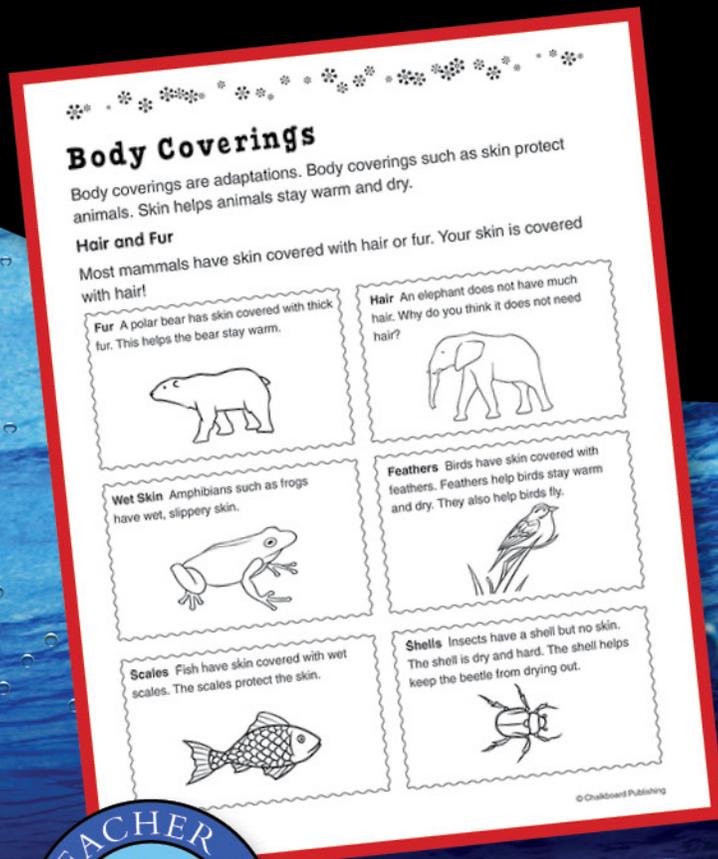


Canadian Daily STEM Activities

2



Includes

- Growth and Changes in Animals
- Properties of Liquids and Solids
- Simple Machines
- Air and Water in the Environment
- STEM Occupations



What Is STEM?

STEM is an acronym that refers to Science, Technology, Engineering, and Math.

Why Is STEM Education Important?

The need for individuals in STEM-related occupations is growing at a faster rate than the need in other types of occupations. Today, the number of young people who are choosing to pursue a STEM occupation is not sufficient to meet future needs. By encouraging students to take an interest in STEM topics, we can help to ensure that the workforce of the future has enough qualified people to meet the challenges of the 21st century.

STEM education is important for all students, no matter what careers they may choose. Almost any job requires individuals to have good problem-solving skills, and to be able to effectively gather and evaluate evidence, and make sense of the large amount of information available in a technological society. These skills are not only important in the workplace, they are also life skills that are increasingly crucial for engaging in 21st century society. STEM education helps students to develop these skills.

By providing all students with quality STEM learning opportunities, we help to prepare them for the future and ensure their success.

How You Can Help Your Child at Home

Tips for Reading Comprehension

- Have your child read the text aloud to you, or take turns reading alternate sentences or paragraphs together.
- Talk with your child about what they have read, and brainstorm ways the information in the text relates to their life.
- Discuss the meanings of unfamiliar words that they read and hear.
- Help your child monitor his or her understanding of what they have read. Encourage your child to consistently ask themselves whether they understand what the text is about.
- To ensure understanding of the text, have them retell what they have read.

Tips for Completing Activities

- Review instructions with your child to ensure they understand the questions.
- Encourage your child to go back to the text to support his or her answers. Then have your child highlight the important information from the text to help them answer the question.
- Offer your child ample opportunities to share with you their answers and the thinking processes they used to arrive at those answers.

