

Creating a Home for Wildlife

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Helping to Clean the Air

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Heating a building in winter takes lots of energy. A roof garden helps to keep out the winter cold, so it saves on energy used for heating. In summer, air conditioning can use up lots of energy. Roof gardens help to keep the sun from making the inside of a building too warm. Less air conditioning is needed, so energy is saved.

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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 article to support his or her answers.

 Then have your child highlight the important information from the text passage 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.

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Introduction

Reading comprehension is the cornerstone of a child's academic success. By completing the activities in this book, children will develop and reinforce essential reading comprehension skills. Children will benefit from a wide variety of opportunities to practice engaging with text as active readers who can self-monitor their understanding of what they have read.

Children will focus on the following:

Identifying the Purpose of the Text

• The reader understands, and can tell you, why they read the text.

Understanding the Text

- What is the main idea of the text?
- What are the supporting details?
- Which parts are facts and which parts are opinions?

Analyzing the Text

- How does the reader's background knowledge enhance the text clues to help the reader answer questions about the text or draw conclusions?
- What inferences can be made by using information from the text with what the reader already knows?
- How does the information from the text help the reader make predictions?
- What is the cause and effect between events?

Making Connections

How does the topic or information they are reading remind the reader about what they already know?

- Text-to-self connections: How does this text relate to your own life?
- Text-to-text connections: Have I read something like this before? How is this text similar to something I have read before? How is this text different from something I have read before?
- Text-to-world connections: What does this text remind you of in the real world?

Using Text Features

How do different text features help the reader?

Text Features

Text features help the reader to understand the text better. Here is a list of text features with a brief explanation on how they help the reader.

Contents	Here the reader will find the title of each section, what page each text starts on within sections, and where to find specific information.	
Chapter Title	The chapter title gives the reader an idea of what the text will be about. The chapter title is often followed by subheadings within the text.	
Title and Subheading	The title or topic is found at the top of the page. The subheading is right above a paragraph. There may be more than one subheading in a text.	
Мар	Maps help the reader understand where something is happening. It is a visual representation of a location.	
Diagram and Illustration		
Label	A label tells the reader the title of a map, diagram, or illustration. Labels also draw attention to specific elements within a visual.	
Caption	Captions are words that are placed underneath the visuals. Captions give the reader more information about the map, diagram, or illustration.	
Fact Box	A fact box tells the reader extra information about the topic.	
Table	A table presents text information in columns and rows in a concise and often comparative way.	
Bold and Italic text	Bold and <i>italic</i> text are used to emphasize a word or words, and signify that this is important vocabulary.	

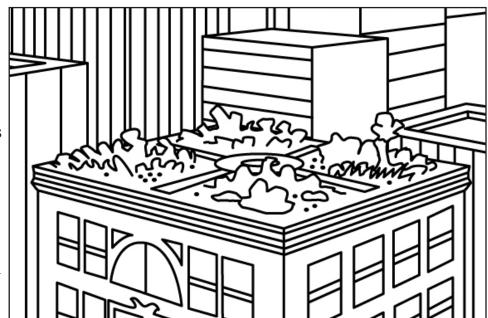
A Garden on the Roof

Not all gardens grow in the ground. Today, you can find gardens on the roofs of many large buildings in cities. Even some homes with flat roofs have **roof gardens**. Why do people grow

roof gardens?

Making Cities More Beautiful

Flowers, grasses, green plants, and even small trees and bushes can grow in a roof garden. Plants are much nicer to look at than a boring, flat roof. You can find gardens on the roofs of many different city buildings.



Creating a Home for Wildlife

A roof garden can be a home for many different types of insects. Butterflies and dragonflies are two insects that can be seen in roof gardens. Some birds build their nests in a roof garden. The sound of birds singing is nice to hear in a busy city.

Helping to Clean the Air

Plants help to remove **pollution** from the air. In some cities, there is lots of **air pollution**! A roof garden can help to clean the air.

Saving Energy

Heating a building in winter takes lots of energy. A roof garden helps to keep out the winter cold, so it saves on energy used for heating. In summer, air conditioning can use up lots of energy. Roof gardens help to keep the sun from making the inside of a building too warm. Less air conditioning is needed, so energy is saved.

"A Garden on the Roof"—Think About It

1. The author wrote this text to answer a question. What is the question?		
2. What are two places where roof gardens can be found?		
3. Tell how a roof garden helps people save energy in winter and in summer.		
4. How can roof gardens help more birds live in cities?		
5. The text has subheadings in bold print. How are the subheadings helpful to readers?		

A Plant That Eats Insects

Most plants make their own food in their leaves. To make food, they use light, air, water, and **nutrients** found in soil. If the soil does not contain enough nutrients, the plant cannot survive.

The Venus flytrap is a very interesting plant. It grows in soil that does not contain enough nutrients to help it survive. So how does a Venus flytrap get the nutrients it needs? It eats insects!

Be Careful—It Is a Trap!

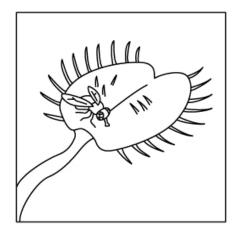
The Venus flytrap has special leaves that are perfect for catching insects. Inside each leaf are **trigger hairs**. When an insect such as a fly lands inside a leaf, the insect touches the trigger hairs. The trigger hairs send a signal to the plant to quickly close the leaf trap.

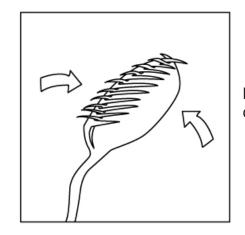
It takes a lot of energy for the Venus flytrap to close a leaf trap. The plant does not want to waste energy by trapping tiny insects. It wants a nice, big meal! The leaf traps will not close unless the insect is big enough to contain lots of nutrients.

When the leaf trap closes, it crushes the insect and kills it. The trap stays closed for one to two weeks while the plant absorbs the nutrients in the insect. Then the trap opens again, ready to catch another insect. Each leaf trap can only catch an insect three or four times. After that, the trap will no longer work.

After eating an insect, the Venus flytrap is not in a hurry for its next meal. The Venus flytrap can go without a meal for one to two months, but will eat about once a week if it can.

Fly entering a leaf trap





Leaf trap closed

"A Plant That Eats Insects"—Think About It

1. Why can a Venus flytrap grow in soil that other plants could not grow in?		
2. How does a Venus flytrap save energy?		
3. Why does a Venus flytrap need to have many leaf traps, and not just one?		
4. Why do you think humans need to eat much more often than Venus flytraps? (Hint: Think about size and energy.)		
5. What surprised you about Venus flytraps?		

Where Does Maple Syrup Come From?

Sap is a liquid that flows inside trees. Maple **syrup** is made from the sap of maple trees. Here are the steps farmers use to make maple syrup.

Step 1: Drill a hole in the trunk of a maple tree.

Step 2: Place a metal spout inside the hole. Then hang a bucket under the spout.

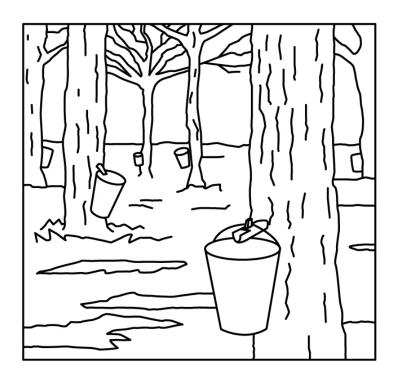
Step 3: Wait for the bucket to fill with sap. The sap is clear and comes out one drop at a time. It takes a long time for the bucket to fill with sap.

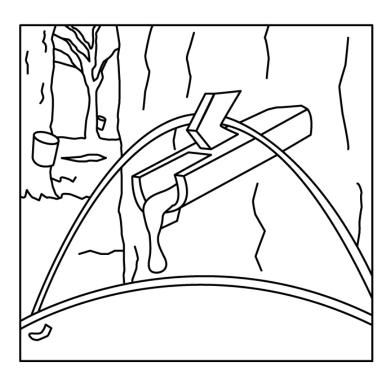
Step 4: Boil the sap for many hours. This makes the sap change from clear to golden. The sap also turns into a thick syrup.

Step 5: Wait for the syrup to cool. Then pour some on pancakes or waffles.

Did You Know?

Sap contains lots of water. When the sap boils, the water turns to **steam** and escapes. As steam rises from the sap, the sap gets thicker and thicker.





"Where Does Maple Syrup Come From?"—Think About It

1. How does the sap get from inside a maple tree into the bucket?	
2. It takes a lot of sap to make a little bit of maple syrup. What disappears from the sap? Why?	
3. How is maple sap different from maple syrup?	
4. Farmers often cover the buckets so no rain gets in. Why would farmers not want rain to get in the sap?	
5. Do you like maple syrup? Tell why or why not.	

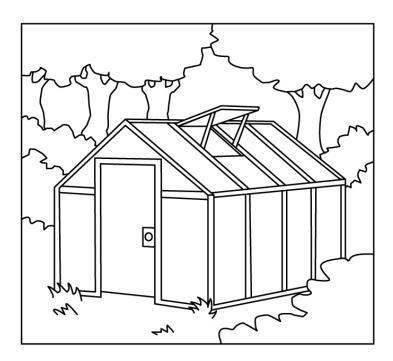
How Does a Greenhouse Work?

What Is a Greenhouse?

In some seasons, it is too cold for plants to grow outside. A **greenhouse** is a place where plants can grow all year long. Some of the fresh fruits and vegetables you can buy in winter were grown in a greenhouse.

What Materials Are Used to Build a Greenhouse?

A greenhouse has a strong **frame** made of steel or wood. The walls and roof are made of glass or clear plastic.



How Does a Greenhouse Help Plants Grow?

Plants need light and warmth. The walls and roof of a greenhouse let in lots of sunlight. The sunlight helps keep the greenhouse warm, even when it is cold outside. The glass or plastic traps warmth from sunlight inside the greenhouse.

Plants also need water. Some greenhouse gardeners water plants by hand. A large greenhouse might have **sprinklers** to keep the soil **moist**.

How Do Greenhouses Avoid Getting Too Hot on Sunny Days?

On a very sunny day, lots of sunlight comes into the greenhouse. Sometimes the air in the greenhouse starts to get too warm for the plants. Some greenhouses have windows that open. The warm air flows out the windows so the air inside gets cooler. Some greenhouses use fans that can blow the hot air outside. Fans help keep the **temperature** of the greenhouse just right.

"How Does a Greenhouse Work?"—Think About It

1. How can greenhouses help people eat fresh, healthy foods in winter?		
2. A greenhouse can have walls and a roof made of plastic. Why is it important to use clear plastic on a greenhouse?		
3. Why do greenhouses have fans or windows that open?		
4. Why does a car with closed windows get hot inside on a sunny summer day?		
5. Sometimes it is cloudy for a whole week, but plants in a greenhouse do not die. Why not?		

Pyramids of Ancient Egypt

The pyramids of ancient Egypt are so old that nobody knows exactly when they were built. We do know that the pyramids are thousands of years old. Why have the pyramids lasted so long?

Shape

A pyramid is a very strong shape. It is large at the bottom and small at the top. This makes the pyramid very **stable**, so it can stand up to **forces** that act on it such as wind or an earthquake.

Building Material

To make a structure last a long time, it is important to use strong building materials. The pyramids were built with huge blocks of stone. Stone is a strong building material, and it lasts for a very long time. The blocks at the bottom of a pyramid are strong enough to **support** the **weight** of all the blocks higher up.

Construction

Pyramid builders shaped the blocks on the outside of a pyramid very carefully. They knew that if the blocks fit together perfectly, with no space in between, the pyramid would be stronger and more stable. Some pyramid blocks fit together so perfectly that you cannot slip a piece of paper between them!

Some Pyramids Were Stronger Than Others

Not all pyramids were built to be as strong and stable as the ones that are still standing today. Some pyramids have started to fall apart over time. These pyramids were also built of stone, but they were not built as carefully as the pyramids that have lasted for thousands of years.

"Pyramids of Ancient Egypt"—Think About It

1. When we say that a structure is stable, what do we mean?		
2. Give two reasons why stone was a good building material to use for the pyramids.		
3. Why is it important for the bottom of a large structure to be strong?		
4. Some experts believe it took about 20 years for ancient Egyptians to build a large pyramid Why do you think it took so long? (Hint: Think about the tools and equipment ancient people would use.)		

Ancient Cave Paintings

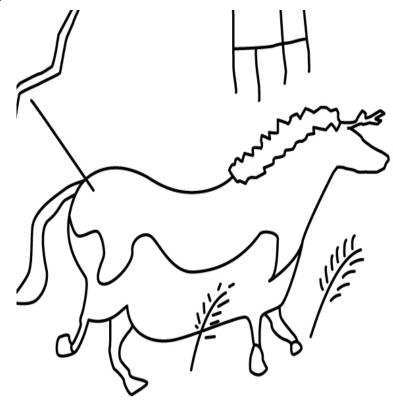
In 1940 in France, four boys found a cave in the woods. When they went inside to explore, they made an amazing discovery. On the walls there were beautiful paintings of animals! The boys brought their teacher to the cave. When the teacher saw the paintings, he knew they were very, very old. Today, people believe the paintings are over 15 000 years old.

What Do the Paintings Show?

The paintings show many different animals, such as horses, bulls, and deer. Some of the paintings are very large. One painting of a bull is over 5 m long! There are over 900 animal paintings inside the cave.

How Were the Paintings Made?

The artists made their own paints from **materials in nature**. Some paints were made from different colours of dirt. Other paints were made from rocks that were crushed into a powder.



Sometimes the artists put paint into their mouth and blew it onto the cave wall. Sometimes they blew the paint through a **tube**, such as a **hollow bone**. In a few places, the artists used rocks to scratch lines into the cave wall.

Keeping the Paintings Safe

Today, only a few scientists are allowed to enter the cave. This helps to keep the paintings safe. Other people might touch the paintings and some of the paint might come off.

"Ancient Cave Paintings"—Think About It

1. What clue in the text tells you that the boys thought the paintings might be important?
2. What clues tell us that it took a long time to create all the cave paintings?
3. The cave with the paintings is very dark. The paintings were made long before light bulbs and flashlights were invented. How do you think the artists were able to see when they were painting?
4. How did the artists make paint?
5. Why do you think scientists are allowed to enter the cave?

Tsunami Alert!

A tsunami (say it like this: *soo-nah-mee*) is a series of large waves that are different from normal waves. A tsunami is not caused by wind.

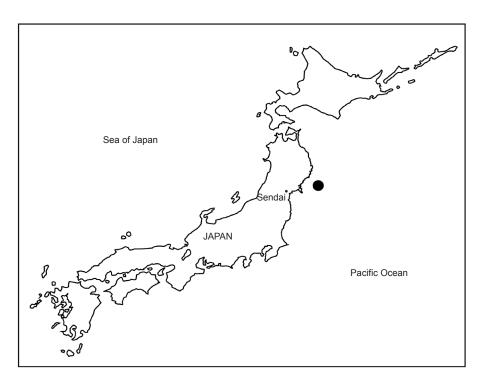
Most tsunamis are caused by an **earthquake** at the bottom of an ocean. Some tsunamis happen when an underwater volcano **erupts**. Both of these events can make large amounts of water start moving, and a tsunami is formed.

A tsunami wave is not very tall when it first forms in the deep water. As the wave moves closer to the **shore**, it gets taller and taller. The tallest tsunami we know about grew to be about 530 metres tall. That tsunami happened in Alaska in 1958.

Tsunamis travel very fast when they are in deep water. They slow down when they reach shallow water. When a tsunami is moving fast, it can travel at the same speed as a jet plane!

In 2011, there was a very powerful earthquake under the ocean near Japan. The earthquake started a tsunami. Some of the waves grew to over 40 m tall when they reached Japan. After waves reached the shore, they travelled as far as 10 km across land.

