

# INVASIVE SPECIES IN OUR FORESTS

A Resource for Educators



Canadian Council  
on Invasive Species

Conseil Canadien des  
Espèces Envahissantes

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# Welcome to **Invasive Species** **In Our Forests!**

This resource contains a range of activities that help youth learn about invasive species, particularly those that impact forest ecosystems, and highlight ways we all can help prevent their spread. They are suitable for use in formal school programs and informal youth groups, camps and recreation programming.

The activities are targeted to elementary to middle-school aged students (Grades 2 – 6), but can be adapted to suit other audiences. There are also several

youth activity sheets included in the package that are free to download and copy, and links to other relevant resources and activities

We hope you enjoy learning about invasive species in our forests, and welcome all input as to how we can make this resource better. Contact us below:

Canadian Council on Invasive Species  
[coordinator@canadainvasives.ca](mailto:coordinator@canadainvasives.ca)

## **Some Definitions and Background Information on Invasive Species**

**Native Species:** A species that naturally occurs exists in an area. A native plant, for example, is a plant that has lived and evolved in a certain place for a long time (i.e. thousands of years) and is part of the natural ecosystem.

**Non-Native but Non-Invasive Species:** Not all introduced species are invasive – many ornamental plants such as roses and tulips won't survive outside of gardens. Other introduced species such as tomatoes and wheat are beneficial food resources.

**Invasive Species:** Invasive species are non-native species that cause economic or environmental harm, and can spread rapidly to new areas.

### **Invasive Species Characteristics:**

There are four main distinguishing features of invasive species:

- they are usually prolific seed producers,
- their seeds spread easily and effectively,
- they establish and spread quickly,
- they lack natural predators and diseases that keep them under control in their native locations.

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## Resources and Links

### Canadian Council on Invasive Species

<http://canadainvasives.ca/>

### Forest Invasives Canada

<https://www.forestinvasives.ca/>

<https://www.canada.ca/en/services/environment/wildlife-plants-species/invasive-species.html>

### Forest Pests and Pathogens – Invasive Species Centre

<https://www.invasivespeciescentre.ca/learn/forest-pest-and-pathogens>

### Top Forest Diseases and Insects in Canada

<https://www.nrcan.gc.ca/forests/fire-insects-disturbances/top-insects/17607>

### Invasive Alien Species in Canada: Canadian Wildlife Service

<http://www.hww.ca/en/issues-and-topics/invasive-alien-species-in.html>

### Forest Education

<https://www.forestsonario.ca/education/programs/focus-on-forests/>

### U.S. Department of Agriculture, Hungry Pests

<https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests>

### Stop the Invasion! A 4 H activity Guide, Penn State Extension Services

<https://extension.psu.edu/programs/4-h/leaders/resources/publications/4h0077>

# Forest Finds: ABC Scavenger Hunt

Primary / Elementary Activity (ages 4 to 9)



Students practice their observation skills, get to know their local “natural” neighbourhood or park, and explore the concepts of living and non-living things. Ideally this would be done in a forested or wooded area, but any park or green space with some trees works well.

**Note:** This is also a good “buddy” class activity, where older students help younger ones complete their list.

## Materials Needed

- *Forest Finds ABC Scavenger Hunt Checklist* on the following page (one copy per student) OR a picture list (for non-readers) of local natural things;
- Pencils
- Clipboards
- Outdoors: a wooded area

## Instructions

1. Provide each participant with a copy of the Biodiversity ABC Scavenger Hunt Checklist. Before heading outside, give students a few examples of things in nature that they could match to the letters: e.g. Ant, Bark, Clouds, Dirt, etc. For children unable to read well, use pictures of local things in nature on a worksheet to help them search for local natural items (e.g. a snail, a slug, a bug, a fern, several shapes of leaves, several types of local trees, common birds, clouds, dandelions, specially shaped rocks, etc. This does not have to be an alphabet list but just items in nature that children can find easily).
2. Set some guidelines with the students (E.g. do not select human-made things, do not pick live plants, leave things the way you found them, stay on trails to prevent erosion) and describe the physical boundaries for the activity (explain where the children can go: set out markers such as traffic cones or surveyor’s tape if needed to outline the area for safety; OR establish the rule that they must keep leaders in sight at all times).
3. Have the students head out on a neighbourhood scavenger hunt. Ask them to find as many things in nature beginning with each letter of the alphabet that they can, and list them in the boxes provided. Or, if using the picture list, put a check beside each picture that they find.
4. Once they have finished their search, make a master list that summarizes everything found under each letter. Then have the children work to categorize their lists into living and non-living things.
5. Discuss the lists as a group and how they came up with their category selections.