Authors: Janis Barr, Rita Vanden Heuvel
Illustrators: Jonathan Barker, Qingyang Chen
© 2016 Chalkboard Publishing Inc
Canadian Daily STEM Activities Grade 2
ISBN 978-1-77105-362-4

All rights reserved. The classroom teacher may reproduce student pages in this teacher resource for individual classroom use only. The reproduction of any part of this teacher resource for an entire grade division, or entire school or school system, is strictly prohibited. No part of this publication may be transmitted, stored, or recorded in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

We acknowledge the financial support of the Government of Canada through the Canada Book Fund for our publishing activities.

Distributed by Nelson Education Ltd.
Printed in Canada.



Contents

Unit: Growth and Changes in Animals	2	Engineering in Our Daily Lives	105
Unit: Properties of Liquids and Solids	25	Think Like an Engineer!	107
Unit: Simple Machines	45	The Design Process	108
Other Machines	64	STEM Vocabulary	112
Unit: Air and Water in the Environment	74	How Am I Doing?	113
		STEM Rubric	114
STEM-Related Occupations	99	STEM Focus	115
STEM Jobs Word Search	100	Achievement Awards	116
What Is My Occupation?	101		
Be an Architect	102	Answer Key	117
When I Grow Up...	104		

As we live in a rapidly changing society, exposure to and fluency in Science, Technology, Engineering, and Mathematics (STEM) ensures students will gain the skills they will need to succeed in the 21st century. It is essential that students gain practice in becoming good problem solvers, critical thinkers, innovators, inventors, and risk takers.

Teacher Tips

Encourage Topic Interest

Help students develop an understanding and appreciation of different STEM concepts by providing an area in the classroom to display topic-related non-fiction books, pictures, collections, and artifacts as a springboard for learning.

What I Think I Know / What I Would Like to Know Activity

Introduce each STEM unit by asking students what they think they know about the topic, and what they would like to know about the topic. Complete this activity as a whole-group brainstorming session, in cooperative small groups, or independently. Once students have had a chance to complete the questions, combine the information to create a class chart for display. Throughout the study, periodically

update students' progress in accomplishing their goal of what they want to know, and validate what they think they know.

Vocabulary List

Keep track of new and content-related vocabulary on chart paper for students' reference. Encourage students to add words to the list. Classify the word list into the categories of nouns, verbs, and adjectives. In addition, have students create their own STEM dictionaries as part of their learning logs.

Learning Logs

Keeping a learning log is an effective way for students to organize thoughts and ideas about the STEM concepts presented and examined. Students' learning logs also provide insight on what follow-up activities are needed to review and to clarify concepts learned.

Learning logs can include the following types of entries:

- Teacher prompts
- Students' personal reflections
- Questions that arise
- Connections discovered
- Labelled diagrams and pictures
- Definitions for new vocabulary



Mammals Are Animals

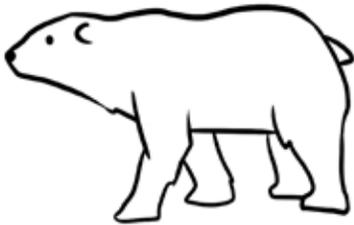
There are different types of animals.
Some animals are **mammals**.



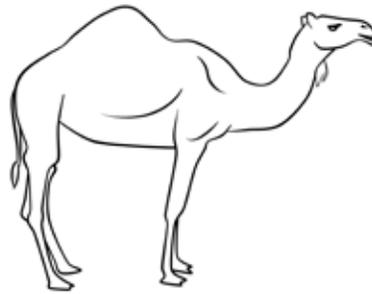
Mammal Facts

- Mammals are warm blooded.
- Mammals have hair or fur.
- Mammal babies are born alive.
- Mammals produce milk to feed their babies.

Most mammals live on land.



Polar bears live in very cold places.



Camels live in very hot places.



Moles live under the ground.

Did you know that bats are the only mammals that can fly?



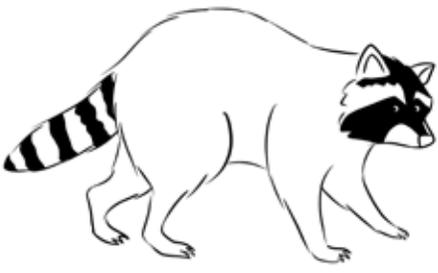
Mammals such as whales live in water.