Right after the earthquake, people in Japan were warned that a tsunami was coming and they should get to high ground. Most people who paid attention to the warning were safe. Many people who did not pay attention were killed by the waves.



The dot with rings shows where the underwater earthquake happened near Sendai, Japan in 2011.

"Tsunami Alert!"—Think About It

1. Explain what a tsunami is.					
2.	2. What are two events that can cause a tsunami?				
3. Complete the chart to compare a tsunami in deep water and a tsunami in shallow water.					
	Tsunami in Deep Water	Tsunami in Shallow Water			
	Speed:	Speed:			
	Height:	Height:			
4. In the 2011 tsunami in Japan, what did many people do to stay safe?					
5.	Read the fifth paragraph. Does this (the order in which events happened)	paragraph compare ideas or does it tell a sequence ed)?			

What Can Wind Do?

Wind is air that is moving. When air moves very quickly, it has a strong **pushing force**. When you see leaves or papers blowing down a street, they are moving because the wind is pushing against them.

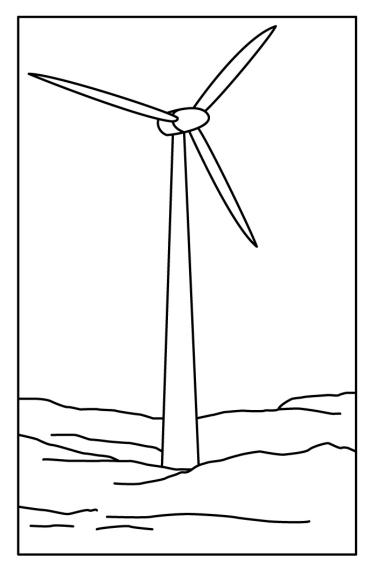
Wind makes waves by pushing against water. Strong winds create big waves. During a storm, strong winds can make waves that do a lot of damage. Big waves can destroy homes and other buildings that are close to a lake or ocean.

Wind is what makes sailboats move. The wind pushes against the sails, and that makes the boat move forward. When the wind is moving very quickly, it pushes against the sails with more force. Then the sailboat will move faster.

People can use wind to create electricity. A **wind turbine** has narrow **blades** that sit on top of a tall pole. Inside the turbine is a magnet. When wind pushes against the blades, they spin and make the magnet spin. The spinning **magnet** creates electricity.

A **tornado** is one of the most dangerous kinds of wind. A tornado is very fast wind that is moving in a circle. A tornado has so much force that it can tear apart a house in seconds. A very strong tornado has enough force to pick up a car and send it flying through the air!

Wind can cause problems for farmers. The best soil for growing plants is the soil on top of the ground. Wind can blow away dry **topsoil** and make it difficult for farmers to grow crops.



"What Can Wind Do?"—Think About It

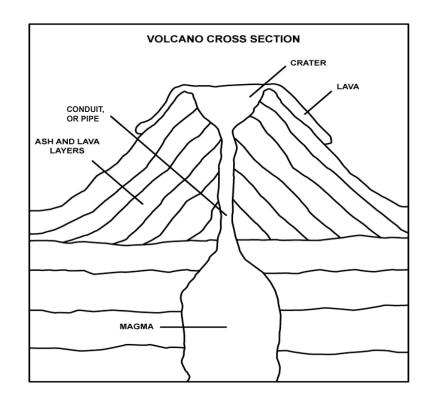
1. How does wind make things move?		
2. Use information from the text to complete the chart below.		
How Wind Helps People		
Problems Caused by Wind		
3. Explain what topsoil is and why it is important to farmers.		

Volcanoes

A volcano is a mountain that has an opening at the top called a **crater**. This opening travels deep into Earth, where there is **molten**, or melted, rock.

When a volcano **erupts**, molten rock and **ash** are pushed out of the crater. Molten rock inside a volcano is called **magma**. When molten rock flows outside of a volcano, it is called **lava**. When the lava cools, it becomes solid rock.

Lava is much, much hotter than boiling water and it cools slowly. Sometimes it can take more than a year for lava to cool completely.



There are three different types of volcanoes:

- An active volcano is one that erupted recently and might erupt again soon.
- A **dormant volcano** is one that has not erupted for a long time, but it might erupt again soon.
- An extinct volcano is one that erupted thousands of years ago and will not erupt again.

Volcanoes are found all over Earth. There are even volcanoes under the oceans. Today, there are more than 500 active volcanoes in the world. Most of these volcanoes are on land next to the Pacific Ocean.

Did You Know?

The tallest volcano we know about is not on Earth. You will have to travel to Mars to see the volcano. This giant volcano is 25 km tall!

"Volcanoes"—Think About It

1. What is the difference between magma and lava?		
2. How are an active volcano and a dormant volcano similar and different?		
Similar:		
Different:		
3. What example does the text give to show that lava cools slowly?		
4. What kind of volcano would it be safest to live near? Tell why.		
5. What text features do you see in this text? Name at least three.		

Slimy, Squiggly Worms!

Some people do not like earthworms because they are slimy and squiggly. Did you know that earthworms help plants grow?

Where Earthworms Live

Earthworms live in soil all around the world. They create **tunnels** called **burrows** in the soil. They come out of their burrows at night and after it rains. When rain fills their burrows with water, earthworms come above ground so they will not drown.

Slimy Skin

The slime on an earthworm's body helps keep its skin **moist**. Earthworms breathe through their skin, and they need moist skin to breathe.

Inside an Earthworm

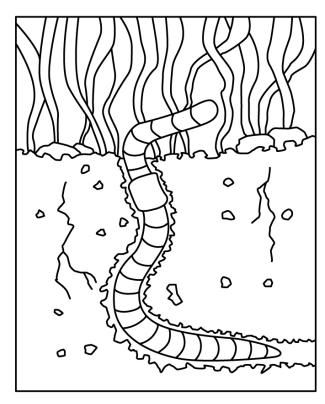
An earthworm has a brain, five hearts, and no bones. Inside an earthworm's mouth you will not find teeth or a tongue. Earthworms use their skin to taste things.

Lunch for an Earthworm

As an earthworm digs its burrow, it eats soil. The soil contains tiny bits of plants, and these provide food for the worm. The soil passes through the earthworm's body and comes out the tail in small lumps called **castings**.

How Earthworms Help Plants

An earthworm's castings contain lots of **nutrients** that help plants grow. Earthworm burrows help plants grow roots deep into the soil. It is easy for a plant to grow roots down an earthworm burrow. Growing roots down through soil is harder work for the plant.



An earthworm travelling through its burrow.

"Slimy, Squiggly Worms!"—Think About It

1. Heat from the sun dries out things that are moist. What problem would an earthworm have if it came out of its burrow on a warm, sunny day?			
2. Complete the chart to compare and contrast earthworms and humans.			
	Earthworms	Humans	
Breathing		Use nose, mouth, and lungs to breathe	
Bones		Have many bones	
Brain	Have one brain		
Heart		Have one heart	

3. What are	two ways tha	t earthworm	s help plants	?	

Use tongue to taste

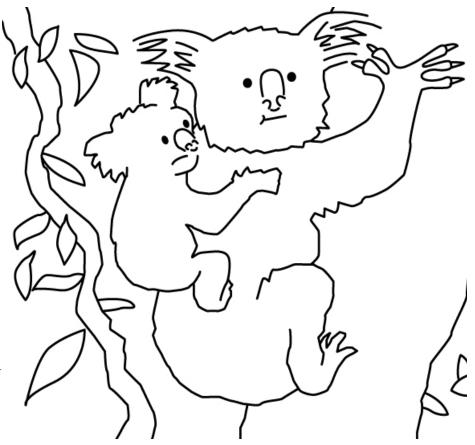
Tasting

Teeth

Koalas Are Cute

Many people think koalas are a kind of bear, but that is not true. Koalas belong to the same animal group as kangaroos.

Koalas live in Australia. They live in forests that have many trees called **eucalyptus** (say it like this: *you-cah-lip-tus*). Eucalyptus leaves are the favourite food of koalas. They spend most of their time in eucalyptus trees. They even sleep in these trees!



A mother koala and baby in a eucalyptus tree.

Koalas have bodies that make it easy for them to live in trees. Their front paws have five fingers each. Two of these fingers work like thumbs so koalas can hold tight to branches. Their fingers also make it easy for koalas to pick eucalyptus leaves.

Koalas have thick, rough skin on the bottom of their paws. The rough skin keeps their paws from sliding on tree branches. The sharp claws on their back paws dig into tree bark, making it easier to climb. Strong **thigh** muscles give koalas the strength to climb tall trees.

Female koalas have one baby at a time. The baby is called a **joey** and it is very tiny. When the joey is born, it climbs into a **pouch** over the mother's stomach. It stays in the pouch for six months. The joey gets milk from its mother's body and grows bigger and stronger. After the joey comes out of the pouch, it stays with its mother for six more months. Then it can live on its own.

Koalas do not get much energy from eating eucalyptus leaves. To save energy, they move slowly and sleep most of the time. A koala sleeps for about 20 hours a day!

"Koalas Are Cute"—Think About It

1. Complete the chart about how a koala's body helps it climb.

Body Part	Good for climbing because		
Two fingers that work like thumbs			
Paws with thick, rough skin on the bottom			
Sharp claws on back paws			
Strong thigh muscles			
2. What happens to a joey while it is in its	mother's pouch?		
3. Circle True or False and tell how you kn A koala can live on its own when it is on			
4. Why does a koala need to save energy?			

The Octopus

The octopus gets its name from a Greek word that means "eight feet." Octopuses do not really have feet. Instead, they have eight long arms called **tentacles**. Each tentacle has two rows of **suckers**, which are like suction cups. These help the octopus to grip slippery rocks and catch sea animals to eat.

Two of the tentacles are more like legs than arms. The octopus uses these tentacles to walk along the bottom of the ocean. If an octopus loses a tentacle, it can grow a new one.

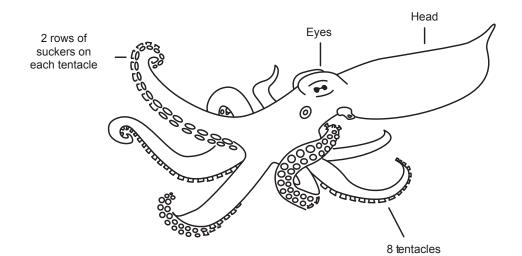
The octopus has no bones. The only hard part on an octopus body is the **beak** it uses to eat. The beak is very sharp and can drill into the shell of animals such as clams and crabs.

An octopus can change the colour of its skin to help it hide from enemies. The colour changes so the octopus can blend in with its surroundings. When it is chased by an enemy, the octopus squirts out a cloud of dark **ink** so the enemy cannot see it. Then the octopus swims away very fast.

Octopuses live alone, not in families or groups. An octopus home is called a **den**. Some octopuses make their dens in between rocks, and some dig holes to live in. An octopus leaves its den to hunt for food.

A female octopus lays thousands of eggs. Then she stays in the den to protect the eggs until they **hatch**. After two months, the eggs hatch and the mother uses water to push the baby octopuses out of the den.

California Two Spot Octopus



"The Octopus"—Think About It

1. An octopus tentacle has suckers. How would the suckers help an octopus to hunt?
2. An octopus can squeeze through a very small space. What fact in the text helps to explain why an octopus can do this?
3. How can changing the colour of its skin help an octopus hide from enemies?
4. What are two sea animals that octopuses eat?
5. What are two ways that octopuses can move around?
6. A female octopus often dies after her eggs hatch. Use information in the text to figure out why the mother might die.

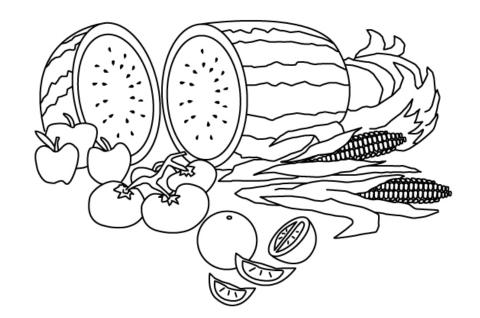
Eating Local Foods

Some foods in the grocery store come from places far away. Trucks, trains, ships, and airplanes **transport** food from one place to another. Many of the fruits and vegetables on store shelves were grown in places far away from where you live—even in other countries!

Local foods are foods grown in the area where you live. Let us look at some reasons why many people are trying to eat more local foods.

- Local foods are **fresher** because you buy them soon after they were **harvested**. They did not spend days or weeks getting to the grocery store from a place far away. Fruits and vegetables **taste** better when they are fresh.
- Over time, fruits and vegetables lose some of their **nutrients**, such as **vitamins**. Local food gets to your grocery store much faster, so it gives you more nutrients that help keep you healthy.
- Eating local foods also helps the environment. Trucks, airplanes, and other forms of transportation pollute the air. The farther they travel, the more pollution they create.
 Trucks carrying food from a local farm create less pollution than a truck that carries food from far away.

It is okay to eat foods that are not local. Some foods you enjoy might not grow in your area. Local fruits and vegetables are for sale only in the season when they are ripe. It is important to eat a variety of foods, but try to eat local foods as often as you can. You will help yourself and the environment!



"Eating Local Foods"—Think About It

1. What does "local foods" mean?			
2. Why do local foods taste better than foods grown far away?			
3. Why are local foods healthier than foods grown far away?			
4. How does eating local foods help the environment?			
5. How do you think eating more local foods would help local farmers?			

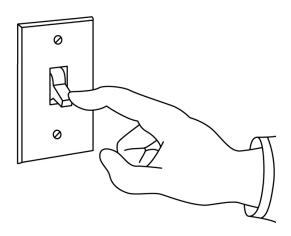
Earth Hour

What Is Earth Hour?

Earth Hour is an event that takes place every year in over 150 countries. Most countries have Earth Hour on a day in March. On this day, people are asked to turn off lights for one hour during the evening.

Do People Need to Turn Off All the Lights?

People are asked to turn off any lights they do not really need. Turning off all the lights could be dangerous. People might hurt themselves by walking into things or falling down stairs. Businesses that are open in the evening need to keep some lights on.



What Is the Purpose of Earth Hour?

Earth Hour was started to make people think about ways to care for our planet. Turning off lights means we use less electricity. Making **electricity** can cause **pollution**. When we use less electricity, we put less pollution into the air.

Earth Hour is not just about saving electricity on one day each year. Earth Hour is a **reminder** that we should always think about what we can do to help our **planet**. People can do more than just turning off lights they do not need. For example, they can **recycle** and they can sometimes take the bus rather than driving a car. They can do something every day to help our planet.

How Can You Help?

You can find out when the next Earth Hour is in your country. (Ask an adult to use the Internet to find out.) Then ask your family and friends to take part. Remind them to keep on lights they need to stay safe. You can also try to do one thing each day to help our planet.

"Earth Hour"—Think About It

1. Why do you think Earth Hour takes place in the evening and not in the daytime?
2. What examples in the text show how turning off all the lights could be dangerous?
3. How does turning off lights help our planet?
4. What is another way that Earth Hour can help our planet?
5. Write two things you could do today to help our planet.
6. Do you think that Earth Hour is a good idea? Explain.

Forest Fires

A small fire starts in a forest. The fire spreads quickly, and soon a large part of the forest is on fire. This type of fire is called a **forest fire**.

When Do Forest Fires Happen?

Most forest fires happen in summer and fall. **Dead plants**, branches, and leaves on the forest floor get very dry. These dry plant parts catch fire easily. Many fires start when there has been no **rain** for a long time.

How Do Forest Fires Start?

Most forest fires are started by people. Campers might start a small fire to **cook** some food. If they are not careful, the fire might start to spread. Sometimes **lightning** starts forest fires. Lightning is very hot. When lightning strikes a tree or the forest floor, a fire can start.