### Did you know?

The European gypsy moth is native to Europe, and the larvae (caterpillars) feed on leaves of a wide range of hardwood and some softwood trees, which makes gypsy moth a forest pest of concern.





<b>A</b>          Acorn, Ant	<b>B</b>          Bark, Bee	<b>C</b>          Cone, Cloud	<b>D</b>          Dandelion, Daisy
<b>E</b>          Egg, Earthworm	<b>F</b>          Feather, Fern	<b>G</b>          Grass, Grasshopper	<b>H</b>          Holes in tree trunk, Hawk
<b>I</b>          Insect activity (e.g. holes, tunnels)	<b>J</b>          Jay	<b>K</b>          Key (a Maple “key” or winged seed)	<b>L</b>          Leaves, Lichen
<b>M</b>          Mushroom, Moss	<b>N</b>          Needle (evergreen), Nest	<b>O</b>          Oak tree, Owl	<b>P</b>          Puddle, Petal
<b>Q</b>          Question you have, Quiet spot	<b>R</b>          Rotting log, Root	<b>S</b>          Soil, Spider web	<b>T</b>          Trunk of a tree, Toadstool
<b>U</b>          “Umbrella” leaf	<b>V</b>          Vine, Variety of colours (list 6 different ones)	<b>W</b>          Wildlife (what kinds did you see?), Water	<b>X,Y,Z</b>          Experience Sounds (list 3 you heard!)



### Did you know?

The Asian longhorned beetle attacks and kills maple trees, which are widespread across natural and urban areas in Canada.



# We Are Being Invaded!

## Game

*Primary / Elementary age activity: (Ages 5 – 9)*

A fun, active game that demonstrates how invasive species can spread, using forest insects as examples.

### Materials Needed

- Surveyors tape
- Outdoor field or large indoor area

### Instructions

1. Brainstorm with the group the terms introduced species/ native species / invasive species, and ensure they understand these definitions: introduced species are those that are brought by humans or animals into areas where they did not exist previously. An invasive species is one that can outcompete native species and can take over the habitat of the native species. A native species is one that naturally occurs in an area, has lived and evolved in a certain place for a long time (i.e. thousands of years) and is part of the natural ecosystem. Provide examples for your local region of each, and especially discuss and list several invasive species.
2. Select one student to be an invasive insect. Ask him/her to select which insect she would like to be from the list in the Resources section, e.g. the Emerald Ash Borer.



### Did you know?

Firewood is an easy place for forest pests to hide under or on the bark and then move to new places?

3. Students spread out in an indoor or outdoor area so most (not all) of them are still able to touch if they stretch out their arms and legs. The group represents a local forest (e.g. temperate rainforest, boreal forest or hardwood forest).
4. Provide the invasive insect student with some long pieces of surveyors tape and have them tie a loop onto one wrist.
5. Explain to the group that native tree species are those that naturally inhabit an area. Ask the rest of the group to select a native tree or plant that they would like to be; they all stay in one place to “put down their strong roots”, wave their arms to represent branches blowing in the wind, and spread their seeds.
6. The “invasive insect” can spread by flying between trees and also by laying eggs to produce offspring. To do this the student can move one arm and one leg and stretch out from where they are standing (note – this is not a running tag game). If a native tree gets touched, she/he will be infested with the invasive insect and then be able to spread them further. She/he will get some tape and tie it around his/her wrist. This student will then also be able to stretch out an arm and a leg and touch other trees in the area, turning them into hosts for invasive insects. This is represented by passing out surveyors tape to each new invader. The invaders make contact with the “trees” one by one until a significant impact has been shown, and there are only a few trees left.
7. Stop the game when most of the trees have been infested by invasive insects. Ask all the native trees that have not been infested to remain standing and have the rest of the group sit down.
8. Discuss with the group what happened during the game. Discuss what would happen to the birds, mammals and insects that depend on the tree species for food and shelter if these trees all died because of the invasive insects. Many invasive insects lay eggs in and under tree bark. Firewood is one mode of transport for invasive species that can have major impacts on a forest. Discuss what could happen to other forests if firewood was cut from the infested trees and taken to another area. Talk about the importance of not moving firewood from place to place, and pass out the Don't Move Firewood colouring sheets.

