

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

**COMMUNICATIONS SKILLS  
DRAWING CONCLUSIONS**

**AN ACADEMIC SKILLS MANUAL  
for  
The Horticulture Trades**

This trade group includes the following trades:  
Arborist, and  
Horticulturist

*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.**

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# COMMUNICATIONS SKILLS

## DRAWING CONCLUSIONS

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*An academic skill required for the study of the  
Horticulture Trades*

### **INTRODUCTION**

*Drawing conclusions* means making a decision through a process of reasoning. It involves finding facts, examining opinions, and determining causes and effects. From this background, the relevant information is selected and used to reason through to the best conclusion.

For example, your pruning shears won't get through a branch that you need to cut. What conclusion can you draw that might lead to a solution to the problem?

First you look for the relevant information. You observe the strength of the shears and their condition, and check how thick the wood is. You check the manual to find out what kind of shears should be used for this thickness of branch. You reason that the dull edge on the blade is the cause of the problem. You come to the conclusion that you need to sharpen your shears. You have identified the problem and decided on a solution.

As you can see, this is a very useful process when you need to make a decision on the job. When you think about what you can observe and you compare it to what you know, you can come to a conclusion that can guide you in making sound decisions.

You draw conclusions by comparing information obtained from different sources. Your information might come from texts and manuals, from listening to knowledgeable workers and teachers and from experience gained working on projects. Here is an example from an everyday situation.

**Example:** The ice on Lake Simcoe is thin, so you decide it won't be safe to snowmobile. Knowing the condition of the ice and the weight of a machine, you conclude there's a risk of an accident. The next day, when the newspaper reports a snowmobiler went through the ice, you realize you made the right conclusion.

In this skills manual, we examine the process of drawing conclusions by looking at the following:

- ◆ Selecting information for valid conclusions
- ◆ Drawing valid conclusions
- ◆ Recognizing conclusions

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## **PART I**

### **SELECTING INFORMATION FOR VALID CONCLUSIONS**

A **valid conclusion** is one that is reasonable and that is based on fact as much as possible. The facts you use to draw a conclusion will come from instructors, textbooks, knowledgeable workers and your careful observations. Use this information and your experience to think through to a reasonable answer or solution – in other words, to a valid conclusion.

**Example:** An *insulator*, or non-conductor, does **not** allow electric current to flow through it whereas current flows easily through a *conductor*. You discover current is flowing in a wire where it shouldn't be; you need to know why because this is a fire safety issue.

If there is no knowledgeable person available to ask, you will have to look at the wiring system for clues. Check any information you have on conductors and insulators. The information you read and your observations should help you draw a reasonable conclusion as to the cause of the problem.

If you can't find a simple cause and solution, shut off the power or the switch and wait for an electrician to come. Turning an electrical problem over to a trained technician is a reasonable conclusion in this situation.

Read Passage 1, below, as an example of information that might explain the reason for the problem.

#### **Passage 1**

##### **Conductors**

A material that allows an electric current to pass through it easily is called a *conductor*. Although there is no perfect conductor of electricity, conductors can be divided into three classes: good, medium and poor.

##### **Insulators (Non-Conductors)**

If a material does not allow enough electric current to pass through it to be calculated, it is called an *insulator* or *non-conductor*. Although there is no such thing as a perfect insulator, insulators are used to prevent electricity from flowing where it is not desired.

**Note:** Moisture has the ability to change an insulator into a poor conductor; it has the ability to change a poor conductor into a medium conductor.

When you start reading this passage you may be thinking that the problem is with an insulating material – maybe a wire has been nicked.

Then you see the reminder about moisture and recall the dampness in the basement. You conclude that moisture is a more likely source of the problem. Looking for moisture somewhere near the insulators in the electrical system is the first thing you should do. If you don't find a source of moisture, you need to keep looking for other reasons for the problem, so you can reach a valid conclusion.

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## Understanding Relationships

Drawing a valid conclusion often depends on understanding the relationship between two things. To discover the connection between the cause of a problem and its effect, such as the situation above, you might follow the following steps:

- You look for information and read that moisture has an effect on an insulator.
- You conclude that this effect could be a possible reason for the problem.
- You go back and look for moisture at the site
- If there is moisture, you can conclude that this is a possible cause.
- If there is no moisture, you need to keep looking.
- In either case, you reasonably conclude that this is a situation for an experienced electrician.