Why Does Wind Make Forest Fires Worse?

Fire needs two things—fuel (something to burn) and air. Wind brings lots of air to a fire, so wind helps fires burn. Wind also helps fires spread. The wind picks up burning leaves and drops them in places that are not burning. Then a new fire starts.



How Do Firefighters Stop Fires?

A fire will go out when it does not have fuel. Sometimes firefighters start small fires around the forest fire. The fires burn up all the fuel in the area. Firefighters make sure these small fires do not spread. When the forest fire reaches an area that has already burned, the fire will not have fuel and will go out.

To fight large forest fires, planes drop water on the fire. The planes make many trips to drop water on all the places that are burning.

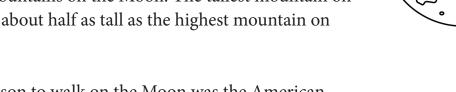
"Forest Fires"—Think About It

1. Why do many forest fires start when it has not rained for a long time?
2. What are two reasons why forest fires start?
3. A forest fire needs fuel. What examples of fuel does the text give?
4. Firefighters sometimes start small fires. How do small fires help to fight a forest fire?
5. Sometimes planes drop water on forest fires. Why do you think the planes make many trips instead of one long trip?

Fact Sheet: The Moon

Read these interesting facts about the Moon.

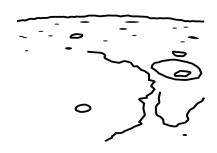
- Light from the Sun **reflects** off the Moon and travels to Earth. That is why the Moon shines. The Moon does not make its own light.
- There are mountains on the Moon. The tallest mountain on the Moon is about half as tall as the highest mountain on Earth.



- The first person to walk on the Moon was the American astronaut Neil Armstrong. He travelled to the Moon in the Apollo 11 spacecraft in 1969.
- Sometimes large space rocks crash into the Moon. When that happens, the rocks leave **craters** on the Moon's surface. Craters are large holes shaped like the inside of a bowl. You can see the craters if you look at the Moon through binoculars or a telescope.
- The same side of the Moon always points toward Earth. We did not see the other side of Moon until scientists launched spacecraft to take photographs of it.
- The Moon is very hot during the day, and freezing cold at night. During the day, the temperature on the Moon is hot enough to make water boil. The astronauts who landed on the moon had spacesuits to keep them from getting too hot or too cold.
- There is no wind or rain on the Moon.







"Fact Sheet: The Moon"—Think About It

1. If the Sun stopped makin	g light, could we	see the Moon at night? Tell why or why not.
2. How is the Moon like a n	nirror? (Hint: Thin	nk about light.)
	nillions of years. V	y left footprints. Some people believe these What information from the fact sheet explains
4. Write two examples of ca	uses and effects in	n the fact sheet.
Cause		Effect

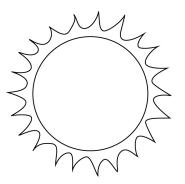
The Sun

What Is the Sun?

The Sun is a **star**, just like the stars we see in the night sky. The Sun looks much bigger and brighter than other stars because it is much closer to Earth.

Where Is the Sun?

The Sun is at the centre of our **solar system**. All the planets travel around the Sun. The distance from Earth to the Sun is about 150 million km.

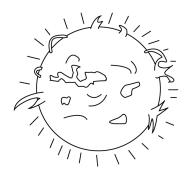


Why Does the Sun Shine?

Stars are balls of burning **gases**. As the gases burn, they give off light. We see the Sun and other stars because the light travels through space to Earth.

How Big Is the Sun?

The sun is huge compared to Earth. If the Sun were hollow, over a million planet Earths would fit inside it. But the Sun is not very big compared to some stars. The Sun is a medium-sized star. Some stars are much bigger than the Sun, and some are much smaller.



Why Do We Need the Sun?

Without the Sun, there would be no life on Earth. Our planet would be too cold for people, plants, and animals to **survive**. Plants also need the Sun's light to stay alive. People and animals need plants for food.

The Sun and You

- Do not look right at the Sun. It is so bright that it can harm your eyes.
- Wear sunscreen on sunny days so the Sun does not burn your skin.
- Spend time outside on sunny days. Sunshine helps your body make vitamin D to keep you healthy.

"The Sun"—Think About It

2. Why do people say that the Sun is at the centre of our solar system?
3. How big is the Sun compared to all the other stars?
4. What fact in the text tells one way all planets are the same?
5. Why is it not good for people to stay indoors all the time?
6. What are two things people can do to stay safe when they are outside on a sunny day?
7. List two subheadings from the text.

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Glaciers and Icebergs

What Is a Glacier?

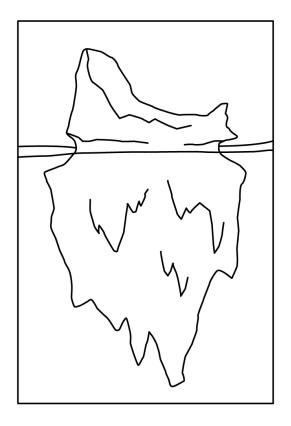
A glacier is a huge **sheet** of ice that forms on land. The largest glacier in the world is in Antarctica. This glacier is over 400 km long and about 100 km wide. Some glaciers are over 1 km thick.

How Do Glaciers Form?

Glaciers form in cold places where the snow does not all melt away. Over years, many heavy **layers** of snow build up. The weight of the all the snow pushes the snowflakes together until they form ice.

Do Glaciers Move?

You might not think that ice can move on its own, but glaciers do move. They slowly **stretch out** and move across the **landscape**. When a glacier reaches the ocean, the ice floats. The part of a glacier that floats in the ocean is called an **ice shelf**.



What Are Icebergs?

Sometimes pieces of ice break off a glacier or ice shelf and float in the ocean. These floating pieces of ice are called icebergs. Some icebergs are huge and some are much smaller. If you see an iceberg, it can be hard to tell how big it really is. Why? Most of the iceberg is under the water. You see only the part that shows above the water.

Fun Facts

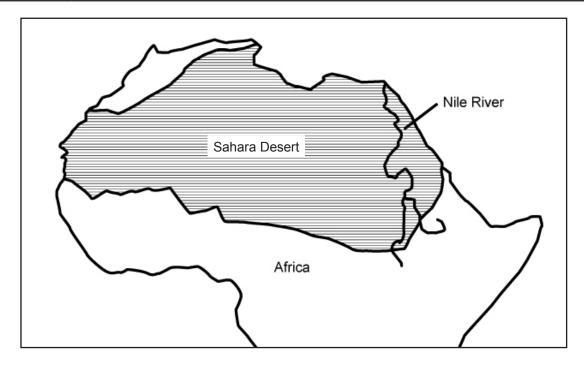
- When ice from an iceberg melts quickly, air bubbles released from it make a sound like pop fizzing.
- Icebergs are gigantic chunks of frozen fresh water. Several companies collect icebergs and melt them. They then filter out the dirt and bottle the water to sell for drinking.

"Glaciers and Icebergs"—Think About It

1. Why could glaciers not form in places where all the snow melts in summer?
2. Tell two ways that an ice shelf and iceberg are similar. Then tell one way that they are different.
Similar:
Different:
3. The tops of some mountains are covered with snow all year long. Do you think a glacier could form at the top of these mountains? Tell why or why not.
4. Why do ships try to stay away from icebergs?

The Sahara Desert

Location	The Sahara Desert is in northern Africa.
Size	The Sahara is the world's largest hot desert. From east to west, it stretches for almost 5000 km.
Landscape	Some of the desert is covered with large sand hills called dunes . Other parts of the desert are rocky. There are even mountains and volcanoes in some parts of the desert. In a few places there is water, and trees and other plants grow. The Nile River runs through the Sahara.
Rainfall	Very little rain falls in a desert. When it does rain in the Sahara, it does not rain everywhere. Some parts of the desert might not get any rain for years.
Temperature	During the hottest months, the temperature can climb to over 50°C. At night, the temperature can drop to almost 0°C.
Wind	Desert winds make sand dunes form. A strong wind can create a sand storm. The air fills with sand and it is very hard to see.
Animals	The antelope and the hyena are two large animals that live in the Sahara. Small animals include rats, gerbils, snakes, and scorpions.
People	About 4 million people live in the Sahara. Some live in cities, but most are nomads who move from place to place rather than living in one place.



"The Sahara Desert"—Think About It

1. What clue in the chart tells you that not all deserts are hot?
2. What are two things that desert winds do?
3. Some animals that live in the Sahara Desert hunt only at night. Why do you think this is so?

4. List two things you would need to help you survive a journey across the Sahara. For each one, tell why you would need it.

What I Would Need	Why

Antarctica

Antarctica is a **continent** at the bottom of the world. The South Pole is found in Antarctica.

An Icy Desert

A desert is a place where there is very little **precipitation** (rain and snow). There is almost no precipitation in Antarctica, so scientists call it a desert. Many deserts are hot places. Antarctica is very cold. Almost all the land in Antarctica is covered by a thick sheet of ice. Where there is no ice, the land is rocky.

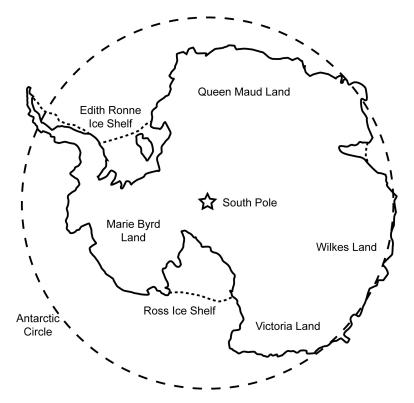
A Home for Animals, But Not for People

No people live in Antarctica all the time. Every year, many scientists travel there to learn about the land and the animals. They do not stay for long because Antarctica is a difficult place to live and work.

Many different types of penguins and seals live in Antarctica. One kind of penguin in Antarctica is called the **emperor penguin**. It is the world's tallest penguin and can grow up to 1 m tall. Penguins and seals hunt for food in the ocean around Antarctica.

Plants in Antarctica

No trees or bushes grow in Antarctica. **Moss** grows in rocky areas. Some grasses grow in rocky areas, but these grow for only a short time when the weather is a little warmer.



"Antarctica"—Think About It

1. Write the two sentences in the text that compare the temperature in Antarctica to the temperature in other deserts.
2. The land in many deserts is sandy. How is the land in Antarctica different?
3. How does the ocean help penguins and seals survive in Antarctica?
4. What makes the emperor penguin unusual?
5. Antarctica is a difficult place to live and work because it is so cold. Think of another reason why it would be a difficult place to live and work. Write your reason.

What Does a Zookeeper Do?

A zookeeper works in a zoo. Zookeepers do many important jobs.

Looking After Animals

A zookeeper's most important job is to look after the animals. Every day, the zookeeper makes sure the animals have food and water. The zookeeper also cleans the spaces where the animals live.

Caring for Sick Animals

A zookeeper watches the animals to see if any are sick or have hurt themselves. The zookeeper works with a **veterinarian** (an animal doctor) to look after sick or injured animals.

Helping Baby Animals

Sometimes an animal has a baby and does not want to look after it. The zookeeper might feed the baby from a bottle. The zookeeper will also play with the baby and give it lots of love.

Working with Visitors

Lots of **visitors** come to see the animals in a zoo. The zookeeper makes sure that visitors do not feed the animals. Some animals might get sick if people feed them the wrong kind of food.

Sometimes visitors might run toward animals or shout at them. This can make the animals upset. A zookeeper makes sure that visitors do not upset the animals.

Visitors often have lots of questions about the animals. Zookeepers learn all about the animals they look after. They can answer most of the questions people have.



A zookeeper feeds a rainbow lorikeet.

"What Does a Zookeeper Do?"—Think About It

1. What is the main idea in this text?
2. Every day, the zookeeper carefully watches the animals. Why?
3. When would a zookeeper feed a baby animal from a bottle?
4. The text tells three things a visitor should not do at a zoo. What are they?
5. Find where the text has words in brackets. What do the words in brackets do?
6. Which job of a zookeeper would you enjoy most? Tell why.

What Does a Pharmacist Do?

Pharmacists work with **medicines**. If you are sick, the doctor might want you to take a special kind of medicine called a **prescription medicine**. People can buy prescription medicines only if their doctor has given **permission**. Prescription medicines are sold at a drug store.

Pharmacists work in drug stores. They are **experts** in different types of medicines. They have learned how each type of medicine helps people get better.

Pharmacists make sure you get the right amount of the prescription medicine your doctor wants you to take. They put a **label** on the medicine to tell you how much to take and how often to take it.

Sometimes, a pharmacist has to make medicines. For example, a pharmacist might make a cream to spread on a rash. The doctor will tell the pharmacist what to put in the cream.

Drug stores also sell medicines that are not prescription medicines. People do not need a doctor's permission to buy these types of medicines. A pharmacist can help people choose the best medicine to help them feel better.

Pharmacists also help people stay safe when they are taking medicine. For example, a pharmacist might say, "This medicine might make you sleepy. Do not drive a car after taking this medicine."

Not all pharmacists work in drug stores. Some work in hospitals, and some work in **nursing homes**.

A pharmacist can give you medicine to make you feel better.



"What Does a Pharmacist Do?"—Think About It

1. What do people need before they can buy a prescription medicine?
2. It can be dangerous to take too much of a medicine or to take it too often. How do pharmacists help to make sure people take prescription medicines correctly?
3. Tell an example in the text that shows how a doctor and a pharmacist might work together.
4. Frank has a cough, but he does not feel sick enough to go to a doctor. How could a pharmacist help Frank?
5. Why is it a good idea for hospitals to have pharmacists?

What Does an Architect Do?

Architects are people who plan new buildings. Before construction workers can start a building, they need to have a plan to follow.

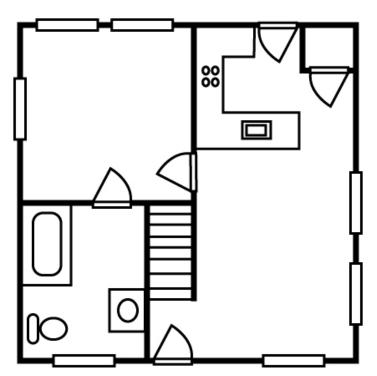
The first thing an architect does is talk to the person who wants the building. That person is called the **client**. The architect finds out what kind of building the client wants. Will it be a house, a store, an office building, a hospital, a sports arena, a shopping mall, or a school?

Next, the architect finds out what needs to be inside the building. For a house, the architect needs to know what rooms are needed. For example, how many bedrooms and bathrooms are needed?

The architect might make some quick **sketches** to show ideas for the building. Some sketches show what the outside of the building will look like. Other sketches show where each room will be and how big it will be. The client looks at the sketches and might ask for changes. Then the architect makes new sketches showing the changes the client asked for.

When architects **design** a building they make sure

- The building is safe for people to use.
- The building meets the needs it was designed for.
- The building has a pleasing appearance.



An architect's plan, or drawing, showing a single floor of a house.

The plan above shows some of the symbols an architect uses when they design a house. In the upper right room, there is a countertop, a cooktop, a sink, and a refrigerator. In the lower left room, there is a bathtub, a toilet, and a sink. What rooms did the architect draw?

"What Does an Architect Do?"—Think About It

1. Why does an architect need to plan a building before construction can start?
2. What are two things an architect needs to find out before starting to plan a building?
3. Why do architects need to be able to draw?
4. Would you like to become an architect? Explain your thinking.
5. An architect planning a school will ask, "About how many students will be in each classroom?" Why does the architect need this information?

Television and Computer Time

You can learn many interesting things from a television show or an **Internet site**. Some **computer games** also help you learn. You might use a computer and the Internet to help you with homework.

