Learning Activity – What's the Problem?

1. Read the following scenarios and make a guess as to what caused the problem.

a. John was sent to deadhead the flowerbeds at the Queen Plaza site on Monday. When he arrived, he noticed many of the lower leaves of the plants had irregular holes in them. When he looked closer, he noticed a slimy trail on some of the leaves. What should he report to his supervisor?

_____

_____

b. Anna was pruning the rose bushes at the Bell estate when she noticed some of the leaves were covered in yellow flecks and were starting to curl. What should she report to her supervisor?

_____

_____

c. Sahid was pruning some shrubs along the city bike path when he noticed that the tops of the shrubs were beginning to discolour. When he looked closer, he saw signs of circular exit holes. What should he report to his supervisor?

_____

_____

d. Ipeelee was asked to cut the grass in the southeast section of the memorial gardens at the Rest-A-While cemetery. When he arrived, the lawn was full of holes. Tufts of grass were ripped up everywhere. What should he report to his supervisor?

_____

_____

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2. Match the following plant pests to the description of plant damage. Draw a line to the correct match. Some may have more than one answer.

a.	tunnels in plant leaves	beetles
b.	curling leaves	mice
c.	missing tree bark	slugs
d.	odd-shaped holes on lower leaves	aphids
e.	chewed leaves and yellow spots	caterpillars
f.	burn areas on plants	rabbits

3. Go to the website listed below and play the Pest Paparazzi game. On a separate sheet, list the ten pests that you found.

http://www.bbc.co.uk/gardening/htbg/module6

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Learning Activity – Evidence

Go outside and collect some evidence of pest activity on plants in your area. Present what you find to your group or your practitioner.

Remember to examine leaves, stems, roots, grass and tree bark for pest activity. Write two paragraphs discussing your findings. Take some photos with a camera or cell phone to add to your findings.

_____

_____

_____

_____

_____

Plant Diseases

Plants, like humans, can get sick from many types of diseases. Like humans, plants also show symptoms of diseases. Plant diseases can be caused by living organisms and non-living environmental stresses. Let's look at some of the diseases caused by living organisms first.

Fungi

Fungi are the most common of all the plant diseases. They are primitive organisms that act like parasites. Unlike most plants, fungi can't make their own food so they must invade other plants to survive. You can usually see fungi on plants. Most fungi grow in the dark. Mushrooms are an example of fungi.

Fungi spread quickly by sending out flying spores. These spores are transported to other healthy plants by wind, rain, insects, animals, and human activities. Fungi infections are difficult to control.

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Learning Activity – Dutch Elm Disease

Go online and find the answers to the following questions about Dutch elm disease.

1. What is Dutch elm disease?

   _____

   _____

2. How is the disease spread from one tree to the next?

   _____

   _____

3. What are the symptoms of Dutch elm disease?

   _____

   _____

4. What can be done to stop the spread of Dutch elm disease?

   _____

   _____

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Bacteria

Bacteria are single-celled organisms that can only be seen under a microscope. Some of the plant diseases caused by bacteria are blights, galls, and rots. Bacteria enter plants the same way they do in humans, through cuts or openings. Bacteria spread very quickly in plant materials. An infected part will ooze milky pus which contains thousands of bacteria.

Viruses

Viruses are tiny particles of infective agents that cannot even be seen by regular microscopes. They can cause serious damage to plant materials and need a living organism to reproduce. They are spread by sucking insects and by human activities such as pruning. Some symptoms of plants that are infected with viruses include yellowing, ring spots, deformities and stunted growth in plants. Some viruses only attack a certain type of plant. Viruses are controlled by the use of chemicals.

Learning Activity – Bacteria and Viruses

Go online and find the following definitions.

1. Plant blight: _____
2. Plant gall: _____
3. Plant rot: _____
4. Now research **one plant virus** and answer the following questions:

a. What is the name of the virus? _____

b. What type of plants does it infect? _____

c. What are the symptoms of the infected plant? _____

d. How is the virus transmitted? _____

e. How is the virus controlled? _____

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Symptoms of Plant Diseases

Anyone who works with plant materials should always be on the lookout for signs of plant injury. When a plant is weakened, it is more likely to be attacked by harmful, dangerous diseases. Some of the things to look for are:

- Discolouration – yellowing or browning
- Odd shaped holes
- Parts of the plant (new shoots) dying
- Dead spots on leaves
- Stems or branches with sunken areas
- Abnormal swelling or growths
- Blisters
- Bad odour
- Mildew (soft fuzz that grows on the plant) or a powdery coating
- Mushy decay
- Powdery orange-red spores
- Wilt

Learning Activity – Plant Problems

Go online and find the definitions and a picture for each of the following plant problems.

- Canker
- Blotch
- Damping-off
- Leaf scorch
- Needlecast
- Blackleg
- Leaf spot
- Wilt

The material and learning activities in the Grounds Maintenance section of the Foundational Skills module of the Prior Learning Toolkit were originally created by Community Literacy of Ontario and the Tri-County Literacy Council (based on Curriculum originally produced by Literacy Link Eastern Ontario). These organizations have given their permission for Landscape Ontario to use this material in this Prior Learning Toolkit.

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