# Forest Detectives: Bug Buddies Scavenger Hunt

*Elementary / Middle School (also a good “buddy” class activity) (Ages 5-12)*

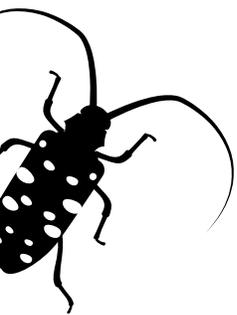
Students look for things in a forested area that highlight biodiversity and change, explore the insects that live there, and understand that most insects are important to forests and are not harmful.

## Materials:

- *Forest Detective Scavenger Hunt* sheets (1 set per pair)
- clipboards, pencils (1 set per pair)
- A wooded area with a diversity of trees and shrubs
- Photos of some common insects and some invasive insects (e.g lady bug, ant, bees, moths / Emerald Ash borer, Asian longhorn beetle)

## Instructions:

1. Students will go on a scavenger hunt to look for things in a forested area that highlight biodiversity and change. They will look for agents of change that alter forests and explore the insects that live in or on trees and shrubs, and the wildlife that feed on them. The activity helps heighten observation skills and stresses the importance of the range of insects that live in a forest. It is important to remind students that most insects are important and not harmful, an important distinction when studying invasive insects!
2. **Discussion:** Before heading out, discuss some of the things that might cause a forest to change. Prompt students if they have seen trees or branches blown down in a storm, the result of fires, flooding, logging and insect infestations. Ask if anyone has seen a dead or dying tree, and let students know these are called “wildlife trees”. Ask students why they might be called this (dead and dying trees provide food, shelter, and habitat for dozens of different animals!) Many insects live on or in dead trees, and are a critical food source for wildlife such as woodpeckers, salamanders, bears and bats.
3. Pass around some photos of insects and explain that there are some insects that have been introduced – such as the emerald ash borer and the Asian longhorn beetle – that are very destructive to trees. Stress that most insects are very helpful and are an important part of the forest ecosystem. Tell the group that they will be working in pairs to explore the wooded area and find as many insects and signs of change as they can.
4. **Outside:** explain the rules and boundaries for the scavenger hunt. Explain that the students are not to pick anything, leave things the way they found them, stay on trails to prevent erosion, and point out physical boundaries (explain where the group can go). This is a good activity to do in partnership with an older group of students, if you are working with young children.
5. Point out examples of native plants and trees in the area, and ask students where they think insects might be hiding?
6. Have the students work in pairs to search and record what they find: they can check off items or draw them. After they have had enough time to explore and search an area, gather the students together and discuss their findings.





# Forest Detectives: Bug Buddies

<b>Wildlife tree (a dead or dying tree)</b>	<b>Branches that have been blown down by the wind</b>	<b>A plant with a chewed leaf</b>
<b>An insect on a plant</b>	<b>A crawling insect</b>	<b>A flying insect</b>
<b>A spider</b>	<b>A nurse log (a fallen tree lying on the forest floor)</b>	<b>A mushroom or fungus</b>