Some kids spend almost all their free time watching television or using a computer. Here are two reasons why this is not good:

1. Not Getting Enough Exercise

When you sit in front of a television or computer, you do not move very much. This means your body is not getting **exercise**. People need exercise every day to stay **healthy**. Exercise can help your body fight germs that make you sick. Getting exercise will help you sleep better at night. It is easier to learn at school if you had good **sleep** the night before.

2. Not Spending Enough Time with Friends

Spending time with **friends** is an important part of **growing up**. It helps you learn how to get along with other people. If you are sad or worried about something, talking with a friend can help you feel better. Playing and laughing with friends are fun ways to spend time. Do not spend too much time in front of the television or computer. Spend time with friends instead.

It is fine to watch television and play computer games just for fun. Just make sure you do not spend too much time on the computer or watching television. Go outside, enjoy the fresh air, and do something **active** with a friend. You will be healthier and happier if you do!



"Television and Computer Time"—Think About It

1. Why can spending too much time in front of a television or computer be bad for your health?
2. What is one way that exercise can help you stay healthy?
3. How can getting exercise help you at school?
4. Why does the author write about friends in a text about television and computers?
5. Give two reasons why it is important to spend time with friends.
6. Do you agree that kids should not spend almost all their free time watching television or using a computer? Tell why or why not.

Caffeine and Kids

What Is Caffeine?

Caffeine (say it like this: *ca-feen*) is something that you find in some drinks, such as coffee and tea. There is also caffeine in some **cola** drinks, iced tea, and **energy drinks**.

What Does Caffeine Do?

Caffeine makes you feel more awake. It can also give you a short burst of energy. Your **heart** beats faster when caffeine is in your body.

Why Can Caffeine Be a Problem for You?

Like many kids, you probably enjoy cola drinks. If you drink too much cola in a day, your body gets too much caffeine. What happens if you drink too much caffeine?

- You might feel **nervous** or worried, or be in a bad mood.
- You can get an upset stomach.
- You might get a headache.
- You can have problems concentrating.
- You might have trouble falling asleep at night.

Why Should You Stay Away From Energy Drinks?

Energy drinks usually contain the most caffeine. Some energy drinks have three times more caffeine than cola does. These drinks have far too much caffeine for kids.

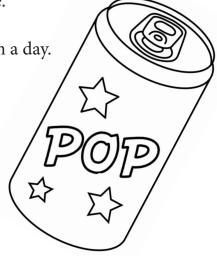
Tips for Kids

1. Drink milk, water, or fruit juice. These contain no caffeine.

2. Ask your parents not to buy pop that contains caffeine.

3. Do not drink more than one can or glass of caffeine cola in a day. Make sure you do not drink it too close to bedtime.

Energy drinks can harm people's bodies and damage their health, so it is best to avoid them. It is better to get your energy from good healthy food and drinks. That way, you can have lots of energy to study, play, and grow without doing any harm to your body.



"Caffeine and Kids"—Think About It

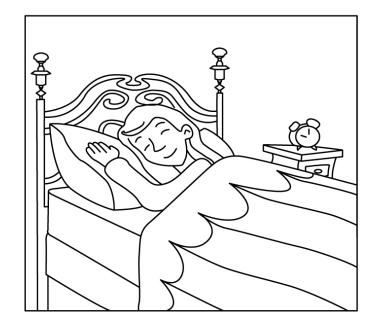
1. What cold drinks can contain caffeine?
2. Some people drink caffeine drinks if they did not get enough sleep the night before. Why
3. Why is it a bad idea to have caffeine drinks close to bedtime?
4. What part of the body works harder when you drink caffeine? Tell how it works harder.
5. Which subheading would you look under to find out why caffeine can be bad for kids?
6. How many lists are in this text? For each list, tell what text feature helps you know that you are reading a list.

Get Your Sleep

Your Body Needs Sleep

Your muscles, bones, and skin are growing all the time. Your body needs sleep to help you **grow**. Sleep also helps your body repair itself. If you have a sore muscle or a cut, sleep helps your body **heal**.

If you want to stay healthy, get lots of sleep. Sleep helps your body fight **germs** so you don't get sick.



Your Brain Needs Sleep

Your brain works better when you get lots of sleep. If you do not get enough sleep, it is harder for you to remember things, pay attention, and **concentrate** on what you are doing. You will also have a harder time solving problems if you do not get enough sleep.

Sleep Helps Your Mood

Sleep helps to keep you in a good **mood**. When you are tired, you might be grumpy and get angry quickly. You might find it harder to get along with friends and family.

How Much Sleep Do You Need?

Children between 5 and 12 years old should sleep for 10 or 11 hours each night. If you are sick, you might need even more sleep.

Tips for Getting a Good Night's Sleep

- Make sure your bedroom is dark, quiet, and not too warm.
- Go to bed at the same time each night. That will help your body learn when it is time to go to sleep.
- Getting exercise helps you sleep at night. Do not exercise too close to bedtime. Your body needs time to relax before sleeping.

"Get Your Sleep"—Think About It

1. Maria broke her arm. Would getting more sleep help her arm get better? Tell why or why not.
2. The text says your brain works better when you get enough sleep. Give two examples of how your brain works better.
Reason 1:
Reason 2:
3. When Sanjay does not get enough sleep, he has more arguments with his sisters. Why?
4. Rachel is 8 years old. She gets up at 7:00 a.m. and goes to bed at 10:00 p.m. Does she get enough sleep? Tell why or why not.
5. Why is it a bad idea to exercise right before bedtime?

Feeling Angry

Everybody gets angry sometimes. What makes you angry? You might get angry when your parents will not let you do something. Or maybe you get angry when kids at school **tease** you. People can get angry for many different reasons.

Anger can fill your body with **energy**. You might feel like using that energy to hit someone, yell at someone, or break something. Doing these things can get you into **trouble**, and that will not help at all.

What Should You Do When You Get Angry?

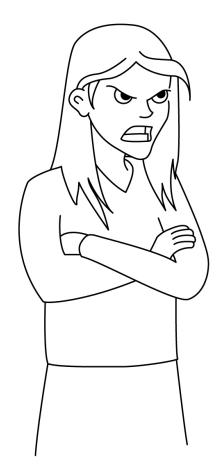
When you get angry, try to **calm down** right away. Some people count to 10 or take a few deep breaths. If you can calm down, it is easier to stop yourself from doing something that could get you into trouble.

When someone makes you angry, tell the person how you are feeling and why. For example, you might say, "I am angry because you are teasing me and it hurts my feelings." Remember not to yell.

Doing something active can help you feel less angry. You could run around your backyard or the playground. Some people go for a bike ride or do jumping jacks. Being active helps to get rid of the energy you feel when you are angry.

Talking about your feelings helps, too. Tell a parent or a friend about what happened and how you are feeling. You can ask for a **hug** to help you feel better.

Doing something fun can help get rid of anger. You might play your favourite song and sing along. Some people play video games or watch a funny movie. Find out what works best for you.



There are many ways to get rid of anger safely to keep yourself out of trouble.

"Feeling Angry"—Think About It

1. People get angry for different reasons. What are two examples of reasons in the text?
2. Why might your body feel different when you get angry?
3. Why is it a bad idea to hit or yell when you feel angry?
4. When you get angry, why is it important to try to calm down right away?
5. The text says you should not yell at someone when you explain why the person made you angry. Do you agree? Tell why or why not.

Wash Your Hands

Germs are all around you. Most of the time, your body fights germs so you do not get sick from them. But sometimes germs do make us sick. Washing your hands with **soap** gets rid of germs.

Staying Healthy

Anything you touch could have germs on it. The germs stick to your fingers. If you touch your mouth, nostrils, or eyes, the germs could get into your body. If you are eating a sandwich, germs could **spread** from your fingers to the bread. When you eat the bread, the germs go into your body. Washing your hands with soap gets rid of germs before they get into you!

Helping Others Stay Healthy

If you are sick, you might blow your nose a lot. You might cough or sneeze into your hands. Germs from your body can get onto your hands. You could spread the germs when you touch something. Someone else might get those germs and get sick.

How to Wash Your Hands

Use warm water and lots of soap. Scrub for 30 seconds. Remember to wash both sides of your hands and between your fingers. If you sing the "Happy Birthday" song twice, you will know when 30 seconds are up. (Do not sing it too quickly!) Then rinse your hands with lots of water and dry them off. Use a clean towel, paper towel, or a machine that blows warm air.

Using Hand Sanitizer

Hand sanitizer is a liquid that kills germs. People use it when they are not able to wash their hands with soap. Use enough hand sanitizer to make both sides of your hands wet. Then rub it in until it dries.



"Wash Your Hands"—Think About It

1. If germs are all around us, why do we not get sick all the time?
2. Leon likes to help his dad make dinner for the family. Why do they always wash their hands first?
3. If you are visiting a sick friend, you should wash your hands before and after the visit. Why do you need to wash your hands twice?
Before the visit:
After the visit:
4. If you wash your hands with soap and dry them with a dirty towel, your hands might still have germs on them. Tell why.
5. If you cough, it is better to cover your mouth with the inside of your elbow than to cough into your hand. Why?

What Does Your Tongue Do?

Your tongue works hard. It does many different jobs.

Talking

Your tongue helps you make different **sounds**. For example, to make the sound for the letter *k*, the back of your tongue touches the roof of your mouth. When you make the sound for the letter *d*, the tip of your tongue touches the roof of your mouth.

Eating

Your tongue helps you eat by moving food around in your mouth as you chew. When you are ready to **swallow**, your tongue moves the food down into your throat.



Tasting

The top of your tongue is bumpy. These bumps contain your **taste buds**. The taste buds help you taste food. Your tongue does not do all the work when it comes to tasting food. Your nose helps, too. If your nose is stuffed up, you will have a harder time tasting what you eat.

Fighting Germs

The very back of your tongue helps to keep you from getting sick. It helps to kill **germs** before they travel down into your body.

Did You Know?

- You might sleep at night, but your tongue does not. It helps you swallow when you are asleep so you do not drool on your pillow.
- Your tongue contains many different muscles. That is why you can move your tongue in many different ways.

"What Does Your Tongue Do?"—Think About It

1. Why are the bumps on the top of your tongue important?		
2. Tell what your tongue does when you say the words below. (Look for clues in the text.)		
When you say "two":		
When you say "go":		
3. What are two things your tongue does to help you eat?		
4. Why might it be harder to taste food if you have a bad cold?		
5. If your tongue had no muscles, which two jobs could it still do?		
6. Think about all the information in this text. Then write a new title for the text.		

A General Store in the 1800s

In the 1800s, most small towns had a general store. It was often the only place where people could shop. At a general store, people bought things they could not make or grow themselves.

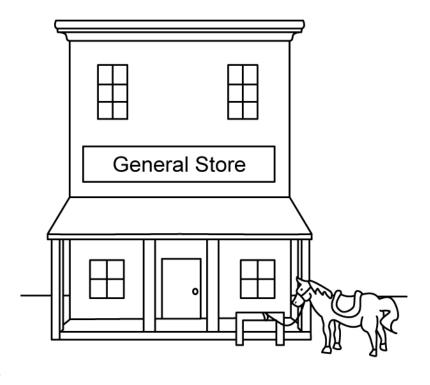
Here are some of the things for sale at a general store:

Category	Examples
Groceries	Coffee beans, spices, sugar, eggs, milk, butter, fruit, vegetables, cheese, honey
Medicines	Pills or syrups for problems such as upset stomach and headache
Sewing supplies	Cloth, pins, needles, thread, buttons
Items for the house	Pots, pans, candles, plates, dishes
Farming supplies	Rope, shovels, and other equipment for farmers
Treats for children	Hard candy, dolls and other toys

People often **traded** to get things they needed. For example, a farmer's hens might lay more eggs than the farmer's family needed. He might trade the eggs for some sugar and honey. Then the general store could sell the eggs to someone else.

Many general stores had a **post office**. People could buy stamps, send letters, and pick up letters at the post office.

The general store was also a meeting place. People would **talk** and **share news** with others who lived in the **community**. Homes did not have **telephones** back then, so people could not call their friends to stay in touch.



"A General Store in the 1800s"—Think About It

1. Why did general stores sell so many different kinds of items?	
2. How could people get things from a general store without spending money?	
3. In the 1800s, people mailed letters more often than we do today. Why do people not mail as many letters today?	
4. A general store usually had large windows at the front. One reason for the windows was to let in light. What would be another reason?	
5. One item sold at the general store was very popular because homes did not have electricity. What is the item, and why did people need it?	

Pioneer Farms: Spring and Summer

Spring

Pioneer farmers looked forward to spring after a long, cold winter. One of the first jobs in spring was to make maple syrup and maple sugar. These were made from the **sap** inside sugar maple trees.

Farmers waited for all the snow on their fields to melt. When the soil was dry, it was time to get ready to plant. Farmers used horses to pull the heavy **plough** over the fields. The plough broke up the hard soil. Then farmers planted seeds.

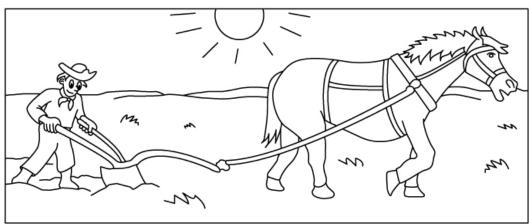
Spring was also time to clip the wool off the sheep. This was called **shearing** the sheep. The wool was used to make warm clothes.

Summer

Farmers watched their crops grow in the fields. All summer long, they pulled up the weeds so their crops would grow better.

Most farmers grew hay in some fields. They needed hay to feed to their horses, cows, and sheep during the winter. Farmers waited for hot, dry weather to **harvest** the hay. They wanted the hay to dry out in the sun before they stored it away in the barn.

Summer was also the time to pick fruits and vegetables. Some fruits and vegetables were kept to eat during winter. To keep fruits from spoiling, people dried them. Fruits were also stewed, or cooked in water and a little sugar, then stored in jars. Vegetables were put in jars that contained salt and vinegar. That way, they would last through the winter. Jars of fruits and vegetables were stored in a hole in the ground called a **root cellar**. The root cellar kept the food from freezing in winter, and kept the food cool during the warmer months.



"Pioneer Farms: Spring and Summer"—Think About It

1. Why were sugar maple trees important to pioneer farmers?
2. Soil can get hard when it dries out in spring. Plants do not grow well in hard soil. How die farmers get the soil ready for planting seeds?
3. What kind of weather was best for harvesting hay? Tell why.
4. A barn kept animals warm in winter. What was another reason why a farmer needed a barn?
5. How did pioneers keep fruits and vegetables from spoiling during the winter?
6. What was the purpose of a root cellar?

Pioneer Farms: Fall and Winter

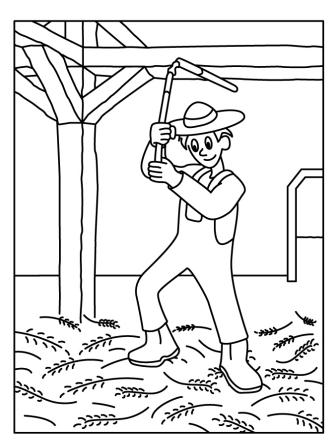
Fall

In fall, farmers **harvested** their **crops**. It was important to harvest the crops before winter came. Frost could ruin the crops.

Many farmers grew wheat. Wheat is used to make flour, and flour is used to make bread. Bread was an important food for pioneers.

Farmers harvested wheat using a tool with a long blade. They cut the stalks of wheat and tied it into bundles. Then they took the wheat to the barn. Farmers beat the wheat with a **flail** to make the seeds come off. This is called **threshing**. Only the seeds are used to make flour.

The seeds are called **grain**. They are covered with a shell called **chaff**. During threshing, the chaff comes off the grain. Chaff cannot be used to make flour, so farmers had to get rid of the chaff. On a windy day, they put the grain and the chaff on a bed sheet. One person held each end of the sheet, and they tossed the grain and chaff into the air. The chaff is very light, so the wind blew it away. The grain fell back onto the sheet. Getting rid of the chaff is called **winnowing**.



