

What Are Living Things?



Focus: Students will develop or reinforce their understanding of the difference between living and non-living things. They will identify a variety of sources of science information and use them to begin to explore the characteristics of living things.

Specific Curriculum Outcomes

Students will be expected to:

- 33.0 use a variety of sources of science information [GCO 2]
- 34.0 respond to the ideas and actions of others in constructing their own understanding [GCO 2]
- 1.0 pose questions that lead to exploration and investigation [GCO 2]
- 2.0 pose new questions that arise from what was learned [GCO 2]

Performance Indicators

Students who achieve these outcomes will be able to:

- identify living and non-living things
- generate and record questions about living things
- use appropriate sources of information to find answers to their questions
- communicate something they have learned about a living thing and the source (e.g., guest speaker, peer, image, book, field trip) of what they learned

NOTES:

Attitude Outcome Statements

Encourage students to:

- be open minded in their explorations [GCO 4]
- show interest in and curiosity about objects and events within the immediate environment [GCO 4]

Cross-Curricular Connections

English Language Arts

Students will be expected to:

- speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences [GCO 1]
- interpret, select, and combine information using a variety of strategies, resources, and technologies [GCO 5]

Getting Organized

Components	Materials	Before You Begin	Vocabulary
• Anchor Video: <i>Needs and Characteristics of Living Things</i> • IWB Activity 1 • Science Card 1 • Unit 1, Science Cards 9 and 10 (optional) • BLM <i>Living Things</i> Literacy Place: • <i>Is It Alive?</i> (Guided Reading, Level B) • <i>True or False? Finding Out About Newfoundland Dogs</i> (Guided Reading, Level H)	• students' Science Journals • construction paper • poster board • markers • glue • scissors • students' Science Folders	• Display a KWHL chart.	• living things • non-living things

Safety

- Review school safety rules before students go outside for an investigation.

Science Background

- Living things move, respond to stimuli, reproduce and grow, respire, and are dependent on their environment. Most living things need food, water, light, temperatures within defined limits, and oxygen.
- Non-living things are all the things that are not classified as living things. Some non-living things, such as rocks and water, were never living. Once a living thing has died, it becomes a non-living thing. Non-living things may do some of the things that living things do. For example, a car moves, and so does a river. A tablet computer responds to the stimulus of touch.

Possible Misconceptions

- Some students may believe that machines such as cars are living things because they can move. Explain that although cars and other machines can move, they do not grow or reproduce. They are therefore not living things. (Students may also believe that phenomena such as fire, lightning, or clouds are alive because they move.)
- Many students are able to identify constructed items as non-living but fail to identify natural things such as water, air, rocks, and soil as non-living things. Help students notice and identify natural items and ask whether each is living or non-living.
- Students may have difficulty deciding whether materials made from living things, such as wood, are living or non-living. Explain that although wood comes from a living thing (a tree), it is no longer living.
- Students may believe plants are non-living because they “do not move.” Show time-lapse videos to help students see that plants do move, but most of the time we don’t see their movement. (Students will observe plant movement later in the unit.)

ACTIVATE

Anchor Video



Play the Anchor Video: *Needs and Characteristics of Living Things* which is located on the Teacher’s Website. Set a focus for viewing by asking students to look for different kinds of living things. What kinds of living things did they see? You may choose to pause the video to allow students to answer questions or to discuss any questions they may have.

Neighbourhood Walk

Take students on a neighbourhood walk outdoors. As you walk, have students identify living and non-living things. Also have students watch for evidence of living things, such as spider webs, a bird’s nest, tracks, or even dog feces on the sidewalk or roadside. Ask questions during the walk, such as:

- What living things can you see?
- What evidence of living things can you see?
- What non-living things can you see?
- How do you tell living things from non-living things?

After the walk, have students draw in their Science Journals three living things they saw and three things that were not living.

Make a T-chart with the headings “Living” and “Non-living” and list students’ suggestions for each column according to what they identified on their walk.

Use a shared think-aloud to model the generation of questions about living things. Using students’ answers and questions, start a KWHL chart about living things. Refer to it often to allow students to add information and any new questions.



IWB Activity:

- Students can use
- Activity 1: *Living or non-living?* to sort the
- images of living and
- non-living things (see
- the Teacher’s Website).