These steps are useful when you have a problem to solve. In many cases, looking at the relationship between different parts of a system will lead you to a reason for the problem. If one thing is not working the way it is supposed to, it can lead to difficulties.

Using the following steps to observe cause and effect relationships can often lead to a solution or even prevent a problem in the first place.

1. You observe the situation
2. You find information about what might cause this situation.
3. You compare your information to what you see.
4. You reach a conclusion about a likely cause.
5. You check to see if the conclusion seems reasonable.
6. You decide on an action based on your conclusion.
7. After carrying out this course of action, you recheck to see if it solved the problem.

Passage 2 is about the factors affecting soil temperature. **Read Passage 2 and answer the questions that follow. Answers are at the end of this skill manual.**

### Passage 2 Soil Temperature

Soil temperatures in each zone are balanced over the seasons and over night and day. Plants need a certain soil temperature range to grow and seeds to germinate. Each plant has a soil temperature range that is best suited to it. Similarly, plant roots depend on the optimum soil temperatures for best growth. Soil temperature depends on weather conditions and the soil itself.

Sunlight is partially absorbed by soil. Dark soils tend to absorb more than pale soils. For this reason they dark soils tend to be warmer. The absorbed sunlight also warms both minerals and water contained in the soil. However, it takes much more energy to warm water (about five times). For this reason, sandy soils warm more quickly and stay warmer longer.

Growers need information about soil temperatures to better determine planting times and harvest dates. If growers want an earlier vegetable crop, for instance, they may prefer a coarse soil which allows them to plant earlier.

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Soil temperatures can be altered: Mulches which are light in colour insulate the soil because they reflect rather than absorb sunlight. This is used for plants needing a lower average soil temperature. For crops which require warm soils, the mulch should be dark because it will absorb sunlight, thus raising soil temperatures. The raised temperatures result in faster growth and better production. Conservation tillage is a method which leaves crop residues on the surface of the soil. The residues reflect sunlight and reduce drying of the soil. Therefore, the soil temperatures will be cooler – as much as several degrees. This can affect production of the plant and can alter harvest dates.

**Questions:**

1. Which of the following results might you expect if you added sandy soil to a soil with a higher moisture content?
  - a) The soil would now warm faster than it did before.
  - b) The soil would produce better plants at a faster rate than before.
  
2. If you do **not** use the correct mulch for a plant, you can conclude the following:
  - a) The soil may be warmer (or cooler) than expected.
  - b) Roots of plants may not establish good growth.
  - c) Moisture in the soil may be reduced.
  - d) All of the above
  
3. If you alter soil temperature in recommended ways, you can predict planting and harvest dates.

**T F**
  
4. You can conclude that soil temperature is more important to crops than weather conditions.

**T F**

Passage 2 describes several factors related to soil temperatures. Having this information will ensure that you understand their effects on plant growth. You can conclude from the passage that if you used the wrong kind of mulch or ignored the type of soil, the results will not be satisfactory. For example, if a black plastic mulch is used where a light mulch such as straw is recommended, the result could be soil which is too warm. There could be root damage to plants or the soil might become too dry for the crop.

Note important details before you start a job. Read, ask questions, and use the information available to arrive at a practical conclusion as to how to carry out a job. Find out what factors will have an effect on the result. You may need to experiment and do some tests to check that you have drawn a logical conclusion.

**PART II**  
**DRAWING VALID CONCLUSIONS**

Sometimes you know the result, but not the exact cause.

**Example:** When you read the newspaper report about the snowmobiler going through the ice on Lake Simcoe, you concluded that the ice was too thin for snowmobiling. This is probably true, but there could also be other factors involved.

You might have a good idea of what happened but you might be missing some of the reasons for the problem. For example, being unfamiliar with the lake and travelling over an area of strong currents could be factors in the snowmobile accident. Bad visibility might also have been a factor. You can conclude that thin ice was the cause of the accident but you don't know why the snowmobiler ended up over the unsafe ice in the first place.

### **Getting all the Pieces**

The same principle applies to paying attention to all the information concerning procedures you use at your workplace. If you make quick observations or if you skim through your manual, you might go ahead, assuming that you have all the pieces. But there is also the possibility that you have missed something. You can't draw a valid conclusion or find a solution to a problem if you overlook important, available information.