Pioneer farmer uses a flail to beat wheat seeds off the stems.

Then farmers took the grain to a mill. At the mill, the grain was crushed to make flour.

Winter

Winter was a time for farmers to fix their tools and repair buildings and fences. Farmers also had more time to visit friends and relatives.

"Pioneer Farms: Fall and Winter"—Think About It

1. In fall, farmers tried to harvest their crops as quickly as possible. Tell why.
2. Why did many pioneer farmers grow wheat?
3. What was the purpose of threshing wheat?
4. Tell why farmers did the winnowing on a windy day.
5. How was flour made?
6. What work did farmers do in winter?

Pioneer Life: Building a House

Choosing a Spot for a House

One of the first jobs of a pioneer family was to build a log house. They carefully chose the spot for their new home. They wanted to be near lots of trees they could use for wood. They also wanted to be near a river or stream, so it would be easy to get water. If their land was not near water, they had to dig a **well**.

A **log house** takes time to build. The family needed somewhere to live right away. Some families lived in a tent. Other families built a small home called a **lean-to**. The lean-to had three walls and was open on one side. **Mosquitoes** made it hard to sleep at night.

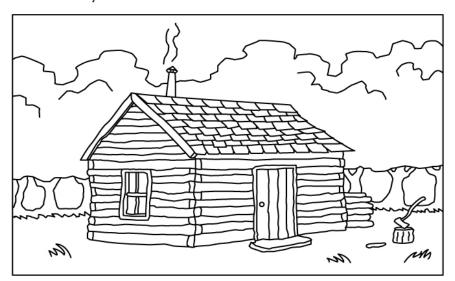
Building a Log House

The next job was to cut down trees to build a log house. Then the branches and bark were cut off the trees to make smooth logs. Once the logs were ready, it was time to start building. Other pioneers in the area came to help build the log house.

Inside a Log House

A family's first log house was usually small and had just one room. A bigger house would take longer to build. The family wanted the house to be finished before winter came.

The most important part of the log house was the **fireplace**. The fire warmed the house and was used for cooking. Many log houses did not have many windows, so fire also provided light. Pioneer children had the job of keeping the fire going. They chopped wood so that the family's wood box was always full.



"Pioneer Life: Building a House"—Think About It

1. Every pioneer family made sure they brought an axe with them to their new land. Why are two reasons why they needed an axe?
2. Why did pioneers live in a tent or a lean-to?
3. Give an example of how pioneer families worked together.
4. Why was it important to finish the log house before winter came?
5. Tell three ways that pioneer families used fire in their homes.
6. What are two jobs that pioneer children did?

All About Snow

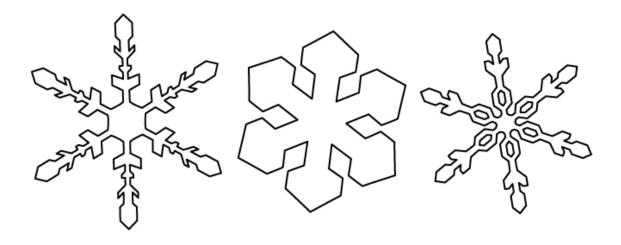
Up in the Clouds

Clouds are made of very tiny drops of water that float in the air. When the air in a cloud is very cold, the drops of water freeze. Then they become tiny **ice crystals**.

The ice crystals in a cloud are moving. When the ice crystals bump into each other, they stick together. A **snowflake** starts to form. The snowflake gets heavier as more ice crystals stick to it. Soon it is heavy enough to fall to the ground.

Snowflake Shapes

Snowflakes come in many different shapes. Here are a few examples:



Wet Snow and Dry Snow

Wet snow is snow that sticks together. You need wet snow to make a snowman. Wet snow forms when the air is just a little warmer than 0°C. The edges of the snowflakes melt, and many snowflakes stick together to create large flakes. Wet snow is heavy to shovel.

When the air is 0°C or colder, snowflakes stay small because they do not stick together. People call this dry snow or powder snow. Dry snow is great for skiing, but drivers do not like it very much. On a windy day, dry snow blows across roads and makes it hard for drivers to see where they are going.

"All About Snow"—Think About It

1. What makes tiny water drops in a cloud turn into ice crystals?
2. How do ice crystals turn into a snowflake?
3. A very tiny snowflake might not fall to the ground. Why not?
4. Why is it impossible to make a snowman from dry snow?
5. What kind of snow has larger flakes? Tell why.
6. What could happen if someone drives too fast on a windy day when blowing dry snow makes it hard to see?

Lighting Up the Sky

The northern lights fascinate people. The dancing lights can shimmer in the night skies in shades of red, yellow, green, blue, and violet. Pale green and pink are the most common.

Spirits and Sky People

The northern lights are also known as *aurora borealis* (you say it like this: *uh-ROAR-uh bore-ee-AL-iss*). For thousands of years, Native people have watched the northern lights. The Cree people gave them the name "Dance of the Spirits." According to Inuit people, the strange lights were caused by "sky people" playing ball.

These glowing lights are seen around the South Pole too. There, they are called the *aurora* australis (you say it like this: *uh-ROAR-uh oss-TRA-liss*).

What Causes the Northern Lights?

Northern lights happen high in Earth's atmosphere when gas particles collide with electrically charged particles from the Sun. The Sun throws off those particles as it turns. They flow toward Earth on the solar wind.

Earth is surrounded by a magnetic field. Most of the Sun's charged particles bounce off Earth. But the magnetic field is weaker at the poles. Some particles enter there.

Sometimes the Sun's charged particles hit oxygen molecules that are high above Earth. That makes the molecules give off red light. The Sun's electric particles sometimes strike oxygen molecules closer to Earth. Those particles glow green. When nitrogen particles are bumped, they shine reddish pink.

Take a Look

Northern Canada is one of the best places in the world to see the northern lights. The best times of year to see them are around March 21 and September 21. That is when the magnetic fields of Earth and the Sun are most closely lined up.

Can You Hear the Northern Lights?

Some people claim they hear crackles and hisses when they see the northern lights. Scientists say the sounds are caused by solar particles high above the ground. Next time you see the northern lights, listen hard. Can you hear them, too?

"Lighting Up the Sky"—Think About It

1. Do you think "Lighting Up the Sky" is a good title for this text? Explain your thinking.
2. What colours are the northern lights?
3. What two other names are the northern lights known as?
4. What happens when the Sun's charged particles hit oxygen molecules that are high above the Earth?
5. When are the best times to see the northern lights in Northern Canada?
6. What kind of sounds do people claim to hear when they see the northern lights?
7. Why do you think the northern lights are so fascinating to people? Explain your thinking using details from the text and your own ideas.

David Suzuki

David Suzuki is a Canadian **scientist**. He became famous for helping Canadians learn more about science. He teaches people about nature and how they can help to protect the **environment**.

David is a Japanese Canadian. A Japanese Canadian is someone who is a Canadian citizen and has **ancestors** from Japan.

Growing Up

David was born in 1936 in Vancouver, British Columbia. Later, David's family moved to Ontario. After high school, David went to university in the United States to become a scientist. Then he returned to Canada and taught at a university in British Columbia.



Teaching People About Nature

When David was young, his father helped him to become interested in **nature**. As a scientist, David learned more about nature and the environment. He saw that people can help or hurt nature. He wanted to share his knowledge with people who were not scientists.

In 1970, David started a television show about science for kids. Four years later, he started a radio show about science for adults. He went on to create many more television shows about science and nature. Some of these television shows won awards and were seen in countries around the world.

David has written more than 50 books about science, including many books for kids. His books and television shows teach people that it is important to care about nature. They also tell people what they can do to help protect nature and the environment.

"David Suzuki"—Think About It

1. There are many different topics in science. What science topics is David most interested in?
2. Which Canadian province has David lived in at two different times?
3. What are three things David has done to share his knowledge with people who are not scientists?
4. Which two facts in the text tell you that David thinks it is important for young people to learn about science?
5. Why do people around the world know who David Suzuki is?

Elizabeth Blackwell

Elizabeth Blackwell was born in England in 1821. Her family moved to the United States when she was 11 years old. Six years later, her father died. Elizabeth began working as a teacher.

Going to Medical School

After several years, Elizabeth decided go to **medical school** to become a **doctor**. She wrote to 29 medical schools. None of them would allow a woman to go to their school. At that time, most people believed that women should not be doctors.

Finally, Elizabeth wrote to a small medical school in New York state. The school asked the male students if a woman should be allowed to come to the school. The students thought it was a joke, so they voted to let the woman come. They were surprised when Elizabeth showed up at the school!



Elizabeth worked hard and finished medical school with the best marks in her class. She was the first woman to complete medical school in the United States. Elizabeth had become a doctor.

Working as a Doctor

Elizabeth's sister Emily also became a doctor. The two sisters started a special hospital for women and children in New York City. They also started a medical school just for women. Later, Elizabeth moved to England and started another medical school for women.

Elizabeth died in England in 1910. Thanks to her courage and hard work, more and more women were able to become doctors.

"Elizabeth Blackwell"—Think About It

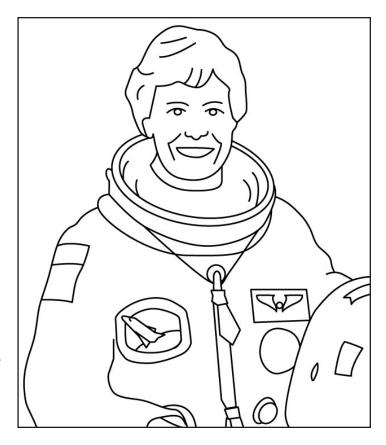
1. How old was Elizabeth when her father died? Tell how you know.
2. Why was it so hard for Elizabeth to find a medical school she could go to?
3. Why is Elizabeth important in history?
4. Why do you think Elizabeth started medical schools that were just for women?
5. What lesson can we learn from Elizabeth's life?

Roberta Bondar

When Roberta Bondar was eight years old, she wanted to become an **astronaut**. Back then, she did not know that she would become the first Canadian woman astronaut.

Growing Up

Roberta grew up in Ontario, Canada, in the city of Sault Ste. Marie (say it like this: *soo saint mah-ree*). She enjoyed building plastic models of rockets and **space stations**. Sometimes she looked up at the stars and wondered what Earth looked like from space.



Blasting Off

When she got older, Roberta became a doctor. She had not forgotten her dream of going into space. In 1983, she began training as an astronaut. In 1992, she blasted off into space on a **spacecraft** called *Discovery*.

While she was in space, Roberta did **experiments** to learn more about the human body. She also took photos of Earth from the spacecraft.

Roberta was not scared in space, but her body felt strange. "The feeling in space flight is like hanging by your heels, with your head down below, with all the blood rushing to your head!" said Roberta.

After the Space Flight

When she returned from space, Roberta continued doing experiments to learn about the human body. She also wrote a book that tells about her time in space. Roberta also loves taking photos that show the beauty of nature on Earth and of Earth from space.

"Roberta Bondar"—Think About It

1.	When Roberta was young, what are two things she did that showed she was interested in space?
2.	What facts in the text tell you that it takes a long time to become an astronaut?
3.	Find the quotation from Roberta (the exact words she said). What idea in the text does the quotation help to explain?
4.	As a doctor, Roberta knew a lot about the human body. How would this knowledge help her in the work she did in space?
5.	Which subheading would you look under to find out what Roberta has done since she returned to Earth?

Alexander Graham Bell

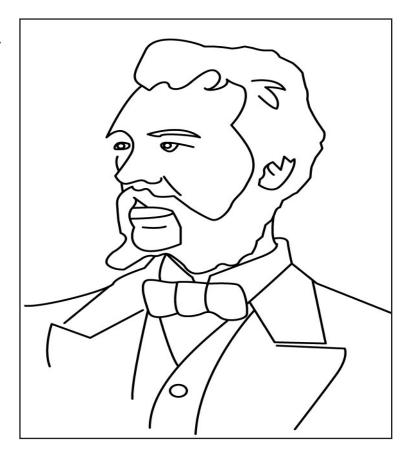
Alexander Graham Bell was an inventor. His most famous **invention** is the **telephone**.

Early Life

Alexander was born in Scotland in 1847. As a young boy, he loved doing **experiments** to learn new things. He made his first invention when he was 12 years old. It was a machine that helped turn wheat into flour.

Leaving Scotland

Alexander and his parents moved to Canada in 1870. They bought a farm near Brantford, Ontario. Alexander set up a **workshop** where he could make inventions. He called the workshop his dreaming place.



Alexander did many experiments with **electricity** and **sound**. Then he got a job as a teacher in Boston, Massachusetts, in the United States. Alexander taught deaf children how to speak. He still had time to work on inventions.

Inventing the Telephone

Alexander wanted to invent a machine that could send voices through a wire. Then someone could talk with a person who was far away. Alexander worked very hard and finally invented the telephone.

After the Telephone

Alexander returned to Canada. He did many more experiments and made more inventions. He liked doing experiments with **kites** to learn how things fly.

"Alexander Graham Bell"—Think About It

1. How do you know that Alexander was curious when he was a boy?
2. Alexander's workshop was not a place to sleep. Why do you think he called the workshop his dreaming place? Use information from the text and your own ideas.
3. Alexander was very interested in sound. How did he work with sound in his teaching job?
4. In Alexander's telephone, how did the speaker's voice get to the listener?

"Alexander Graham Bell"—Think About It (continued)

5. Using your own ideas, explain how the telephone helps people in their daily lives.
6. Why did Alexander build and fly kites?
7. Think of an invention that would help make people's lives easier or better. Draw and label your invention. Explain the purpose of your invention.

Saying "I Am Sorry!"

Saying "I am sorry" is called **apologizing**. It is not always easy to apologize to someone, but it can help make things better.

When Should People Apologize?

Sometimes we do things we know we should not do. You might **argue** with a friend and say mean things to her. You might break a rule at school or at home. When you know you did something wrong, apologizing is the right thing to do.

What If It Was Not My Fault?

Sometimes accidents happen. You might step on someone's foot by **mistake**. It is still a good idea to apologize. Apologizing can be a way of saying, "I wish that did not happen."

What If I Did Not Start the Problem?

Imagine a student says something mean to you in the school hallway. You get angry, grab a book out of his hand, and throw it down the hall. You might think, "I did not start it, so I do not have to apologize."

The student was wrong to be mean to you. That does not make it right for you to throw his book. Even if you did not start the problem, you should apologize for what you did wrong.

What If I Do Not Feel Sorry?

People can tell if you say "I am sorry" and you do not really mean it. Apologizing when you are not sorry does not help much. Maybe you are still feeling angry, so you do not want to apologize. Take some time to calm down and think about what happened. Then try apologizing. The other person might still be angry with you, but you will probably feel better about yourself. Why? You will know you did the right thing.



"Saying 'I Am Sorry!"—Think About It

1. What does apologizing mean?
2. If you argue with someone and yell at them, why might it be hard to apologize right away
3. The text says it is a good idea to apologize if you do something by accident. Do you agree people should apologize when they do something by accident? Tell why or why not.
4. What are two things you can do if you feel too angry to apologize?
5. Write about one of the topics below. Put a check mark beside the topic you are going to write about.
☐ How you felt after apologizing to someone
☐ How you felt after someone apologized to you
Do not write about the problem. Just tell how you felt and why.

Gossip

What Is Gossip?

Gossip is talking about someone in a way that would make the person feel **angry**, **hurt**, or **embarrassed**. People repeat the gossip to others, and soon lots of people have heard it.

Why Do People Gossip?

Sometimes people gossip to be mean to someone they do not like. They want the person to feel angry, hurt, or embarrassed when they find out about the gossip. Sometimes people gossip as a way of showing off. They like to show people that they know things that others do not know.