Identifying Living and Non-living Things

Have students examine the farm scene on Science Card 1 and identify living and non-living things that they see. Ask:

- What living things can you see?
- What evidence of living things can you see?
- What non-living things can you see?
- How do you tell living things from non-living things?



Note that Science Cards 9 and 10 from Unit 1 also depict a variety of living and non-living things and can be used for this activity.

Encourage students to generate questions about the living things depicted on the science card(s). Use the I Wonder Wall to record students' questions.



Literacy Place Connection:

Is It Alive? (Guided Reading, Level B) compares living and non-living things. Invite students to discuss how they know which things are alive and which are not alive.

CONNECT

Brainstorming Session

As a class, brainstorm sources of science information about living things. Examples might include:

- Internet sites
- personal experience
- videos
- images
- texts such as non-fiction books, field guides, encyclopedia, magazine articles
- people (i.e., knowledgeable community members)
- museums and interpretation centres

Then, brainstorm lists of local plants and animals. Include pets, farm animals, and local wild animals.

Focus Animal

Using the brainstormed lists from the previous activity, have each student choose one local animal (farm, domestic, or wild) to focus on throughout the unit. Ask students to begin to write what they know and to generate questions about that animal. They can write these questions in their Science Journals. Throughout the unit, students will gather information about their Focus Animal. Later, they will have the opportunity to create their own page or pages about this animal to contribute to a class book.



CONSOLIDATE

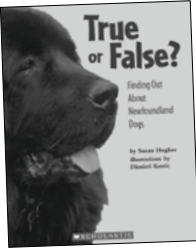


Research Living Things

Students work independently or in small groups to explore sources of science information (e.g., the Internet, personal observation, videos and images, classroom books) to begin to answer their questions about living things in general, as recorded on the I Wonder Wall and the KWLH chart, and about their Focus Animal. They should continue to record new questions that arise.

Poster

Provide poster board and craft supplies. Have students work in pairs or small groups to create posters communicating something they have learned about living things. Alternatively, students could create digital versions using photos from the Image Bank (see the Teacher's Website).



Literacy Place Connection:

True or False? Finding Out About Newfoundland Dogs (Guided Reading, Level H) invites the reader to learn about the characteristics of Newfoundland dogs by answering a series of true or false questions. Challenge students to answer the questions.



What a Living Thing Is (and Isn't)

Provide students with copies of BLM *Living Things*. Have students complete the BLM to consolidate their understanding of characteristics of living things. Invite students to share their work with a partner. Then invite volunteers to share with the class. Remind students to store the completed BLMs in their Science Folders.

EXPLORE MORE

Interviewing an Expert

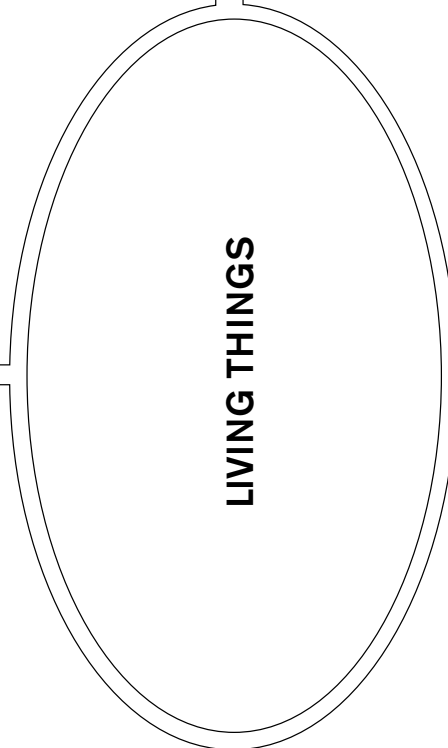
Challenge students to interview an adult they know (e.g., a parent, a dog groomer, a community Elder, or a farmer) to find answers to questions they have about living things. Students can then present their findings orally to the class. Alternatively, they could digitally record the interview using a smart phone.

Living Things

Name: _____

Pictures or drawings of living things

Characteristics of living things



LIVING THINGS

Things that are living

Things that are not living

Adapted from Frayer Model Diagram