“Mammals Are Animals”—Think About It!

1. How can you tell a raccoon is a mammal?
List four ways.



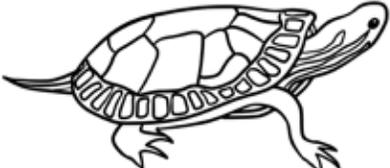
2. Name three mammals.

3. Choose a mammal that you like. Tell three things about it. Read the clues to your friends. Did they guess the mammal?



Kinds of Animals

Read the chart to learn about other kinds of animals.

Kind of Animal	Features
Birds owl 	<ul style="list-style-type: none">• Birds have two legs.• They have a beak but no teeth.• Most birds can fly using wings.• Birds hatch from eggs.
Insects grasshopper 	<ul style="list-style-type: none">• Insects have six legs.• Most insects can fly using wings.• Insects hatch from eggs.
Fish salmon 	<ul style="list-style-type: none">• Fish live in water.• They have fins to help them swim.• They have gills to breathe.• Fish hatch from eggs.
Amphibians frog 	<ul style="list-style-type: none">• Amphibians usually live first in water, then later on land.• They hatch from eggs.
Reptiles turtle 	<ul style="list-style-type: none">• Turtles live in water and on land.• Lizards live on land.• Most reptiles hatch from eggs.



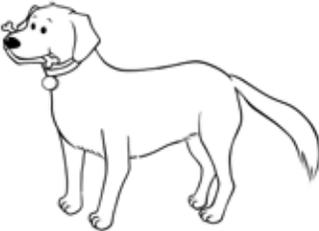
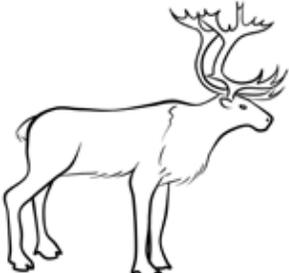
Classify Animals Game

1. Create a word card for each type of animal:

amphibians birds fish insects mammals reptiles

2. Colour and cut out the picture cards.

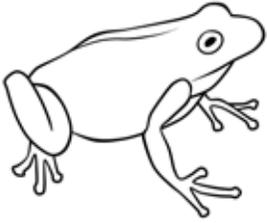
3. Spread out the word cards you created. Sort the picture cards by type of animal.