Should You Believe Gossip?

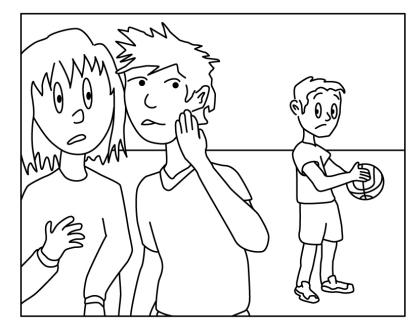
Gossip can be true or partly true. Sometimes gossip is not true at all because someone made it up. When you hear gossip, remind yourself that you do not know how true it is. It might be just a lie.

Should You Repeat Gossip to Others?

It is not nice to tell stories that could make someone feel bad. Even if you know the gossip is true, don't repeat it. The **information** you heard might be something the person wants to keep **private**. You would not want people to gossip about something you want to keep private. Be kind to others by not repeating gossip about them.

When Should You Tell Someone What You Heard?

Tell an adult when you hear about something that could be **dangerous**. For example, you might hear that someone in your class is getting to school by walking on train tracks. Telling an adult about this is not gossip because you are trying to keep someone safe.



"Gossip"—Think About It

1. Pedro is telling people at school that Lisa is a good soccer player. Is this gossip? Tell why or why not.
2. When people gossip, they might tell a story that is partly true. What does it mean when we say a story is partly true?
3. The text says people should not repeat gossip that is true. Do you agree? Tell why or why not.
4. When is it okay to repeat gossip that you have heard?
5. What can you do to help stop gossip at your school?

Old Cat and Little Cat

(Based on a Chinese folktale)

Old Cat picked up his fishing pole. "Can I come fishing, too?" asked Little Cat as she jumped and hopped about. "Please can I come?"

"You need to be still and quiet, or you will not catch any fish," said Old Cat. Little Cat **promised** to be still and quiet. "We will see about that," Old Cat said to himself. He let Little Cat come fishing.

When they got to the river, Old Cat said, "Here is a good spot." He sat down and started fishing. Little Cat was about to sit beside him when a dragonfly flew by.



"A dragonfly!" shouted Little Cat. She dropped her fishing pole and chased the dragonfly, but it got away. When she returned, she saw that Old Cat had caught a big fish. "I want to catch a big fish, too," she said. Old Cat said nothing.

Little Cat sat down and started to fish. Soon she shouted, "Look, a butterfly!" Little Cat chased the butterfly, but it got away. When she returned, she saw that Old Cat had caught another big fish. "You are catching all the fish," Little Cat said to Old Cat. "You are not leaving any fish for me!"

"Listen," Old Cat said softly. "If you want to catch fish, you have to sit here and fish. You cannot chase dragonflies and butterflies and catch fish at the same time. Choose one thing to do and stick to it."

Little Cat sat **quietly** by the river and fished. A dragonfly flew by, but Little Cat did not move. A butterfly flew by, but Little Cat kept on fishing. Soon after that, Little Cat caught a great big fish.

"Old Cat and Little Cat"—Think About It

1. Why does Old Cat say to himself, "We will see about that."
2. Tell three places in the story that show Little Cat has lots of energy.
3. Does Old Cat get angry when Little Cat does not stay still and quiet? Tell how you know.
4. A folktale often teaches a lesson that is useful to readers. What is the lesson in this story?
5. What are two things cats do in this story that real cats cannot do?
6. Write a new title for this story.

The Ant and the Dove

(Based on a fable by Aesop)

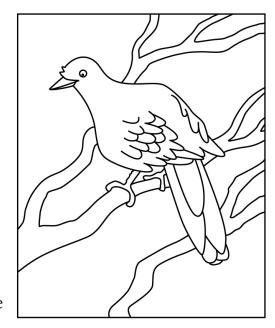
One very hot summer day, an ant went to the edge of a river to get a drink. When he put his head down to drink, he fell into the water. The water was moving quickly. It pulled the ant away from the land.

"I cannot swim!" cried the ant. "Now I will drown. Help!"

Beside the stream was a tree. In the tree sat a beautiful white bird called a dove. The dove heard the ant call for help.

"I must help that poor ant," said the dove. "But what can I do? If I fly down and pull him out of the water with my beak, I might crush him."

The dove had an idea. She used her beak to **pluck** a leaf from the tree. Then she dropped the leaf so it landed in the water right beside the ant. The ant climbed onto the leaf. Soon the leaf **floated** to the edge of the river and the ant climbed back onto land.



A few minutes later, a bird catcher came to the river to get a drink of water. He saw the dove in the tree. "I must catch that beautiful bird," said the bird catcher. He got his net ready.

The ant heard what the bird catcher said. "That man wants to catch the dove who helped me," said the ant. So the ant ran over to the bird catcher and bit him on the foot. The bird catcher cried out in pain.

The dove heard the noise. She looked down and saw the bird catcher with his net. She quickly flew away to safe place.

Moral: Always help people who have helped you.

"The Ant and the Dove"—Think About It

1. Why was the ant thirsty?
2. Why did the dove not fly down from the tree to pull the ant out of the water?
3. The dove plucked a leaf from the tree. Tell the four things that happened next that stopped the ant from drowning.
First:
Second:
Third:
Fourth:
4. The ant bit the bird catcher. How did this help the dove?
5. What does this folktale remind you about?

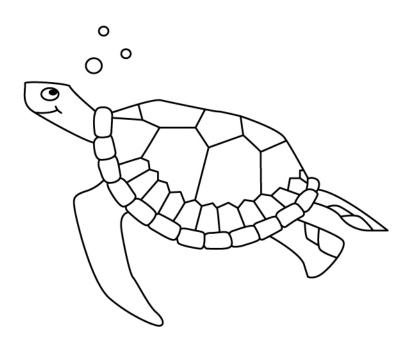
The Broken Promise

(Based on a Japanese folktale)

Long, long ago, a young man was walking along a beach. He saw a group of children gathered in a circle. He went over to see what they were doing.

"Look, we have found a big turtle!" one of the children said. The other children were **poking** the turtle with sticks and **throwing** stones at it.

"Go away and find something else to do!" the young man said angrily. The children all ran off.



"You are very kind," the turtle said to the young man. "I would like to invite you to my secret castle. Please climb on my back and I will take you there." The young man climbed on the turtle's back and the turtle swam out in the ocean. Then the turtle dived under the waves and took the man to his underwater castle.

The turtle called for food, and servants brought out a huge **feast**. The young man had never eaten such tasty food. When it was time for the young man to go back to land, the turtle said, "I am going to give you two boxes. You must promise to open only one."

"I promise," said the young man. When he got back to land, he opened the largest box. He found it was full of gold. "I am rich!" said the young man, and he was very happy.

Then the young man looked at the other box. "It must be full of money too," he said. He knew he should not, but he opened the box anyway.

Right away, all his hair turned white. His face was full of wrinkles. He looked like a very old man for the rest of his life.

"The Broken Promise"—Think About It

1. Why did the young man get angry near the beginning of the story?
2. Why do you think the turtle gave the young man a huge feast?
3. Do you think the young man was greedy? Tell why or why not.
4. Tell two things in this story that could not happen in real life.
5. What lesson does this story teach?

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The Happy Man

(Based on an African folktale)

Long ago in Africa, a man became the chief of all the people in his land. "Now that I am the chief, I will be rich," said the man. "That will make me happy." The chief became rich, but he was not happy.

"I need a kind and loving wife," said the chief.
"That will make me happy." He married a kind and loving woman. Still he was not happy.

"I must have many children," said the chief. "That will make me happy." The chief had five children. Still he was not happy.



The chief called his servant and asked, "How can I be happy?"

"You must find a man who is truly happy," said the servant. "Take off his shirt and put it on. Then the man's **happiness** will go into your body and you will be happy."

"That is an excellent idea!" said the chief. He sent soldiers to search all across the land to search for the happiest man they could find. Everyone they found was unhappy about something.

One day the soldiers found a man who said, "I am the happiest man in the world!" The soldiers took the man to the see the chief. The chief looked at at the man and cried, "You have no shirt!"

"I am very poor," said the man. "I do not own a shirt."

"If you are so poor, how can you be happy?" asked the chief.

"It is easy," said the man. "I think happy thoughts."

"The Happy Man"—Think About It

1. Who are the two most important characters in this story?					
2. What problem is the chief trying to solve in this story?					
3. What does the servant think the chief should do to become happy?					
4. Why is the chief surprised when he meets the happy man?					
5. The story suggests a way for the chief to solve his problem. What is it?					
6. What lesson does this story teach?					

The Man and the Coconuts

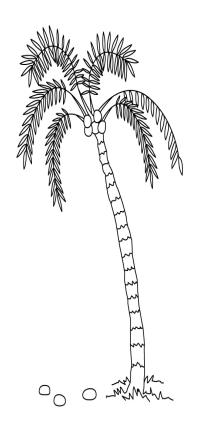
(Based on a folktale from the Philippines)

Long ago, an old man saw he had almost run out of food. He **hitched** a small cart to his horse and went to look for coconuts.

Coconuts grow high in coconut trees. The man was too old to climb trees, so he looked for coconuts that had fallen to the ground. The man had to go very far to find coconuts. People had already taken all the coconuts from the trees near the village.

Finally, the man found trees with lots of coconuts. Many coconuts had fallen to the ground. He filled his cart with coconuts, then he set off for home. He was tired and wanted to get home quickly.

After a while, the man saw a boy walking down the road. He asked the boy, "Is the village near? Will it take me long to get home?"



The boy looked at the cart full of coconuts. Then he said, "If you go fast, it will take a long time. If you go slowly, you will be home soon."

"What a **foolish** boy," the man thought. He made his horse go fast. The road was **bumpy** and many of the coconuts fell off the cart. It took a long time to pick them up and put them back on the cart.

"Now I have wasted time picking up coconuts," the man said. "I had better hurry so I can get home soon." Once again, the man made his horse go fast. Once again, coconuts fell off the cart. The man stopped to pick them all up.

"Maybe that boy was not so foolish after all," the man said. He made his horse go slowly, and soon he was home.

"The Man and the Coconuts"—Think About It

1. What was the man going to do with the coconuts? Tell how you know.					
2. Why did the man have to travel far to find coconuts?					
3. Why does the boy say, "If you go fast, it will take a long time"?					
4. Why does the boy say the man will get home soon if he goes slowly?					
5. Who is the foolish person in this story? Give a reason for your answer.					

The Shepherd Boy and the Wolf

(Based on a fable by Aesop)

Long ago, there was a boy whose father owned many sheep. One day, the father said to the boy, "You are old enough now to be my shepherd. Take the sheep to a field where there is lots of grass for them to eat. Then watch the sheep. Make sure that none get lost, and do not let wolves eat my sheep!"

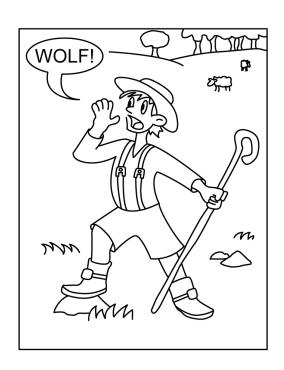
The boy led the sheep up a hill to a field of grass. He sat on a rock and watched the sheep. After a few hours, the boy was **bored**. "The sheep eat and do not **wander** off. I have not seen any wolves. What can I do for fun?"

Then the boy got an idea. There were no wolves in sight, but he shouted, "Wolf! Wolf!"

The people in the village heard him shout. They ran up the hill to help him chase away the wolf. When they got to the top, they were huffing and puffing. "Where is the wolf?" they asked.

The boy laughed. "There is no wolf," he said. "I was just having a bit of fun." The villagers **grumbled** and went back down the hill.

The next day, the boy was bored again. "Wolf! Wolf!" he shouted. The villagers rushed up the hill and saw the boy had tricked them again.



On the third day, the boy took a nap while the sheep ate grass. When he woke up, he saw a wolf killing a sheep. "Wolf! Wolf!" he shouted. The villagers did not come. He shouted again, but still no one came.

Moral: If you tell **lies**, no one will believe you when you tell the truth.

"The Shepherd Boy and the Wolf"—Think About It

1. Tell three things that are part of a shepherd's job.					
2. Why did the boy take the sheep up a hill?					
3. Why did the boy shout "Wolf!" when there was no wolf?					
4. What information in the story tells readers that it was hard work for the villagers to run up the hill?					
5. Do you think the boy was selfish? Tell why or why not.					
6. Why did the villagers not come when the boy called "Wolf!" on the third day?					

Where Does Milk Come From?

Milk comes from cows. Let us look at how milk gets from a cow to a store.

How Cows Make Milk

Grass and hay are healthy foods for a cow. Most cows eat for about eight hours a day. Inside the cow's body, **nutrients** from food go into the cow's **blood**. The blood flows into the cow's **udder**, and the nutrients are turned into milk.

Milking a Cow

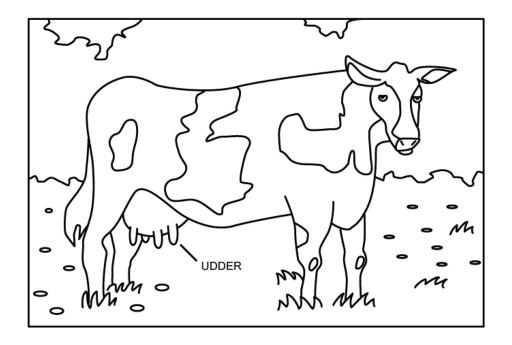
Long ago, farmers used their hands to collect the milk out of the udder. Today, machines do that work and they can milk many cows at the same time. The cows are milked two or three times a day. The milk that is collected flows into a tank that keeps it cold and fresh.

Milk Trucks

Trucks with big **steel tanks** come to the farm to collect the milk. The person who drives the truck checks the milk to make sure it looks fresh and healthy. Then the milk goes into a big steel tank on the truck. The steel tank keeps the milk cold. The truck driver delivers the milk to a **factory**.

At the Factory

At the factory, the milk is heated to kill **germs**. Some of the milk is put aside to make **dairy products** such as cheese and yogurt. The rest of the milk is put into **containers**. Then the containers are loaded onto **refrigerated trucks**. The trucks keep the milk cold while they deliver it to stores.



"Where Does Milk Come From?"—Think About It

Milk is a healthy food for people because it contains lots of nutrients. Where do the nutrients in milk come from?
2. Long ago, it took a long time for workers to collect the milk out of all the cows on a large farm. Today, it takes much less time to milk cows. Why?
3. The driver of a milk truck has two important jobs. What are they?
4. What are two foods made from milk?
5. We know the milk we buy in stores is safe to drink and will not make us sick. How do factories make sure milk is safe to drink?
6. Why are large fields of grass needed to feed cows?

Graphic Organizers

Graphic organizers are excellent tools to use for identifying and organizing information from a text into an easy-to-understand visual format. Students will expand their comprehension of a text as they complete the graphic organizers. Use these graphic organizers in addition to the activities in this book or with other text.

Concept Web – Helps students understand the main idea of a text and how it is supported by key details.

Concept Map – Helps students gain a better understanding of how different subtopics within a text connect to the topic as a whole.

Venn Diagram/Comparison Chart – Helps students focus on the comparison of two items, such as individuals, ideas, events, or pieces of information. Students could compare by looking at which things are the same, or contrast by looking at which things are different.

Fact or Opinion – Helps students to distinguish between statements of fact or opinion. Facts are pieces of information that can be proven to be true. Opinions are pieces of information based on something that someone thinks or believes, but that cannot necessarily be proven to be true.

Cause and Effect – Helps students to recognize and explain relationships between events. The cause is the reason why an event happens and the effect is the event that happens.

Making Connections – Helps students to connect something they have read or experienced, with the world around them.