*A valid conclusion relies on having, and examining, all of the information important to that situation.*

Read Passage 3 below. Consider the conclusions you might draw from the information given. **Answer the questions which follow. Answers are at the end of this skills manual.**

#### **Passage 3 Two-cycle Fuel Mixtures**

Most two-cycle engines are lubricated by oil that is mixed with gasoline. The correct quantity and quality of oil must be mixed in the correct proportions. Even with the correct proportions, a two-cycle engine can be seriously damaged if the gasoline and oil are not mixed properly. To ensure they are properly mixed, first pour some of the gasoline into a clean container. Next, the oil is added to the gasoline and shaken (agitated). The remainder of the gasoline is then added and agitated again thoroughly. If stored for several weeks, add a gasoline stabilizer so that oxidation, varnish and corrosive acids do not form. These can ruin an engine.

Too little oil can cause the engine to overheat. Overheating causes parts to expand, this expansion may result in scoring of machined surfaces. As a result, the pistons may eventually seize in the cylinders. Too much oil will cause incomplete combustion resulting in rapid buildup of carbon. This will foul spark plugs and add weight to the pistons.

#### **Questions:**

1. If the engine overheats, you might conclude the following:
  - a) oil and gas were not properly mixed.
  - b) oil and gas were not mixed in the proper proportions.
  - c) the fuel was not properly stored.
  - d) all of the above.
2. You can conclude that too much or too little oil will be the cause of fouled spark plugs.

**T F**

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3. From this passage, what type of engine damage would result from improper storage of fuel?
    - a) scoring of machined surfaces
    - b) sluggish pistons
    - c) corrosion of parts
    - d) none of the above
  
  4. Piston damage could result from too little or too much oil.

T F

### Getting the whole picture

Factors that are not stated may also affect the results of a job. For example, suppose you followed the sequence outlined in Passage 3 for mixing fuel and still had problems with the stored fuel. Is something else different? Was the container clean? Was it clearly marked so that nothing was added by mistake? Was it full so that condensation would not affect the mixture?

When looking for the cause of a problem, you usually start with the obvious reasons. But, sometimes you need to check everything. Make sure you don't reach a conclusion based on only part of the information. You want all the available information before drawing a conclusion. Always get the whole picture first.

**Example:** Suppose you have been mixing chemicals on the job. After a few months you come down with flu symptoms – headaches, dizziness and nausea. The symptoms hang on and you see your doctor. Your doctor asks about factors at work that might cause the symptoms, but you say everything seems fine. You and the doctor decide this is just a nasty bug. You carry on at work but the flu symptoms don't go away.

A few weeks later you read this on a container:

**NOTE: Vapours from this product can cause headaches and nausea. Proper ventilation or discontinuing use of this product is recommended for this and other reasons.**

You wonder if your flu-like symptoms are caused by breathing in the fumes from this product. From your observations, it seems likely. You can conclude that the fumes probably caused your symptoms. You can now act on this conclusion by making sure your work area is adequately ventilated.

In this example, your first conclusion was that you had the flu. You based this on your past experiences. It felt like other flu that you have had. However, when the flu didn't get better, you realized that there may be another reason for your symptoms.

From the information on the container, you learned about another factor that might be causing the problem. You acted on that information by providing better ventilation and your symptoms disappeared. You drew a new conclusion based on further information and observation.

### Is it a valid conclusion?

If a first conclusion doesn't provide a practical solution, you have to keep looking. When you add new information, you should then be able to draw a different, and more valid, conclusion. In other words, new information can lead to a new conclusion when the first conclusion was not valid.

Making an estimate about a job is one form of drawing a conclusion. To come up with a reasonable estimate requires several steps

- ◆ You have to know what options are available.
- ◆ You have to find out the cost of each option.
- ◆ You have to compare the advantages and disadvantages of each option.
- ◆ Then you have to weigh the cost against the advantages and disadvantages. You will have to decide what the most important factors in making this decision are.
- ◆ Reaching a final estimate involves coming to a conclusion as to what the best option is for the cost.
- ◆ You can now present this estimate to the customer along with reasons for your choices.

To make sound decisions in the horticultural trade, you study information in texts, manuals and diagrams so that you learn the material and can apply it. You observe different factors in the workplace for the same reason - so you can understand and evaluate what you see. What you read (theory) and what you do (practice) are essential to making good decisions. You read and learn when working with written material; you observe and learn when gaining hands-on experience.

**Example:** You experience a mild shock while drilling. You take a good look at your drill and notice that the cord is frayed. You know from your reading that frayed cords can cause shocks. After concluding that the frayed cord is the cause of the electrical shock, you unplug the drill carefully and set it aside until the cord is replaced.