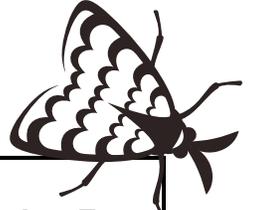


# Forest Detectives: Bug Buddies

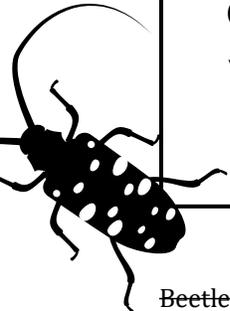
<p><b>A fallen log or large branch with holes in its bark</b></p>	<p><b>A seed</b></p>	<p><b>A seedling or baby tree</b></p>
<p><b>A woodpecker hole</b></p>	<p><b>Holes made by a sapsucker – a type of woodpecker (Hint: holes in rows)</b></p>	<p><b>A hole that a bird might be able to live in</b></p>
<p><b>A nest</b></p>	<p><b>A hole that may have been made by an insect</b></p>	

# Pest Detective!

Find the 30 words hidden in the word search below!



E	U	U	T	A	S	H	D	B	B	R	S	R	A	L	A	R	V	A	E
M	R	O	S	P	D	G	A	R	R	B	E	E	T	L	E	F	R	O	S
E	C	J	U	W	K	L	P	F	R	A	S	S	H	Y	P	L	V	S	A
R	C	N	F	I	R	D	J	K	L	M	N	B	O	V	P	O	P	S	M
A	X	P	H	L	Q	A	U	G	E	N	U	S	R	C	W	P	E	E	J
L	R	R	M	L	P	A	S	T	E	J	U	M	A	B	A	S	S	C	D
D	Z	E	D	O	F	E	U	W	O	I	E	A	X	M	I	H	T	O	F
O	X	V	C	W	J	J	L	O	N	M	R	F	S	D	M	V	C	S	D
P	P	E	L	E	C	V	B	N	E	G	G	Y	M	A	P	L	E	Y	H
E	U	N	O	I	E	X	B	F	P	L	F	Q	H	R	A	U	Y	T	N
N	P	T	Y	Y	W	E	B	O	R	E	W	X	A	V	C	L	R	E	J
T	A	D	U	L	T	I	O	R	N	A	O	G	E	A	T	U	F	M	Q
O	F	T	I	O	E	M	R	E	O	V	O	I	N	S	E	C	T	I	K
M	Q	I	N	E	Z	B	E	S	Q	E	W	T	C	Y	Z	D	D	T	L
O	P	E	V	C	Y	Y	R	T	Y	S	E	U	E	S	C	A	E	Y	P
L	E	B	A	N	I	T	R	S	C	W	O	O	D	P	E	C	K	E	R
O	L	D	S	T	A	R	L	I	N	G	S	T	A	R	H	W	T	R	Z
G	S	E	I	M	A	C	A	M	P	I	N	G	R	E	K	A	B	E	O
Y	F	G	V	H	J	K	M	N	B	V	C	X	Z	A	D	C	U	W	I
F	I	R	E	W	O	O	D	Z	N	J	Y	M	L	D	G	W	G	A	O



Beetle  
Thorax  
Egg  
Borer  
Genus  
Spread

Larvae  
Adult  
Frass  
Pupa  
Ash  
Firewood



Maple  
Leaves  
Willow  
Emerald  
Invasive  
Pest

Woodpecker  
Forests  
Impact  
Camping  
Cedar  
Entomology

Prevent  
Starling  
Ecosystem  
Bug  
Fir  
Insect



# Insect Invasion!

## Game

*Elementary / Middle School (also a good “buddy” class activity) (Ages 5-12)*

A fun and active game where students review knowledge they have about invasive insects, and discover how forest pest insects can be moved by firewood. This is a good activity to reinforce or assess learning after reviewing information about invasive insects.

