

Title: Insect Scavenger Hunt

Objective: Observe insects on the school grounds. Search out insects and identify which type of metamorphosis they go through.

Time: 20-30 minutes

Materials Needed: Insect Scavenger Hunt sheet (found at jeffersfoundation.org), tape, journal, pencil, clipboard (optional)

Activity

Theme: Life Cycles

Topic: Insects and Life Cycles

Suggested Grade Level: 1-4

Indoors or Outdoors: Outdoors

Directions:

1. Distribute copies of the Insect Scavenger Hunt to each student and have them tape it in their journals.
2. Lead students outdoors and circle up.
3. Ask students where insects could be found on the school grounds and what insects might be doing (flying, sitting on plants, gathering nectar on flowers, walking on the ground, landing on students, etc.).
4. Ask students what senses may best be used to help them observe insects (sight and sound). Model effective strategies that will help the class look and listen for insects. Examples include: stay together, no sudden movements, be quiet (talk softly), point in direction of insects seen or heard.
5. Read the names of the insects on the Insect Scavenger Hunt sheet and begin the hunt. Walk slowly and visit a variety of locations on the school grounds including: flowers, trees, shrubs, rain garden, grassy areas and playfields, sidewalk, etc.
6. Upon the completion of your Scavenger Hunt, circle up and sit in a comfortable location outdoors.
7. Complete the bottom portion of the Insect Scavenger Hunt sheet. Identify the proper life cycle for each of the insects you observed. If you did not observe all of those on the Hunt sheet, you may consider identifying all of them as a review of insect life cycles for the species listed.

Discussion Questions:

1. What surprised you about the types of insects we found on the school grounds?
2. Compare and contrast the two types of metamorphosis, complete and incomplete metamorphosis.
3. If we attempted the scavenger hunt on a different day, possibly in a different month, how might our data be different? Explain.

Science and Engineering Practices:

8. Obtaining, evaluating, and communicating information.

Crosscutting Concepts:

1. Patterns; 6. Structure and function.

Disciplinary Core Ideas:

Life Sciences: LS 1: From molecules to organisms: Structures and processes; LS3: Heredity: Inheritance and variation of traits.

Background Information:

- **Complete metamorphosis** includes 4 stages: egg-larvae-pupa/chrysalis-adult.
Insects that go through complete metamorphosis include: butterflies, moths, beetles, flies, mosquitos, ants, bees.
- **Incomplete metamorphosis** includes 3 stages: egg-nymph-adult.
Insects that go through incomplete metamorphosis include: dragonflies, damselflies, true bugs, leaf hoppers, grasshoppers.

Extension:

Research insects observed on the school grounds and create a field guide for your site. The field guide could be in paper or digital form. Provide students with samples of insect field guides to help design your class field guide.

Math lesson- Work on fractions: number of insects observed out of 12 on the sheet, insects observed in each row/column, flying, etc.

Additional Resources:

- Iowa State University Department of Entomology - <https://bugguide.net/>
- Amateur Entomologists' Society - <https://www.amentsoc.org/insects/fact-files/life-cycles.html>
- Insect Life Cycle Read Aloud - <https://www.youtube.com/watch?v=cKLbbvKBYWc>
- *Insect Life Cycles* by Molly Aloian and Bobbie Kalman

Correlates with:

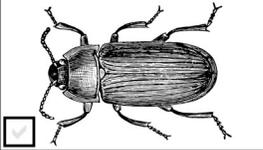
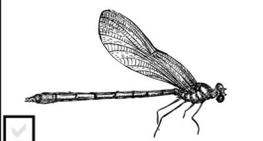
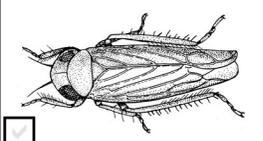
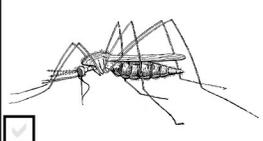
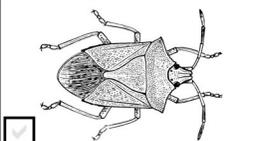
Greeting - Life Cycle Greeting (p. 23)

Interdisciplinary Lesson - Insect Life Cycle Model (p. 99)

Insect Scavenger Hunt

Your name: _____

- Check a box once you have observed the insect that matches the name or picture in the box.
- If you observe insects that are not included in the chart, draw or name them in the "other insect" boxes at the bottom.

 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
Ant C <input type="checkbox"/> I <input type="checkbox"/>	Bee C <input type="checkbox"/> I <input type="checkbox"/>	Beetle C <input type="checkbox"/> I <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
Butterfly C <input type="checkbox"/> I <input type="checkbox"/>	Damselfly C <input type="checkbox"/> I <input type="checkbox"/>	Dragonfly C <input type="checkbox"/> I <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
Fly C <input type="checkbox"/> I <input type="checkbox"/>	Grasshopper C <input type="checkbox"/> I <input type="checkbox"/>	Leaf Hopper C <input type="checkbox"/> I <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
Moth C <input type="checkbox"/> I <input type="checkbox"/>	Mosquito C <input type="checkbox"/> I <input type="checkbox"/>	True Bug C <input type="checkbox"/> I <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
Other Insect C <input type="checkbox"/> I <input type="checkbox"/>	Other Insect C <input type="checkbox"/> I <input type="checkbox"/>	Other Insect C <input type="checkbox"/> I <input type="checkbox"/>

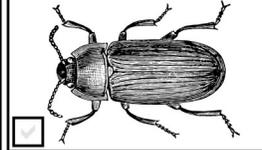
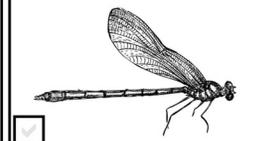
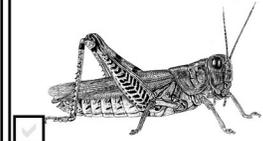
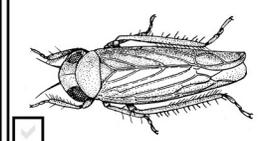
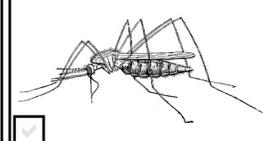
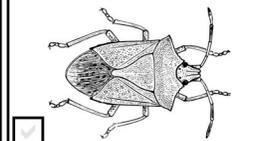
- Check the "C" box of insects that go through Complete Metamorphosis.
- Check the "I" box of insects that go through Incomplete Metamorphosis.
- Enter in the boxes below the total of numbers for each type of insect:

<input style="width: 80px; height: 30px;" type="text"/> Complete Metamorphosis	<input style="width: 80px; height: 30px;" type="text"/> Incomplete Metamorphosis
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Insect Scavenger Hunt

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