Passage 4 describes factors which contribute to the effective use of pesticides. **Read the passage and answer the questions that follow. Answers are at the end of this skill manual.**

#### Passage 4 Pesticide Application

Damage to plants can be controlled. However, cultural and chemical methods will only be effective if applied at the right time, in the right way, on the identified source of the problem. It is important, therefore, to first identify the cause of damage. For example, if damage is caused by an insect, the insect must be identified. An insect development calendar for your area will show the life cycle of the insect so the active period can be identified. This information will help determine the best time and intervals for control.

Some domestic pesticide mixtures are multipurpose: they contain both insecticides and a fungicide. If plant damage is caused by a fungus only, the application of an insecticide is unnecessary. On the other hand, if the damage is caused by an insect and a mixture which includes a fungicide is applied,

the plant may develop a resistance to the fungicide. This then renders the fungicide useless for that plant while failing to control the real culprit. Also, as some plants can withstand a certain amount of damage, it is important to identify whether any control is required.

The time for application may vary each year because weather and growing conditions will vary, especially in spring. Otherwise treatment times and intervals in the control of insects are based on two factors: the life cycle of the insect and the residual activity of the pesticide.

Each pesticide product specifies the rate of application on the label. This should be strictly followed to avoid over-application which can lead to injury to the plant, injury to beneficial insects, or to harmful residue remaining on edible crops. On the other hand, under-application may not solve the pest problem. Each pesticide contains an active ingredient. The rate for applying the pesticide depends on the concentration of this ingredient. The rate also depends on the type of insect or disease encountered.

**Questions:**

1. You spray a pesticide at the correct rate for the identified insect, but there is no improvement. What could you conclude?
  - a) The time in the life cycle for spraying this insect was not right.
  - b) You applied the insecticide during spring.
  - c) There was pesticide residue on the plant.
  - d) All of the above.
2. A multipurpose pesticide can be used to rid plants of fungus.

**T F**

3. Effective pesticide application depends on which of the following factors?
  - a) The rate of application and concentration of active ingredient.
  - b) Identification of the pest and its life cycle.
  - c) Identification of weather and growing conditions for that year.
  - d) All of the above.
4. Under-application of a pesticide would result if the concentration of active ingredient was **not** calculated for the rate of application.

**T F**

In this passage, you learn about factors which affect pesticide effectiveness. You can conclude that you will get you the best results if you identify the pest first so you know why you are spraying. You also need to find out when to spray, and what method and product should be used. When you understand the relationships between such factors, you can draw conclusions that will get you the reasonable results. You can also look for reasons when the application is not effective.

**Look ahead**

When you read technical information such as the passages about fuel mixtures and pesticide application, you can make **predictions**. To make a prediction, you must read the instructions and then think ahead to what the outcome of following those steps might be

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You can predict that your outcome will be successful if you follow the provided instructions, use the right equipment and give yourself enough time for the job. You can also predict that you will not get the right result if you do not follow the directions exactly or if you work without the required knowledge and skills.

***Note:** Because of other factors – unknown to you or overlooked – this may not result in a valid conclusion. If you do not arrive at the correct conclusion, you will have to continue researching until you discover it.*

### **Look behind**

You can turn the process of drawing conclusions around by *looking backwards*. If you have discovered a problem, you'll need to go back to find a cause. You may have to go through the instructions sentence-by-sentence. After reading the information again, check your technique and tools, and then observe what is actually happening on the job. This will help you to identify the cause of the problem. Then you can draw a conclusion that will let you figure out how to avoid the problem next time.

### **Process of elimination**

The examples in this unit ask you to use a process of reasoning for several reasons. You might want to:

- decide what is the best way to proceed,
- choose a material,
- find an answer to a question, or
- find a solution to problem.

To come to a reasonable conclusion in these cases, you might use a process of eliminating possibilities. You make a preliminary selection between possible choices as a way of getting started.

- First, you try to eliminate the least likely or the weakest possibilities first.
- Next you look carefully at the more likely possibilities, based on your reading and experience.
- Then you pick what looks like the best choice.
- If you get more information or if your choice doesn't seem to be working out, you start the process over.
- You might have to look for more options to consider.

As you begin to see the relationship between various factors, you can begin to draw conclusions that work for your situation.