### Materials:

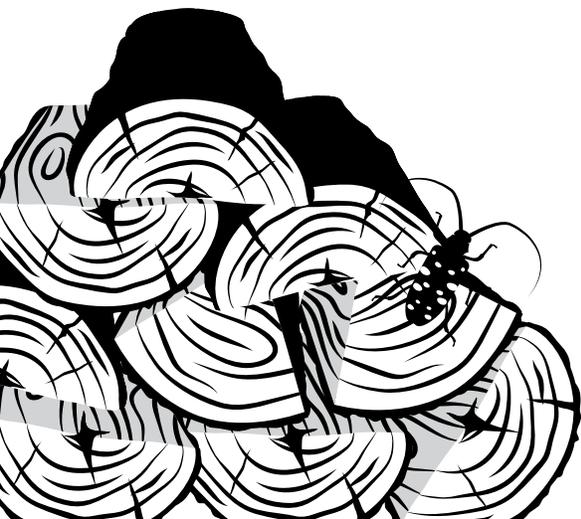
- Bundles of sticks, one for each team or individual (at least 5 sticks of long and short lengths per bundle; quantities of long versus short should vary per bundle.)
- Five orange traffic cones, rocks or markers to mark each location.
- Five Location signs: Forest, Campground, Lake, Hiking Trail, Backyard
- Ten questions each on separate cards from the Insect Investigator Question List (with answers)
- An outdoor area or large indoor space.

*(adapted from US Department of Agriculture, “Hungry Pests” activity guide)*

### Instructions:

1. Review some basic information about forests with the students. See the list of questions below. Then review some invasive insects with the students, and show some photos. Ask students how they think these insects spread? Invasive insects such as the Emerald Ash Borer or the Brown Spruce Longhorn Beetle lay their eggs on the bark of trees, and their larvae eat into the tree and hide inside it. We think that these invasive insects got into Canada inside wooden shipping materials. How did they spread around after that?
2. Explain to the students that they will play a game in teams where they have to answer some questions about invasive insects. Select five Location Leaders, who will ask a question to each team as they visit the location. If the team gets the question right, they get to leave a stick behind and move to the next location. If they get it wrong, they can move on, but cannot leave a stick behind. The winning team is the first to visit all five locations and have no (or the fewest) sticks left.
3. Set up the five location sites with a marker and sign. Give the Location Leaders a question card each (with 2 questions per card) and have them go to their location. Gather students into five teams, and have each team start at a different location. Give the “go” signal. Leaders ask the teams the first question on the card at each location; the second question is for a second round if teams still have sticks.
4. Once all the teams have finished, have them return to the starting point, and review all the questions and answers with the group. Then explain that the sticks they were carrying were firewood. The long sticks represented firewood that was infested with invasive insects and the short sticks were from healthy logs. Where did the infested firewood end up?
5. Visit each location and see how many infested sticks are at each. Ask students if they could see the hidden insects in the long sticks (No!). Ask: “What do you think will happen to the trees in these locations? What does this tell you about how invasive insects have been moved around our province and country?” (People help the insects move by mistake by moving firewood, as they can’t tell that it might be infested). The simple rule is to never move firewood!

**Buy Local, Burn Local – Don’t Move Firewood!**



# Insect Invasion!

## Investigator Question List

Copy and cut out the questions and provide 2 questions to each Location Leader to ask the teams as they visit.

<p><b>What is the life stage of an insect called, after it hatches from an egg?</b></p> <p>Larva</p>	<p><b>What is a Predator?</b></p> <p>An animal that catches and eats other animals – or prey</p>
<p><b>What is a wildlife tree?</b></p> <p>A standing dead or living tree that provides homes and food for wildlife</p>	<p><b>Name 3 animals that eat insects in the forest.</b></p> <p>Little Brown Bat, Salamander, Downy woodpecker, chickadees, nuthatches, spiders</p>
<p><b>Where do invasive insects such as the Asian Longhorn Beetle or Emerald Ash borer lay their eggs?</b></p> <p>On the bark of trees</p>	<p><b>What is a Habitat?</b></p> <p>The place where an animal or plant lives: it includes food, water, space and shelter</p>
<p><b>What is the definition of prey?</b></p> <p>An animal that is hunted for food</p>	<p><b>What is a coniferous tree?</b></p> <p>A tree that has cones and is usually evergreen, such as firs, spruces, pine</p>
<p><b>What is a deciduous tree?</b></p> <p>A tree that loses its leaves each autumn</p>	<p><b>This tree is a favourite tree of invasive insects like the Asian Longhorn Beetle, it gives us beautiful fall colours and delicious syrup for our pancakes!</b></p> <p>Maple</p>

# Forest Pest Pathways Tag!

## Game

*Elementary / Middle School (Ages 8-14)*

This active game simulates how invasive species spread via pest pathways, and how difficult it is to control the spread of pests once they get established. Note: If running is not an option, have students hop on one leg or crawl instead.

