

Science  
Unit 5

# Small Crawling and Flying Animals

---

Developed by Lauren Koma

Grade 2

## **GRADE 2 SCIENCE**

### **UNIT 5**

#### **SMALL CRAWLING AND FLYING ANIMALS**

##### **UNIT SUMMARY**

Students will learn about the structure and life habits of animals by studying small animals that live in their own community. By investigating outdoor spaces in and around the school and their homes, students discover a wide range of animals that find shelter and food within the local area. In studying these animals, they learn about where the animals live, what they eat, what they are eaten by and features of the animals that suit them to their particular environment.

Students will be expected to describe the general structure and life habits of small crawling and flying animals. They will apply this knowledge to interpret local species that have been observed. Students will be able to identify ways that animals are considered helpful and harmful to humans and the environment, as well as identify roles of animals in the food chain.

Students will be assessed through their consistency to understand specific learning objectives presented by skills demonstrated through individual worksheets and experiments, attitude demonstrated through group participation, and knowledge demonstrated through recall, comprehension, application, analysis, synthesis and evaluation of information (*Bloom's Taxonomy*).

## CURRICULUM FRAMING QUESTIONS

### ESSENTIAL QUESTIONS

What is the general structure of small crawling and flying animals?

What are the life habits of small crawling and flying animals?

### CONTENT QUESTIONS

How do I recognize that there are many different kinds of small crawling and flying animals, and identify a range of examples that are found locally?

How do I compare and contrast small animals that are found in the local environment?

How do I recognize that small animals, like humans, have homes where they meet their basic needs of air, food, water, shelter, space, and special characteristics that help the animal survive?

How do I identify each animal's role within the food chain?

How do I distinguish between plant eaters, animal eaters and decomposers?

How do I describe the relationships of these animals to other living and nonliving things in their habitat, and to people?

How do I identify and give examples of ways that small animals avoid predators, including camouflage, taking cover in burrows, use of keen senses and flight?

How do I describe conditions for the care of a small animal?

How do I identify ways in which animals are considered helpful or harmful to humans and to the environment?

## STUDENT UNIT COMPLETION CHECKLIST

### **Unit 5: Small Crawling and Flying Animals!**

At the end of this unit I will be able to do the following:

- ✓ I can recognize that there are many different kinds of small crawling and flying animals, and identify a range of examples that are found locally.
- ✓ I can compare and contrast small animals that are found in the local environment.
- ✓ I can recognize that small animals, like humans, have homes where they meet their basic needs for air, food, water, shelter and space; and describe any special characteristics that help them survive in their home.
- ✓ I can identify each animal's role within the food chain, as well as identify animals that are plant eaters, animal eaters, or decomposers.
- ✓ I can describe the relationships of these animals to other living and nonliving things in their habitat and to people.
- ✓ I can identify and give examples of ways that small animals avoid predators, including camouflage, taking cover in burrows, use of keen senses and flight.
- ✓ I can describe conditions for the care of a small animal, and demonstrate responsible care in maintaining the animal for a few days or weeks.
- ✓ I can identify ways in which animals are considered helpful or harmful to humans and to the environment.

### **GENERAL LEARNING OUTCOME**

*2-10 Students will describe the general structure and life habits of small crawling and flying animals; e.g., insects, spiders, worms, slugs; and apply this knowledge to interpret local species that have been observed.*

### **SPECIFIC LEARNING OUTCOMES**

1. Recognize that there are many different kinds of small crawling and flying animals, and identify a range of examples that are found locally.
2. Compare and contrast small animals that are found in the local environment. These animals should include at least three invertebrates - that is, animals such as insects, spiders, centipedes, slugs, worms, ants.
3. Recognize that small animals, like humans, have homes where they meet their basic needs of air, food, water, shelter, and space; and describe any special characteristics that help the animal survive in its home.
4. Identify each animal's role within the food chain. To meet this expectation, students should be able to identify the animals as plant eaters, animal eaters or decomposers and identify other animals that may use them as a food source.
5. Describe the relationships of these animals to other living and nonliving things in their habitat, and to people.
6. Identify and give examples of ways that small animals avoid predators, including camouflage, taking cover in burrows, use of keen senses and flight.
7. Describe conditions for the care of a small animals, and demonstrate responsible care in maintaining the animal for a few days or weeks.
8. Identify ways in which animals are considered helpful or harmful to humans and to the environment.

SKILLS

SCIENCE INQUIRY

2-1 Students will investigate, with guidance, the nature of things, demonstrating an understanding of the procedures followed.

2-2 Students will recognize pattern and order in objects and events studied; and, with guidance, record procedures and observations using pictures and words; and make predictions and generalizations, based on observations.

**Focus:**

- ✓ Ask questions that lead to exploration and investigation
- ✓ Identify one or more possible answers to questions asked by themselves and others. Ideas may take the form of predictions and hypotheses.

**Explore and Investigate:**

- ✓ Manipulate materials and make observations that are relevant to questions asked
- ✓ Carry out simple procedures identified by others
- ✓ Identify materials used and how they were used
- ✓ Use, with guidance, print and other sources of information provided. Sources may include library, classroom, community and computer-based resources.

**Reflect and Interpret:**

- ✓ Describe what was observed, using captioned pictures and oral language.
- ✓ Describe and explain results; explanations may reflect an early stage of concept development
- ✓ Identify applications of what was learned
- ✓ Identify new questions that arise from the investigation

PROBLEM SOLVING THROUGH TECHNOLOGY

2-3 Students will construct, with guidance, an object that achieves a given purpose, using materials that are provided.