**Example:** You know that a change in altitude means a change in atmospheric pressure. If you are working at a different altitude than sea level, you conclude that a pressure gauge will not give you an accurate reading unless it is adjusted. Drawing this conclusion will lead you to check your equipment before you use it and to make the proper adjustments.

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### Is this valid?

When you see what happens on a job, you use what you see to draw conclusions about what works and what doesn't. At some point, you have to assess whether your conclusions are valid.

Often when you draw a conclusion, you need more testing or examples to be sure it is valid. If an outcome happens once during project, you can't be sure it will always happen that way. More examples are required before you can use that outcome to make predictions. You will know the conclusion is valid if the same thing happens every time you follow that procedure.

**Example:** You may produce a defective pruning cut because you used the wrong pruners. However, in another situation, a defective cut may be the result of cutting a branch too close to or too far away from the main stem.

Noticing causes and results, while you are learning and while you are working, adds to your awareness of what is a valid conclusion for a given situation. With experience, you will come to instinctively figure out what is the best way to proceed.

You may have overlooked other factors which affect the outcome of the finished work. If you notice that you have missed something on a project, make sure to take it into account the next time. Each factor will have an effect on the finished product. As you learn how each factor affects the process, you will work hard to develop the skills needed to reach a satisfactory conclusion.

Sometimes you need to reach a conclusion quickly, perhaps about what product to choose. You don't have time to check all the possible results of using the different products. You can ask other workers what they would choose. You can also rely on manufacturers' literature. The information will often tell you what to expect. If the company is reliable, you can count on them to test their product and to back them up with a guarantee.

A conclusion may be valid in one situation given the information you have available. It may *not* apply in another situation. Learn to judge each new situation before you draw a conclusion. Look at the relationship between cause and effect. Keep track of what happens in different situations so you have a range of possibilities from which to choose. Consider all the possibilities and keep your mind open when making conclusions.

There are skills you can develop to help in making valid conclusions:

- 1) Observe and keep records of what happens in different situations on the job.
- 2) Talk to skilled workers to add to your store of knowledge.
- 3) Watch and listen as you work.
- 4) Test your ability to judge a situation.
- 5) Start to see patterns that can help you make reliable prediction.

As you become more experienced, you will find it easier to reach valid conclusions and make valid decisions.

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### **PART III**

#### **RECOGNIZING CONCLUSIONS**

You might be reading a text or manual and you want to decide if the information is presented in a way that comes to a conclusion you can use. Experienced workers might talk about different situations and you aren't sure what conclusion to draw from the conversation. There are guides that help you recognize when a conclusion is being made.

#### **The language of conclusion**

Some words and phrases provide clues that a conclusion is being drawn. When you examine information, notice when any of these words are used. They will give you a signal that the writer is drawing a conclusion.

The words *therefore*, *must have (must be)* and *would have to be* often indicate that a conclusion is being drawn:

**Example:** You are asked to evaluate a young tree which isn't doing well. You listen to your customer describe the stone patio installed a few years ago. You know that compacted soil can cause growth problems in young trees. You might say, "The heavy equipment and paving stone has compacted the soil. *Therefore* the tree *must be* in decline because water and air cannot penetrate the soil".

**Example:** In a different situation you might say: "The damage *can't be* from compaction because there has been no equipment, heavy foot traffic or other source of compaction. However, the tree is close to where a lot of salt is spread during the winter. *Therefore* it *has to be* from salt run-off. "

The words *if*, *so that*, *due to*, *because of*, or *since* often indicate that a cause and effect statement will follow. They point out the causes that lead to a result. The conclusion follows.

#### **Examples:**

The valve in the head of the sprayer must operate *so that* the concentration of spray will be accurate. Due to defective valves, the concentration may be too high or too low.

*Due to* clean air regulations, some solvents are no longer used.

*Since* files are designed to be pushed rather than pulled, it is important to release pressure on the backward stroke.

*Because* there is a wide variety of products available, it is important to know the ratio of minerals required in a fertilizer.

Words such as *will then*, *consequently*, *as a result*, *must*, *thus* or *therefore* often indicate a result. Once you know the cause and result of a situation, you can sometimes use the information to reach a conclusion.

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### **Examples:**

Good soil structure holds water and nutrients while allowing excess water to drain away; *therefore*, good structure is essential to good root growth in seedlings.

The conclusion to be drawn is that if you want good growth in seedling, you need good soil structure.

Fertilizer salts can build up as a *result of* constant and high rates of feeding container plants.