Beluga whale 	dog 	goldfish 	goose 
ladybug 	lizard 	mosquito 	caribou 

continued next page 



frog



shark



bee



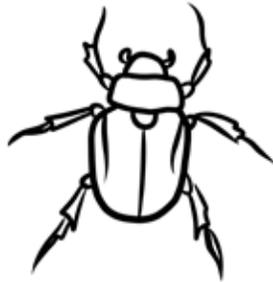
duck



snake



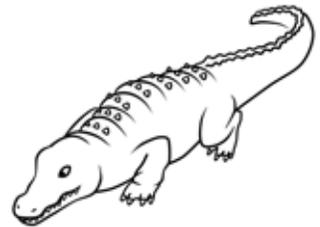
beetle



squirrel



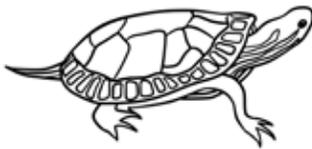
crocodile



bluebird



turtle



ant



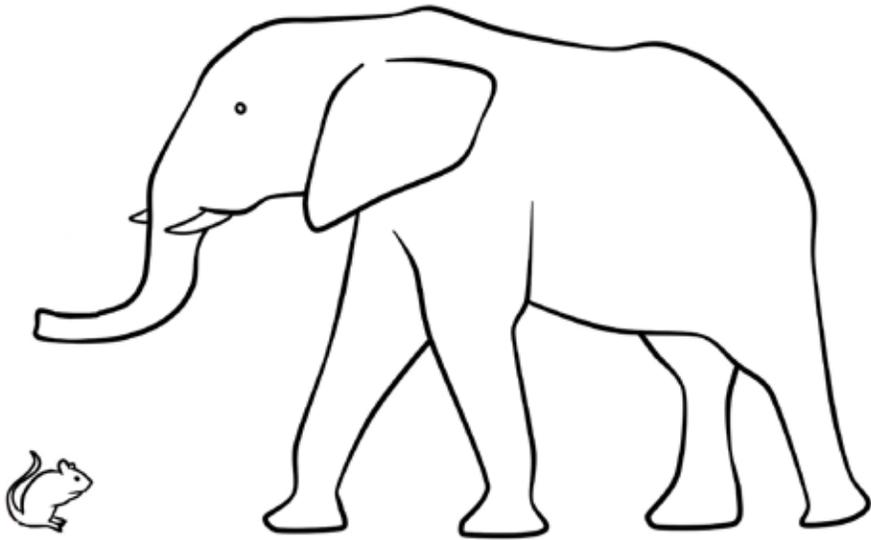
butterfly





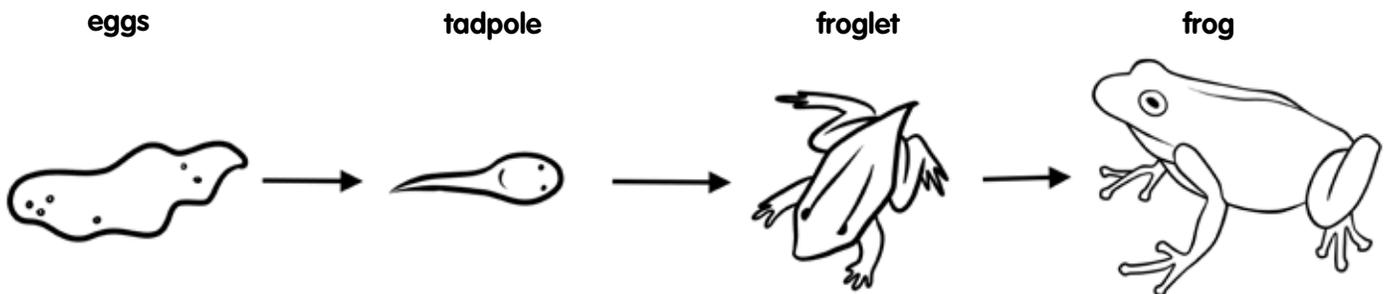
Animals Grow Up

Animals go through stages to grow up. The stages make a life cycle. Most animals have a simple life cycle. They are born alive from their mother or hatch from eggs. Then they grow to adult size.



The life cycle of an elephant and a mouse are similar. Both are born alive from their mother. They drink milk from their mother. They look like their parents, but are smaller. Both will grow up and look even more like their parents. The human life cycle is similar to that of elephants and mice.

Amphibians have more stages in their life cycle. They go through big changes. Look at the pictures that show how frogs grow and change.



A tadpole hatches from an egg. The tadpole has gills like a fish to breathe in the water. It grows slowly into a froglet, then into a frog. The frog lives on land and breathes air the same way you do.