**Focus:**

- ✓ Identify the purpose of the object to be constructed: What structure do we need to make? What does it need to do?

**Explore and Investigate:**

- ✓ Attempt, with guidance, a variety of strategies to complete tasks
- ✓ Identify steps followed in constructing the object and in testing it to see if it works
- ✓ Engage in all parts of the task and allow others to make their contributions
- ✓ Identify materials used and how they were used use, with guidance, print and other sources of information provided

**Reflect and Interpret:**

- ✓ Communicate results of construction activities using oral language, captioned pictures and simple graphs
- ✓ Describe the product and describe and explain the processes by which it was made
- ✓ Identify applications for the product that was made

ATTITUDES

2-4 Students will demonstrate positive attitudes for the study of science and for the application of science in responsible ways.

- ✓ Curiosity
- ✓ Confidence in personal ability to explore materials and learn by direct study
- ✓ Inventiveness
- ✓ Perseverance: staying with an investigation over a sustained period of time
- ✓ Appreciation of the value of experience and careful observation
- ✓ A willingness to work with others and to consider their ideas
- ✓ A sense of responsibility for actions taken
- ✓ Respect for living things and environments and commitment for their care.

## UNIT BREAKDOWN

	<u>SPECIFIC OUTCOMES</u>	<u>MAIN ACTIVITY</u>	<u>MATERIALS</u>	<u>ASSESSMENT</u>
1	Recognize that there are many different kinds of small crawling and flying animals, and identify a range of examples that are found locally.	<p><b>Insect Hunt Land and Pond</b></p> <p><a href="http://www.fossweb.com/modulesK-2/Insects/activities/insecthunt.html">http://www.fossweb.com/modulesK-2/Insects/activities/insecthunt.html</a></p> <p>Students will play the interactive game and recognize that there are a variety of insects in two different local habitats (land and pond). They will also recognize what makes it an insect.</p> <p><i>Differentiation: variation on sentence structure in application of knowledge</i></p>	<p>Interactive game link</p> <p>Insect Hunt Student Follow-Up</p>	<p><i>Assessment will be based on the following learning objectives in which pertain to the corresponding Specific Outcome in regards to:</i></p> <ul style="list-style-type: none"> <li>- Skills</li> <li>- Attitude</li> <li>- Knowledge</li> </ul>
2	Compare and contrast small animals that are found in the local environment. These animals should include at least three invertebrates - that is, animals such as insects, spiders, centipedes, slugs, worms, ants.	<p><b>Insect Hunt Venn</b></p> <p>Students will use previous Insect Hunt activity to fill out a Venn Diagram discussing two of the insects they viewed.</p> <p><i>Differentiation: variation on the amount of Venn Diagrams required and the amount of data input.</i></p>	<p>Insect Hunt Student Follow-Up</p> <p>Insect Hunt Venn Diagram</p>	<p><i>Assessment will be based on the following learning objectives in which pertain to the corresponding Specific Outcome in regards to:</i></p> <ul style="list-style-type: none"> <li>- Skills</li> <li>- Attitude</li> <li>- Knowledge</li> </ul>

3	<p>Recognize that small animals, like humans, have homes where they meet their basic needs of air, food, water, shelter, and space; and describe any special characteristics that help the animal survive in its home.</p>	<p><b>Build a Food Chain</b> Students will choose a designated amount of animals and create a food chain poster report. They will list the relationships these animals have to living and non-living things in their habitat, whether or not it is a plant eater, animal eater or decomposer, where it lives, and what other animals may use them as a food source.</p>	<p>Food Chain Poser Report Rubric  Research tools (Books, websites, etc)</p>	<p><i>Assessment will be based on the following learning objectives in which pertain to the corresponding Specific Outcome in regards to:</i></p> <ul style="list-style-type: none"> <li>- Skills</li> <li>- Attitude</li> <li>- Knowledge</li> </ul>
4	<p>Identify each animal's role within the food chain. To meet this expectation, students should be able to identify the animals as plant eaters, animal eaters or decomposers and identify other animals that may use them as a food source.</p>	<p><i>Differentiation: variation of number of animals and sentence length, structure, and application of knowledge.</i></p>		
5	<p>Describe the relationships of these animals to other living and nonliving things in their habitat, and to people.</p>			



6	Identify and give examples of ways that small animals avoid predators, including camouflage, taking cover in burrows, use of keen senses and flight.	<b>My Insect Project</b>	My Insect Project Rubric	<i>Assessment will be based on the following learning objectives in which pertain to the corresponding Specific Outcome in regards to:</i> <ul style="list-style-type: none"> <li>- Skills</li> <li>- Attitude</li> <li>- Knowledge</li> </ul>
8	Identify ways in which animals are considered helpful or harmful to humans and to the environment.	Students will create a 3-D insect of their choice with the information they have collected throughout the unit. They will choose to present their information in one of the following ways: visual presentation (play) written report poster form Criteria included in rubric.  <i>Differentiation: variation of presentation length and depth</i>	3-D building materials	
7	Describe conditions for the care of a small animals, and demonstrate responsible care in maintaining the animal for a few days or weeks.	<b>Praying Mantis</b>	Praying Manti larvae kit	<i>Assessment will be based on the following learning objectives in which pertain to the corresponding Specific Outcome in regards to:</i> <ul style="list-style-type: none"> <li>- Skills</li> <li>- Attitude</li> <li>- Knowledge</li> </ul>
		Students will observe and take care of praying manti		