### Materials:

- 2 different colored bandanas, armbands or surveyor's tape (enough for everyone to have one of each)
- Large labeled signs of eight Pest Pathways: Camping Gear, Hay Bales, Plant Seed Packets, Hiking Boots, Wood Shipping Pallets, Firewood, Mountain Bikes, Pet Stores
- 8 Hula hoops (if outdoors) or 8 chairs (if indoors)

*(adapted from 4-H Invasive Species Project, Penn State University Agriculture Extension)*

### Instructions:

1. Discuss the main types of invasive insects that impact forests and trees in Canada. Also talk about some of the invasive plants that impact forests (See the Resources section and the Insects Information Sheet).
2. Divide the group into two teams: Forest Pests (have them make up two-thirds of the group size) and Foresters (one-third of the group). Give the Pest group one colour of bandana or surveyor's tape, and the Forester group the other colour to wear on their arms.
3. Place the Pest Pathway signs around your playing field. If indoors, place the signs on tables or chairs. If outdoors, place them on the ground inside hula hoops to create "safe bases." Before play starts, ask the participants to identify all of the Pest Pathways on the playing field and talk about why each of them could be an invasive species pathway. Pest Pathways: E.g. Camping gear, hiking boots and mountain bikes can all carry mud containing seeds and plant parts from place to place; hay bales and plant seed packets can contain invasive plant seeds; wooden shipping pallets and firewood can contain invasive insects; and pet stores can sell invasive animals and invasive aquarium plants.
4. Forest Pests and Foresters move throughout the playing field, with the Pests continuing from pathway to pathway throughout the game. Foresters try to tag the Pests before they reach a pest pathway. If tagged, the Pest passes his/her arm band to the Forester and leaves the playing field.
5. If a Forester collects three Pest arm bands, they can remove one Pest Pathway from the field, and try and tag all the Pests that might be inside that pathway!
6. When a Pest reaches a pest pathway, they are safe. If three Forest Pests get inside one pathway, they can bring a "dead" Forest Pest back into the game (pass the Pest a new arm band).
7. The game ends when all the pests have been eradicated, or all pest pathways have been eliminated.

**Summary discussion:** Ask students if it is possible to completely eliminate a forest pest? (Yes, but it is very challenging!)