Context Clue Chart – Helps students organize clues that the author gives in a text to help define a difficult or unusual word. Encourage students to look for explanations of words within a text.

Drawing Conclusions and Making Inferences Chart – Helps students practice drawing conclusions and making inferences based on their prior knowledge, as well as what they read in the text.

A Concept Web About...

A **main idea** is what the text is mostly about. A **detail** is important information that tells more about the main idea.

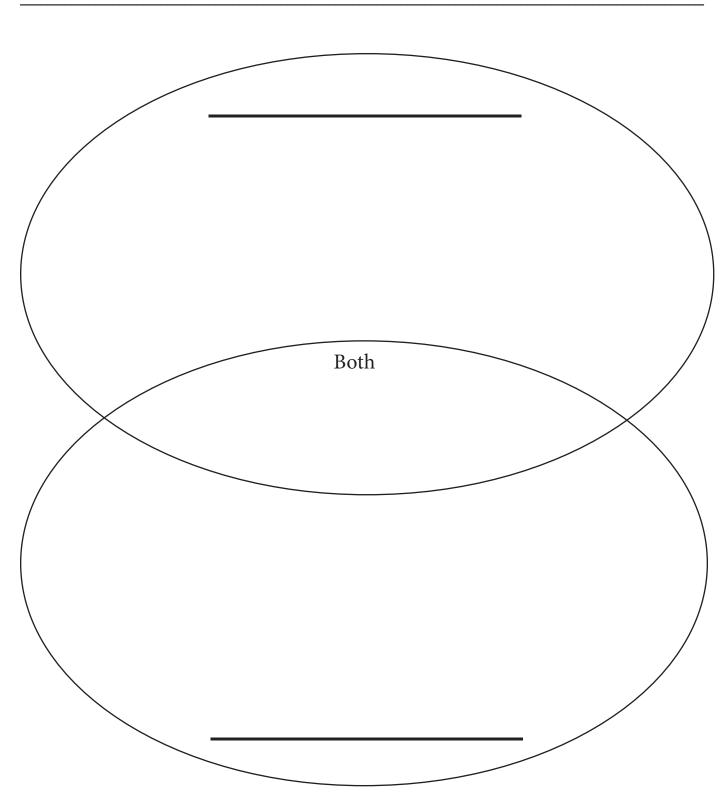
Detail Detail **Detail** Main Idea Detail **Detail** Detail 102 © Chalkboard Publishing

Concept Map

A **main idea** is what the text is mostly about. A **subheading** is the title given to a part of a text. A **detail** is important information that tells more about the main idea.

Main Idea		
Subheading	Subheading	Subheading
1	_	
Details	Details	Details

A Venn Diagram About...



A Comparison Chart

Compared							
to							
Detailed information	_		Detailed in	formation			

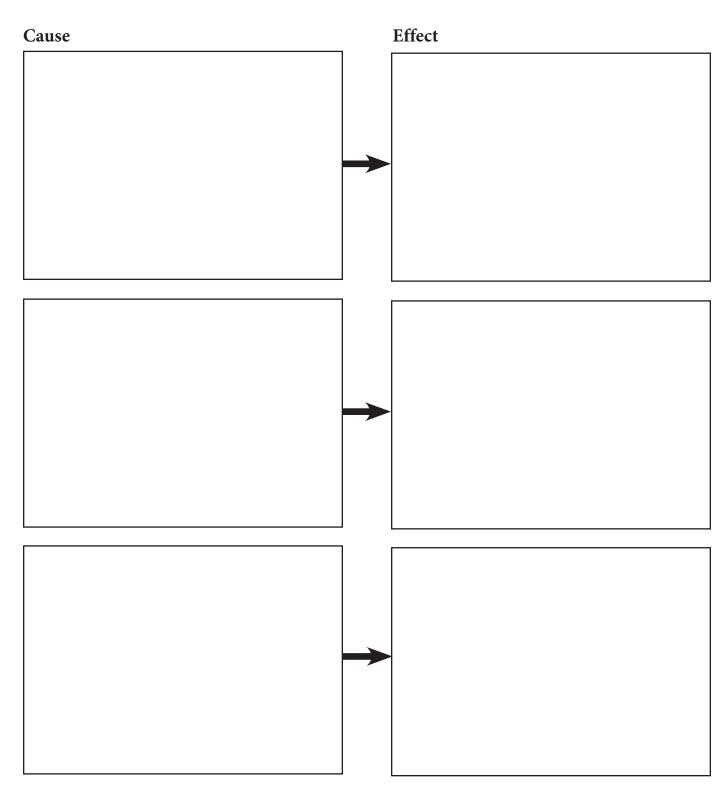
Fact or Opinion

- Facts are pieces of information that can be proven to be true.
- Opinions are pieces of information based on something a person thinks or believes.

Piece of Information	Fact or Opinion?	How do you know?

Cause and Effect

- The **cause** is the reason something happens.
- The **effect** is what happened.



Making Connections with What I Have Read

After reading	It reminds me of	This helps me make a connection to
		something else I have readmyselfthe world around me
		something else I have readmyselfthe world around me
		something else I have readmyselfthe world around me
		□ something else I have read□ myself□ the world around me

Context Clue Chart

Context Clues are hints that the author gives in a text that can help you find the meaning of a word.

Meaning of Word		
Context Clue from Text		
Word		

ions and Making Inferences Chart	a conclusion. Help me to conclude or infer:		
ions and Making	What I already know: Clues from the text I read: Help me		
Drawing Conclus	An interence is when we combine information. What I already know:		

How Am I Doing?

	Completing my work	Using my time wisely	Following directions	Keeping organized
Full speed ahead!	 My work is always complete and done with care. I added extra details to my work. 	I always get my work done on time.	I always follow directions.	 My materials are always neatly organized. I am always prepared and ready to learn.
Keep going!	 My work is complete and done with care. I added extra details to my work. 	I usually get my work done on time.	I usually follow directions without reminders.	 I usually can find my materials. I am usually prepared and ready to learn.
Slow down!	 My work is complete. I need to check my work.	I sometimes get my work done on time.	• I sometimes need reminders to follow directions.	 I sometimes need time to find my materials. I am sometimes prepared and ready to learn.
Stop!	 My work is not complete. I need to check my work.	I rarely get my work done on time.	• I need reminders to follow directions.	 I need to organize my materials. I am rarely prepared and ready to learn.

Reading Comprehension Student Tracking Sheet

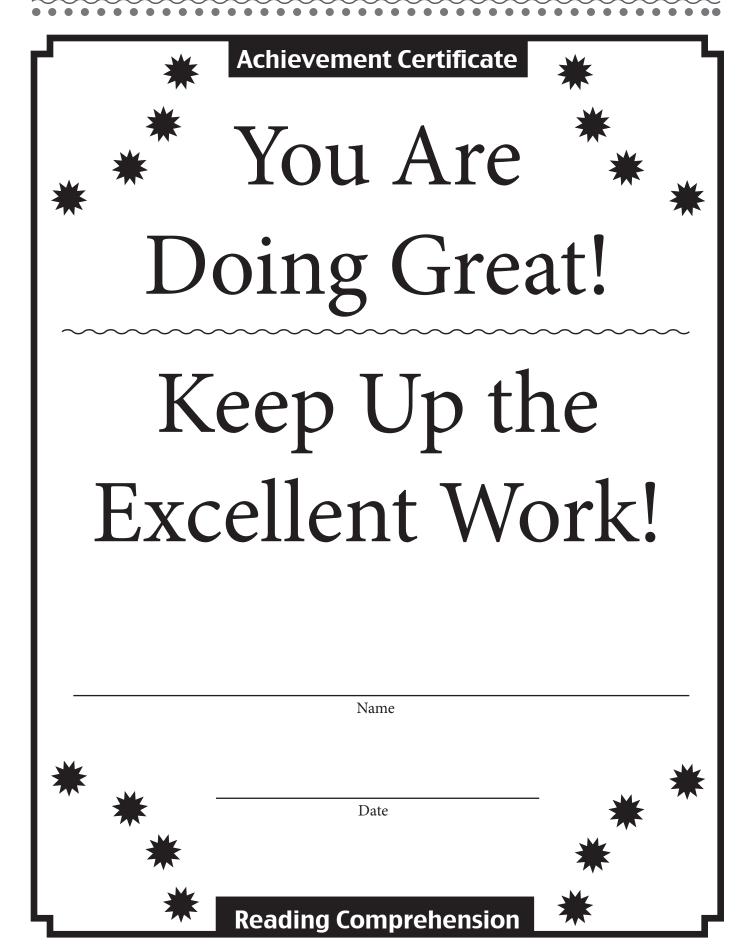
Student's Name	Identifies the Purpose of the Text Student: I can tell you why we read this.	Demonstrates Understanding of the Text Student: I can tell you what the text is about.	Analyzes Text Student: I can make predictions, interpretations, and conclusions using information from the text.	Makes Connections to Text (Prior Knowledge) Student: This reminds me of • text-to-text • text-to-self • text-to-world	Text Features Student: I can tell you how different text features help the reader.

Level 4: Student shows a thorough understanding of all or almost all concepts and consistently gives appropriate and complete explanations independently. No teacher support is needed.

Level 3: Student shows a good understanding of most concepts and usually gives complete or nearly complete explanations. Infrequent teacher support is needed.

Level 2: Student shows a satisfactory understanding of most concepts and sometimes gives appropriate, but incomplete explanations. Teacher support is sometimes needed.

Level 1: Student shows little understanding of concepts and rarely gives complete explanations. Intensive teacher support is needed.



Answers

A Garden on the Roof, pp. 4-5

- 1. The author wrote this text to answer the question, "Why do people grow roof gardens?"
- 2. Roof gardens can be found on the roofs of large buildings and on some homes with flat roofs.
- 3. In winter, a roof garden helps keep out the cold, so less energy is needed for heating. In summer, a roof garden helps to keep the sun from making the inside of a building too warm, so less energy is needed for air conditioning.
- 4. Roof gardens help more birds live in cities by providing more places for them to build nests.
- Subheadings help readers to know what kind of information they are about to read (introducing subtopics). Subheadings also help readers to quickly find the information they are looking for.

A Plant That Eats Insects, pp. 6-7

- 1. A Venus flytrap gets nutrients from insects, so it can grow in soil that does not contain the nutrients most plants need.
- A Venus flytrap saves energy by not closing a leaf trap when the insect inside it is too small to contain lots of nutrients.
- A Venus flytrap needs to have many leaf traps because each one will stop closing once it has caught an insect three or four times.
- 4. Humans are much larger than Venus flytraps and they are moving all the time, so they need lots of energy from food. Venus flytraps are smaller than humans and they move much less (closing and opening leaf traps), so they do not need to eat as often as humans.
- 5. Answers will vary. Sample answers: I was surprised to find out that the leaves can only close 3 or 4 times, and that one meal can last the plant for up to 2 months.

Where Does Maple Syrup Come From? pp. 8-9

- 1. Sap gets into the bucket by flowing from the tree trunk into the spout, then dripping into the bucket.
- Water disappears from the sap as steam when the sap is boiled.
- Maple sap contains lots of water and is clear. Maple syrup contains less water, is thicker, and is golden rather than clear
- 4. Rain would add water to the sap. If there is more water in the sap, farmers would have to boil it longer to remove the extra water and make the sap thicken.
- 5. Answers will vary. Ensure that students give a good explanation as to why they do or do not like maple syrup.

How Does a Greenhouse Work? pp. 10-11

1. Fruits and vegetables can grow in a greenhouse even when it is too cold for them to grow outside.

- 2. It is important to use clear plastic because it lets lots of sunlight into the greenhouse. Plastic that is not clear would not let in enough sunlight.
- 3. Greenhouses have fans or windows that open to let out air when it gets too warm inside the greenhouse.
- A car with closed windows is like a greenhouse. The windows let in warmth from sunlight and trap it inside.
- Even on cloudy days, enough sunlight passes through the clouds to help plants grow. (Point out to students that even after week of cloudy weather, plants in outdoor gardens do not die.)

Pyramids of Ancient Egypt, pp. 12-13

- A stable structure is one that can stand up to the forces that act on it.
- Stone was a good building material for the pyramids because it is strong and it lasts for a very long time.
- 3. The bottom of a large structure needs to be strong to support the weight of the building materials above it.
- 4. The pyramids took a long time to build because ancient builders did not have modern power tools to shape the blocks, or modern equipment such as trucks and cranes for transporting and placing blocks.

Ancient Cave Paintings, pp. 14-15

- 1. The boys brought their teacher to the cave to see the paintings.
- 2. There are over 900 paintings and some of them are very large, so it must have taken a long time to create all the paintings.
- 3. The artists must have used fire for light. They might have built a fire or carried torches.
- 4. The artists made paint from different colours of dirt, and rocks crushed into powder.
- 5. Students might suggest that scientists are allowed to enter the cave for reasons such as the following:
 - · Scientists would be careful not to touch the paintings.
 - Scientists can help us learn more about the paintings and the people who created them.

Tsunami Alert! pp. 16-17

- A tsunami is a series of large waves that are not caused by wind.
- 2. Two events that can cause a tsunami are an underwater earthquake and the eruption of an underwater volcano.

Tsunami in Deep Water	Tsunami in Shallow Water
Speed: very fast	Speed: slower
Height: not very tall	Height: taller

- People stayed safe by paying attention to the warning and moving to higher ground.
- 5. The fifth paragraph tells a sequence (the order in which events happened).

What Can Wind Do? pp. 18-19

1. Wind makes things move by pushing against them.

2

2.	
How Wind Helps People	
Wind makes sailboats move.Wind makes wind turbines create electricity.	
Problems Caused by Wind	
Wind can create big waves that do a lot of damage. Wind creates tornadoes, which can destroy homes and cars.	

Wind can blow away topsoil that farmers need to grow crops.

3. Topsoil is the soil on top of the ground. It is important to farmers because it is the best soil for growing plants.

Volcanoes, pp. 20-21

- 1. Magma is molten rock that is inside a volcano. Lava is molten rock that is outside a volcano.
- Similar: Both an active and dormant volcano might erupt again soon. Different: An active volcano has erupted recently, and a dormant volcano has not erupted for a long time.
- To show that lava cools slowly, the text gives the example that sometimes it can take more than a year for lava to cool completely.
- 4. It would be safest to live near an extinct volcano because that type of volcano will not erupt again.
- 5. Text features in the text: title, bullet list, bold print, boxed text.

Slimy, Squiggly Worms! pp. 22-23

1. The sun would dry out the earthworm's skin, so it would not be able to breathe.

2.

	Earthworms	Humans
Breathing	Use skin to breathe	Use lungs to breathe
Bones	Have no bones	Have many bones
Brain	Have one brain	Have one brain
Heart	Have five hearts	Have one heart
Tasting	Use skin to taste	Use tongue to taste
Teeth	Have no teeth	Have many teeth

3. Earthworm castings contain nutrients that help plants grow. Earthworms make burrows that make it easier for plants to grow roots deep down in the soil.

Koalas Are Cute, pp. 24-25

1.

Body Part	Good for climbing because
Two fingers that work like thumbs	they help koalas hold tight to branches
Paws with thick, rough skin on the bottom	it keeps their paws from sliding on tree branches
Sharp claws on back paws	the claws dig into tree bark
Strong thigh muscles	strong thighs give the koala strength to climb

- 2. The joey gets milk from its mother's body and grows bigger and stronger while it is in the mother's pouch.
- 3. True. The koala spends six months in the pouch and stays with its mother for six more months. 6 months + 6 months = 12 months or 1 year.
- 4. A koala needs to save energy because it does not get much energy from eating eucalyptus leaves.