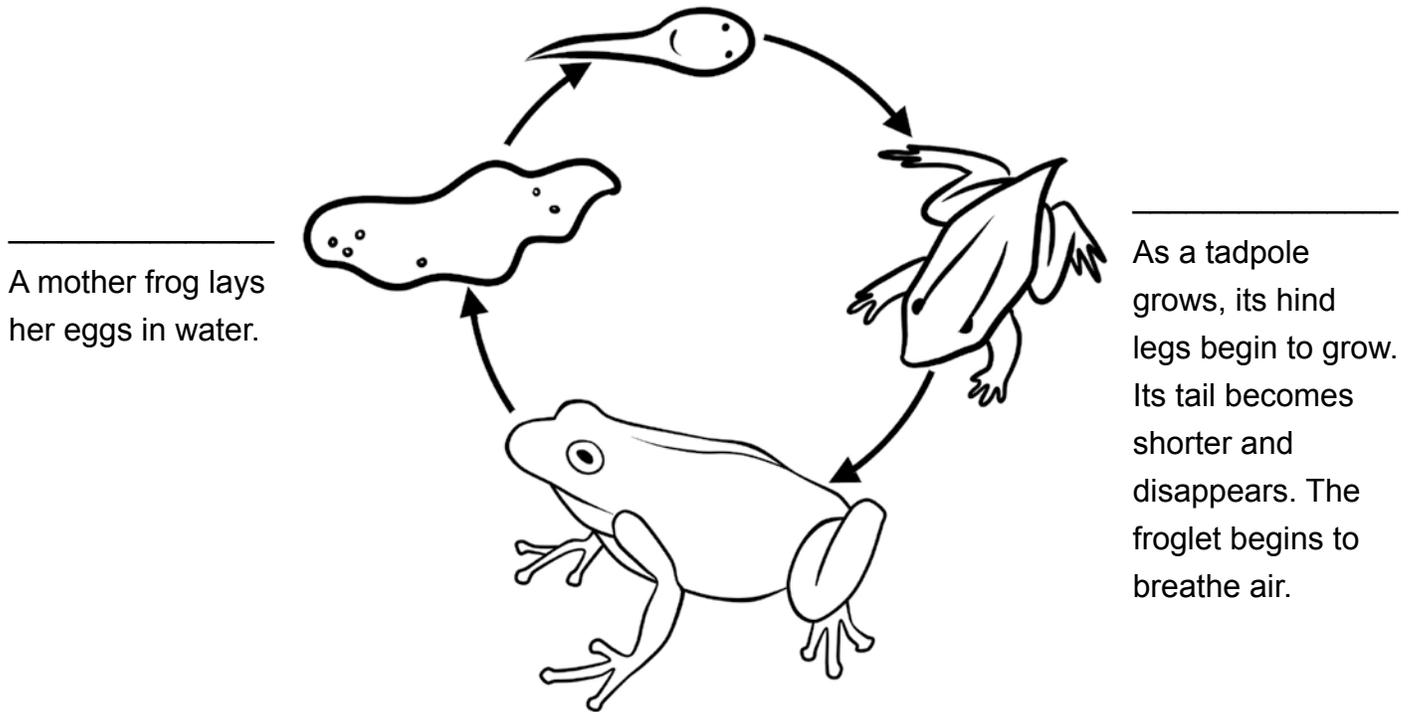


"Animals Grow Up"—Think About It!

1. The diagram shows the life cycle of the frog. Use the words below to label the diagram.

eggs **frog** **froglet** **tadpole**

A tadpole hatches out of each egg. The tadpole has a long tail but no legs. It has gills to breathe in the water.



The frog leaves the water. It can now live on land. After three years, the cycle starts again.

2. How many stages are there in the life cycle of a frog?

continued next page 



"Animals Grow Up"—Think About It! (continued)

Some baby animals look just like their parents. Some animals change just a little as they grow up. Other animals change a lot as they grow.

Draw a line to match the baby to the adult.

3.



A.



4.



B.



5.



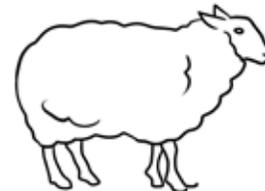
C.



6.



D.



7.



E.



Brain Stretch

On a sheet of paper, draw the life cycle of a chicken. There are three stages. The stages are egg, chick, and chicken. Label your sketch. Write what you know about each stage.

GET EVEN MORE!

Access thousands of activities and student pages just like these with a Chalkboard digital subscription!

Chalkboard engages students and inspires a love of learning with

- 100% Canadian curriculum-based content (featuring Canadian spelling and grammar!)
 - A variety of materials that cover core, foundational and supplementary k-6 subjects and concepts
 - Instant access to thousands of resources on all devices. All you have to do is print and teach
 - High-quality learning materials, how-to's, tips and tricks, graphic organizers, and student success criteria
 - Illustrations, word games and hands-on activities, students are able to learn concepts and practice skills while having fun
-

Visit www.chalkboardpublishing.com to learn more or to get started!