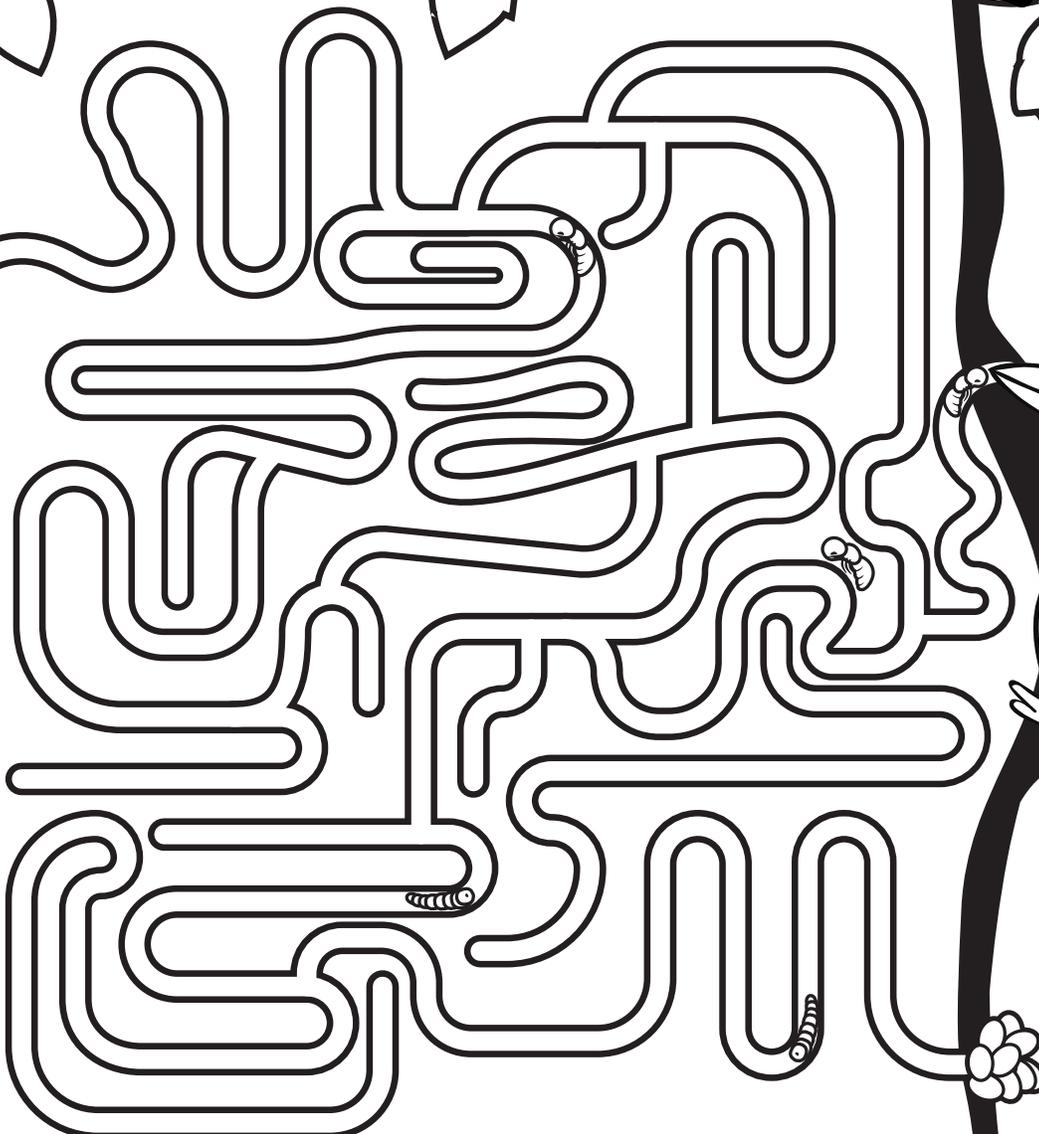
How did removing pest pathways affect the game? In real life, is removing a pest pathway possible? What is the real world equivalent of removing a pest pathway? What can you do to help stop the spread of invasive species?

# A Bug's Life (Cycle)

The female emerald ash borer (EAB) lays an egg. When the egg hatches, a larva emerges. The larva burrows into the tree, where it begins to feed and develop under the bark. As it feeds, it makes S-shaped tunnels. Eventually the larva turns into a pupa and then an adult EAB. The adult EAB chews through the bark and escapes, leaving behind a D-shaped exit hole that's about 1 cm across.

## Did you know?

The emerald ash borer is an invasive wood-boring beetle, native to parts of Asia. It kills 99% of ash trees in its path.



Start the maze as a larva and finish as an adult! **Good luck!**



# Forest Pests: Information Sheet

Elementary / Middle School (Ages 8-14)

Here is some information on a few of the main invasive species affecting our forests in Canada. This sheet can be used for information or to assess the accompanying work sheet.



## Asian Longhorned Beetle

- When:** First discovered in the US 1996
- From:** China, arrived in wooden packing crates aboard ships
- Impacts:** Attack hardwood trees: ash, birch, elm, chestnut, maple, poplar, willow
- Life Cycle:** Females chew depressions in the bark lay their eggs; larvae tunnel into the tree, feeding on tree's tissues, eventually killing it
- Identification:** Shiny black beetle with white spots, often have blue feet. 2.54 cm long, with antennae longer than their body.



