summary

1. **Classification is a process of organizing information.** Information usually starts with a general category and moves to a narrower, more specific categories.
2. **Know your purpose** for classifying information.
3. **Decide** which features are most important.
4. **Match** a list of features to match with a list of requirements.
5. **Use questions** such as “*which one?*” to help define appropriate choices.
6. **Classify features and conditions** to determine the most suitable choices. Experience, knowledge and access to experts will help direct your search.

ANSWER PAGE

PART I **Passage 1, Composite Board**

1. Which of the following characteristics or uses don't apply to composite boards?

b) used as roofing material. From the general and specific description of the different types of composite board, you can predict that the glue used to make the product is probably not moisture resistant enough to withstand the conditions on a roof.

2. Which composite boards would you choose if you wanted a continuous sheathing in a 12 foot length?

a) hardboard. Hardboard is the only type of composite board that is described as coming in varying lengths. Because the information is organized in categories, you can quickly check each category for sizes.

3. Which composite panels are waterproof?

d) none of the above. This is not a trick question. You have to be careful about detail. Passage 1 says that hardboard is "more water resistant than standard hardboard." It also tells us that wafer board is bonded with a waterproof adhesive. This, however, is not the same as being *waterproof*, so choose Answer d). You would have to investigate further to find out if any of the composite boards are waterproof.

PART II **Passage 2, Rigging**

1. Which group of workers *must* be trained when using hoisting equipment?

d) all of the above

Each group of workers belongs to the category of workers who *must be trained* when preparing rigging, working with rigging/hoisting equipment and inspecting rope or other equipment.

2. Nylon rope is stronger than polyester rope.

T Each type of fibre rope is followed by a brief description. Under the heading **Polyester**, it says polyester rope is *not* as strong as nylon. Therefore, nylon is stronger than polyester.

3. Which group of characteristics fits the category that describes polypropylene fibre rope?

c) degrades in sunlight, softens in heat, does not absorb water. This question asks you to match a list of features to a type of rope. Answer c) lists features that belong in the category of polypropylene rope. Answer a) contains two features that don't fit: *absorbs*

water and extended exposure to sunlight causes it no harm. Similarly, Answer b) contains features that don't fit: deteriorates when exposed to acids or chemicals and suitable for use in high heat.

PART III Passage 3, Painting and Maintenance

1. Which category of paint includes the characteristics of low odour, water-based and unlikely to peel?
2.
 - a) Emulsion. This question asks you to match characteristics of the various types of paints. Emulsion fits the characteristics listed.
3. Which are *not* characteristics of alkyd paints?
 - b) slow to dry, strong smelling. These are characteristics of oil-based paint, not alkyd. Careful reading tells you the differences.
4. Which group of products would you choose to cover a chalky surface?
 - a) oil-based. The passage mentions that oil-based paints are good on chalky surfaces and emulsion paints aren't. It doesn't say anything about alkyd paint, so a) is the best answer.
4. You could use emulsion paint over bare wood still damp from a sudden rain.

T or F ? The information about this situation is somewhat ambiguous. Paragraph one states that you should wait before painting until the wood dries, if it is wet by rain. Paragraph four says that emulsion paints can go over damp surfaces. This is a case where the answer isn't clear. Go to other sources: a more experienced painter, the paint label, or a paint supplier.