You could conclude that reducing the amount of fertilizer will reduce amount of salt in a container.

### **Example:**

Since moving water is a form of energy, it *will then* erode soil.

You could conclude that if you don't want your soil eroded, you will have to divert sources of moving water.

## **CONCLUSION**

To draw valid conclusions, you must first make accurate observations. Then you compare what you see to what the information you have from textbooks and manuals. You might ask a more experienced worker for their opinion of the situation. All this information is used to reason through to a logical conclusion.

After reaching a conclusion, you need to check if it seems valid in other situations. This process will gradually build up a wealth of experience that you can use to make future decisions. You will be able to quickly decide what course of action to take in various situations. This will also be useful in making a reasonable estimate.

Understanding the relationship between cause and effect is a necessary step in reaching a valid conclusion. Skill in drawing conclusions will give you the ability to judge a situation accurately. You will also develop the habit of making sound decisions as you learn. This will help you develop into an efficient and effective horticultural tradesperson.

### **Summary**

1. **Use a variety of resources to draw conclusions.** These include experience, observations, advice from experts and all relevant technical reading information
2. **Read technical material carefully** to find information about causes, results and solutions; you can then use the information in the workplace.
3. **Carefully observe** what is happening in the workplace.
4. **Understand the relationship between things** to be able to judge cause and effect.

5. **Understand that a change in a procedure, material or tool often affect something else.**  
Notice how these changes affect the result.
6. **Consider whether you have all the information** needed to reach a valid conclusion. Are there factors affecting the outcome that you do not understand or don't know about?
7. **Eliminate weak possibilities** to focus on the strongest and the most likely.
8. **Observe language used in drawing conclusions** such as *therefore, thus, would have to be, must be* which set up the situation and then reach a conclusion.

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**Answer page**

**PART I      Passage 2, Soil Temperature**

1. Which of the following might you expect if you added sandy soil to a soil with a higher moisture content?
  - a) The soil would now warm faster than it did before.

Passage 2 states that *sandy soils warm more quickly and stay warmer longer*, and it explains why: it takes more energy and, therefore, more time to warm water. Answer a) may be a safe conclusion.

2. If you do **not** use the correct mulch for a plant, you can conclude the following:
  - d) All of the above

Information in paragraph three will lead you to this conclusion. It tells how light and dark coloured mulches affect soil temperature which directly affects root growth. It also explains how mulch affects soil moisture.

3. If you alter soil temperature in recommended ways, you can predict planting and harvest dates.

**F** Paragraph three states that growers need information about soil temperatures to help them *better determine planting times and harvest dates*. If all factors are considered when planting, a grower can make *better* predictions about all aspects of growth. However, paragraph one states that soil temperatures also depend on weather conditions. A grower cannot control temperature, sunlight or rainfall to *predict* harvest dates.

4. You can conclude that soil temperature is more important to crops than weather conditions.

**F** While this passage tells you that soil temperature is important for germination and growing, nothing in the passage indicates that soil temperature is more important than weather conditions.

**PART II      Passage 3, Two-Cycle Fuel Mixtures**

1. If a two-stroke (cycle) engine overheats, you might conclude the following:
  - b) The oil and gas were not mixed in the proper proportions.

Passage 3 tells you that two-cycle engines are lubricated with an oil/gas mixture. Paragraph two states that *too little oil can cause the engine to overheat*.

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2. Provided you use the correct oil in the correct proportions, you can expect the correct lubrication of a two-cycle engine.

**T**

3. According to Passage 3 which type of engine damage would result from the improper storage of fuel?

d) all of the above

4. If you used too much oil or too little oil, the result could be piston damage.

**T?** We've added a question mark to this conclusion. If an engine overheats because there is too little oil, a piston could seize and bind (stick). It seems a probable conclusion that this could cause damage to the piston. However, because the passage doesn't state this specifically, add the question mark and read further to find the answer.

### **PART III      Passage 4, Pesticide Application**

1. You spray a pesticide at the correct rate for the identified insect, but there is no improvement. What could you conclude after reading Passage 4?

a) The time in the life cycle for spraying this insect was not right.

2. A multipurpose pesticide can be used to rid plants of fungus.

**T**

3. Effective pesticide application depends on which of the following factors?

d) All of the above.

4. Under-application of a pesticide could result if the concentration of active ingredient was *not* calculated for the rate of application.

**T** This question reminds you of the result to expect if you do not follow directions or do not calculate carefully.