## Emerald Ash Borer

- When:** First discovered 2002, spread across the US and Canada
- From:** China and eastern Asia, in wooden crates or pallets aboard ships
- Impacts:** Killed millions of ash trees in North America
- Life Cycle:** Larvae tunnel and feed under the bark, eventually killing the tree.
- Identification:** Very small, metallic green beetle 7 – 15 mm long



## Brown Spruce Longhorn Beetle

- When:** In Nova Scotia since at least 1990, spreading west
- From:** Europe, in wooden crates or pallets aboard ships
- Impacts:** damages and kills spruce trees
- Life Cycle:** females lay eggs in spruce tree bark; Larvae bore into the tree to feed, producing a network of irregular tunnels
- Identification:** 1 to 1.5 cm long, dark brown body, 2 to 3 longitudinal stripes on wing covers, red-brown antennae about half the body length.



## Hemlock Woolly Adelgid

- When:** found in Virginia, 1951; spread to eastern North America; also in BC
- From:** Asia, probably in infested nursery stock
- Impacts:** large infestations weaken and kill range of hemlock trees
- Life Cycle:** lay eggs at base of hemlock needles; nymphs hatch and feed on twigs, needles.
- Identification:** tiny brown insect adults 0.8 mm, oval; egg sacs look like small cotton balls clinging to undersides of needles



## European Gypsy Moth

- When:** 1869 to eastern US for possible silk production; spread westwards
- From:** Europe
- Impacts:** caterpillars eat leaves of many trees and shrubs, can completely defoliate tree
- Life Cycle:** females lay egg masses on trees, rocks or human structures; caterpillars feed through summer
- Identification:** 60 mm long caterpillars hairy with two rows of spots: red spots at head and blue spots at tail; adults creamy white with dark markings; 50 – 60 mm wing span

# Forest Pests

## A Work Sheet

*Elementary / Middle School (Ages 8-14)*

Research key information about some of the main invasive species affecting our forests in Canada, and fill out the work sheet below. Check the Resources section for online links and information.

### Asian Longhorned Beetle



**When:** \_\_\_\_\_

\_\_\_\_\_

**From:** \_\_\_\_\_

\_\_\_\_\_

**Impacts:** \_\_\_\_\_

\_\_\_\_\_

**Life Cycle:** \_\_\_\_\_

**Identification:** \_\_\_\_\_

\_\_\_\_\_

### Emerald Ash Borer



**When:** \_\_\_\_\_

\_\_\_\_\_

**From:** \_\_\_\_\_

\_\_\_\_\_

**Impacts:** \_\_\_\_\_

\_\_\_\_\_

**Life Cycle:** \_\_\_\_\_

**Identification:** \_\_\_\_\_

\_\_\_\_\_

# Brown Spruce Longhorn Beetle



When: \_\_\_\_\_  
\_\_\_\_\_

From: \_\_\_\_\_  
\_\_\_\_\_

Impacts: \_\_\_\_\_  
\_\_\_\_\_

Life Cycle: \_\_\_\_\_  
\_\_\_\_\_

Identification: \_\_\_\_\_  
\_\_\_\_\_

# Hemlock Woolly Adelgid



When: \_\_\_\_\_  
\_\_\_\_\_

From: \_\_\_\_\_  
\_\_\_\_\_

Impacts: \_\_\_\_\_  
\_\_\_\_\_

Life Cycle: \_\_\_\_\_  
\_\_\_\_\_

Identification: \_\_\_\_\_  
\_\_\_\_\_

# European Gypsy Moth



When: \_\_\_\_\_  
\_\_\_\_\_

From: \_\_\_\_\_  
\_\_\_\_\_

Impacts: \_\_\_\_\_  
\_\_\_\_\_

Life Cycle: \_\_\_\_\_  
\_\_\_\_\_

Identification: \_\_\_\_\_  
\_\_\_\_\_



Canadian Council  
on Invasive Species

Conseil Canadien des  
Espèces Envahissantes