The Octopus, pp. 26-27

- The suckers help the tentacles grab onto animals the octopus wants to eat.
- 2. An octopus has no bones, which means it is easier to squeeze through a small space.
- 3. An octopus can change the colour of its skin to blend in with its surroundings.
- 4. Clams and crabs are two sea animals that octopuses eat.
- 5. Octopuses can use two tentacles like legs to walk along the bottom of the ocean. They can also swim.
- An octopus needs to leave its den to hunt for food. A female octopus does not hunt for two months while she looks after her eggs, so she might starve to death.

Eating Local Foods, pp. 28-29

- 1. "Local foods" means foods that were grown in the area where you live.
- 2. Foods taste better when they are fresh. Local foods are fresher than foods grown far away.
- Local foods contain more nutrients because they are fresher. Foods grown far away lose more nutrients as they are transported to stores.
- Local foods help the environment by reducing pollution.
 Transporting foods from far away creates lots of pollution.
- 5. When people eat more local foods, local farmers sell more of their food to stores, so they make more money.

Earth Hour, pp. 30-31

- People often do not need to use lights during the daytime, so they might not have any lights on to turn off.
- 2. People could walk into things or fall down stairs.
- 3. Making electricity can cause pollution. When we turn off lights, we use less electricity, so less pollution goes into the air.

4. Earth Hour can help our planet by reminding people to think about things they can do every day to help the planet.

- 5. Some ideas might include conserving water, not letting the water run while you brush your teeth, turning off the television and computer, playing board games instead of computer games, not holding the fridge open when looking for a snack.
- Answers will vary. Ensure that students explain their viewpoint.

Forest Fires, pp. 32-33

- When there has been no rain for a long time, dead plants, branches, and leaves on the forest floor get very dry and will catch fire easily.
- Forest fires can start when campers are not careful with a fire they made to cook food, and when lightning strikes in a forest.
- 3. The text gives dead plants, branches, and leaves on the forest floor as examples of fuel for a forest fire.
- 4. Small fires burn up all the fuel in an area. The forest fire will go out when it reaches an area where all the fuel has already been burned.
- The planes cannot carry enough water to drop water on all the places that are burning. The planes keep going back to get more water until the fire is out.

Fact Sheet: The Moon, pp. 34-35

- 1. If the Sun stopped making light, we could not see the Moon at night. We see the moon because light from the sun reflects off the Moon and travels to Earth.
- 2. The Moon is like a mirror because both reflect light.
- There is no wind or rain on the Moon to destroy the footprints.

4

**	
Cause	Effect
Light from the Sun reflects off the Moon and travels to Earth.	The Moon shines.
Large space rocks crash into the Moon.	The rocks leave craters on the Moon's surface.

The Sun, pp. 36-37

- 1. Possible answers include
 - The Sun would look smaller and not as bright.
 - The Sun would not look much bigger and brighter than the other stars.
- 2. People say the Sun is at the centre of our solar system because all the planets travel around it.
- 3. Compared to other stars, the Sun is a medium-sized star.
- 4. All the planets travel around the Sun.
- 5. People need sunshine to help their bodies make vitamin D.
- People can avoid looking right at the Sun, and they can wear sunscreen.
- 7. Students should list any two of the following subheadings: What Is the Sun? Where Is the Sun? Why Does the Sun Shine? How Big Is the Sun? Why Do We Need the Sun?

Glaciers and Icebergs, pp. 38-39

- 1. Many layers of snow have to build up over years for a glacier to form. In places where all the snow melts in summer, many layers of snow will not build up.
- Similar: Both are made of glacier ice.
 Similar: Both float in the ocean.
 Different: An ice shelf is part of a glacier. An iceberg is ice that has broken off a glacier.
- 3. Yes, a glacier could form at the top of these mountains. The snow does not melt in summer, so layers of snow could build up over years and form a glacier.
- 4. Ships try to stay away from icebergs because running into an iceberg can cause a ship to sink.

The Sahara Desert, pp. 40-41

- The chart says that the Sahara is the world's largest hot desert, not the world's largest desert. This is a clue that not all deserts are hot. (Antarctica is the world's largest desert, and it is a cold desert.)
- 2. Desert winds make sand dunes form and they create sand storms
- 3. Some animals hunt only at night because it is too hot for them to hunt during the day.
- 4. Answers will vary. Accept any reasonable answer that is related to survival and is supported by a logical reason. Students might suggest such things as water, food, tent, clothing for hot and cold weather, compass, map, sunglasses, and sunscreen.

Antarctica, pp. 42-43

- 1. Many deserts are hot places. Antarctica is very cold.
- 2. Almost all the land in Antarctica is covered by a thick sheet of ice. Where there is no ice, the land is rocky.
- The ocean helps penguins and seals survive because they hunt for food in the ocean.
- 4. The emperor penguin is unusual because it is the world's tallest penguin and can grow up to 1 m tall.
- 5. Answers will vary. Accept any logical reasons. Possible responses include the following:
 - · It would be difficult to be away from friends and family.
 - There are no hospitals if someone gets very sick.
 - There are no places to go for fun, such as to a mall, movie theatre, or restaurant.

What Does a Zookeeper Do? pp. 44-45

- 1. The main idea is that zookeepers do many important jobs.
- 2. Zookeepers carefully watch the animals to see if any are sick or have hurt themselves.
- 3. A zookeeper would feed a baby animal from a bottle if the baby's mother does not want to look after it.
- 4. Three things a visitor should not do at a zoo are feed the animals, run toward them, and shout at them.
- 5. The words in brackets—"(an animal doctor)"—explain to

- readers what a veterinarian is.
- Answers will vary. Check to see that students have given a reason that logically supports their answer.

What Does a Pharmacist Do? pp. 46-47

- People need permission from a doctor before they can buy a prescription medicine.
- 2. Pharmacists put a label on prescription medicine to tell people how much to take and how often to take it.
- 3. The doctor might tell a pharmacist what to put in a cream for a rash and the pharmacist will make the cream.
- 4. A pharmacist could help Frank by helping him choose the best medicine for his cough.
- 5. Students might suggest the following ideas:
 - Many patients in a hospital need prescription medicines, and a pharmacist can provide the medicines they need.
 - A very sick patient in a hospital might need medicine right away. A pharmacist who works in the hospital can provide the medicine quickly.

What Does an Architect Do? pp. 48-49

- An architect needs to plan a building before construction so construction workers have a plan to follow.
- **2.** An architect needs to find out what type of building the client wants and what needs to be inside the building (what rooms are needed).
- **3.** Architects need to be able to draw so they can make quick sketches of their ideas for the client.
- 4. Answers will vary.
- 5. The architect needs this information to know how big to make the classrooms so there is enough room for all the students.

Television and Computer Time, pp. 50-51

- If you spend too much time in front of a television or computer, you do not get enough exercise.
- 2. Exercise can help your body fight germs that make you sick.
- 3. Exercise can help you sleep better, and getting good sleep makes it easier to learn at school.
- 4. The author writes about friends to explain that spending too much time in front of a television or computer can mean you are not spending enough time with friends.
- 5. Students might suggest two of the following reasons why it is important to spend time with friends:
 - · It is an important part of growing up.
 - · It helps you learn to get along with other people.
 - Talking with a friend can help you feel better if you are sad or worried.
- 6. Students' responses will vary. Check that students have offered a reason to support their opinion.

Caffeine and Kids, pp. 52-53

1. Cola drinks, iced tea, and energy drinks are cold drinks that contain caffeine.

- 2. Some people drink caffeine drinks to feel more awake and have more energy if they did not get enough sleep.
- 3. It is a bad idea to have caffeine drinks close to bedtime because caffeine can make it harder to fall asleep at night.
- 4. The heart works harder when you drink caffeine. It works harder by beating faster.
- 5. I would look under the subheading Why Can Caffeine Be a Problem for You?
- 6. There are two lists in the text. The first list has the text feature of bullets (sometimes called "nuggets"). The second list has the text feature of boldface numbers.

Get Your Sleep, pp. 54-55

- 1. Getting more sleep would help Maria's arm get better because sleep helps your body repair itself (heal).
- 2. Students should offer two of the following examples:
 - · It is easier to remember things.
 - It is easier to pay attention.
 - · It is easier to concentrate.
 - · It is easier to solve problems.
- Sanjay is probably grumpy and gets angry quickly when he does not get enough sleep. This could make him have more arguments with his sisters.
- 4. Rachel does not get enough sleep. She sleeps for nine hours, and children between 5 and 12 years old should sleep for 10 or 11 hours.
- 5. Your body needs time to relax before sleeping, so exercising right before bedtime is a bad idea.

Feeling Angry, pp. 56-57

- Two examples of reasons for getting angry are when your parents will not let you do something and when kids at school tease you.
- Your body might feel different because anger can fill your body with energy.
- 3. You might get into trouble if you hit or yell when you feel angry.
- 4. If you can calm down right away, it is easier to stop yourself from doing something that could get you into trouble.
- 5. Students' responses will vary. Check to see that students have provided a reason to support their answer.

Wash Your Hands, pp. 58-59

- Most of the time, our body fights germs so we do not get sick.
- Germs could spread from their hands into the food. Then the people who eat the food could get the germs and they might get sick.
- 3. Before the visit: You need to wash your hands so you do not spread germs to your friend and make him or her even sicker. After the visit: You need to wash your hands in case you got germs on them from your friend.
- 4. There might be germs on a dirty towel, and these will get on your hands when you dry them.

You touch lots of things with your hands, so it is easy to spread germs from your hands. You do not usually touch things with the inside of your elbow, so you probably will not spread germs.

What Does Your Tongue Do? pp. 60-61

- 1. The bumps on the top of your tongue are important because they contain taste buds that help you taste food.
- 2. When you say **two**: The tip of your tongue touches the roof of your mouth to make the *t* sound. When you say **go**: The back of your tongue touches the roof of your mouth to make the *q* sound.
- Your tongue moves food around in your mouth as you chew, and it moves food down into your throat when you are ready to swallow.
- 4. Your nose might be stuffed up if you have a cold, and it is harder to taste food when your nose is stuffed up.
- 5. Your tongue could still taste food and help to kill germs.
- 6. Students might suggest titles such as the following:
 - Your Tongue Does Many Jobs
 - All About Your Tongue
 - How Does Your Tongue Help You?
 - Your Tongue Is a Hard Worker

If necessary, point out to students that a title such as "Your Tongue Helps You Taste" is too specific and does not cover most of the information in the text.

A General Store in the 1800s, pp. 62-63

- 1. A general store was often the only place in a small town where people could shop.
- 2. People could trade things they had for things they needed.
- People do not mail as many letters today because we have telephones, e-mail, text messages, and the Internet to keep in touch.
- 4. Large windows at the front of a store were a place to display merchandise to people outside the store.
- Because there was no electricity, candles were very popular. People did not have electric lights to light their homes at night, so they often used candles.

Pioneer Farms: Spring and Summer, pp. 64-65

- Sugar maple trees were important to pioneer farmers because they used the sap from the trees to make maple syrup and maple sugar.
- Farmers got the soil ready for planting seeds by using horses to pull a plough over the fields. The plough broke up the hard soil.
- 3. Hot, dry weather was best for harvesting hay because it dried out the hay before farmers stored it in the barn.
- A barn was a place to store hay until it was fed to farm animals in winter.
- Fruits were dried, and they were stewed, or cooked in water and little sugar, then stored in jars. Vegetables were put into jars that contained salt and vinegar.

A root cellar kept jars of fruits and vegetables from freezing in winter. It also kept the food cool during the warmer months.

Pioneer Farms: Fall and Winter, pp. 66-67

- 1. Farmers wanted to harvest their crops before winter came because frost could ruin the crops.
- 2. Many pioneer farmers grew wheat because wheat is used to make flour. Flour is used to make bread, which was an important food for pioneers.
- The purpose of threshing wheat was to make the seeds come off the stalks of wheat.
- 4. Farmers did the winnowing on a windy day so the wind would blow the chaff away, leaving only the grain.
- 5. Flour was made by crushing the grain at a mill.
- In winter, farmers fixed their tools and repaired buildings and fences.

Pioneer Life: Building a House, pp. 68-69

- 1. Pioneers needed an axe so the they could cut down trees to make logs for a house and chop wood for the fire.
- Pioneers lived in a tent or a lean-to because they needed a place to live while they built a log house.
- 3. Pioneer families worked together to build log houses.
- 4. It was important to finish the log house before winter came because a tent or lean-to would be a very cold place to live in winter.
- 5. Pioneer families used fire to warm the house, to cook, and to provide light.
- 6. Pioneer children kept the fire going and chopped wood to keep the wood box full.

All About Snow, pp. 70-71

- Very cold air in a cloud makes tiny water drops turn into ice crystals.
- 2. Ice crystals turn into a snowflake when the crystals bump into each other and stick together.
- 3. A very tiny snowflake might not be heavy enough to fall to the ground.
- 4. Snowflakes in dry snow do not stick together. You cannot roll the snow into balls to make a snowman if the snowflakes do not stick together.
- Wet snow has larger flakes. The edges of snowflakes melt and many snowflakes stick together to create large flakes.
- 6. Possible answers include
 - A driver could drive off the road.
 - A driver could hit a car or a person.
 - A driver might not see a red light or stop sign in time to stop.

Lighting Up the Sky, pp. 72-73

 Answers will vary. Sample answer: Yes, I think it is a good title because the northern lights do light up the sky; No, I do not think it is a good title because the northern lights do not light up the whole sky, just the sky in northern Canada.

2. The northern lights are in shades of red, green, or purple.

- 3. The northern lights are also called *aurora borealis* and the Native peoples call them "Dance of the Spirits."
- 4. When the Sun's charged particles hit oxygen molecules that are high above Earth, it makes the molecules give off red light.
- 5. The best times of year to see them are around March 21 and September 21.
- 6. Some people claim to hear crackles and hisses.
- 7. Answers will vary. Sample answer: I think the northern lights are fascinating to people because they appear only at certain times of the year, they can be in different colours, and they move in the sky.

David Suzuki, pp. 74-75

- David is most interested in nature and protecting the environment.
- 2. David has lived in British Columbia at two different times.
- David started television shows, started a radio show, and wrote books to share his knowledge with people who are not scientists.
- David started a television show about science for kids, and he has written many books about science for kids.
- People around the world know who David Suzuki is because some of his television shows were seen in countries around the world.

Elizabeth Blackwell, pp. 76-77

- 1. Elizabeth was 17 when her father died. She was 11 when she came to the United States and her father died six years later. 11 + 6 = 17.
- Medical schools did not allow women because most people thought women should not be doctors.
- Elizabeth is important in history because she was the first woman to complete medical school in the United States.
- 4. Elizabeth started medical schools that were just for women so it would be easier for women to become doctors.
- 5. Answers will vary. Students might suggest lessons such as the following:
- · Hard work leads to success.
- Do not give up if you have a goal that is difficult to achieve.
- Do not listen to people who say you cannot do something just because you're a woman (or a man).

Roberta Bondar, pp. 78-79

- When she was young, Roberta built models of rockets and space stations. She also looked at the stars and wondered what Earth looked like from space.
- 2. Roberta started training as an astronaut in 1983. She did not go on a space flight until 1992, nine years later.
- The quotation helps to explain the idea that Roberta's body felt strange when she was in space.
- Roberta's knowledge as a doctor would help her in space when she did experiments to learn more about the human body.
- 5. I would look under the subheading After the Space Flight.

Alexander Graham Bell, pp. 80-82

- As a boy, Alexander loved doing experiments to learn new things.
- 2. Alexander's workshop was a place where he could dream up new inventions.
- Alexander taught deaf children how to speak, and speaking is making sounds.
- 4. The speaker's voice was sent through a wire to the listener.
- 5. Answers will vary. Students might say the telephone helps people by allowing them to talk to people who are far away; letting them get in touch with police, fire, and ambulance services quickly; helping people keep in touch with friends and neighbours when they cannot or do not have time to visit them
- 6. Alexander built and flew kites to learn how things fly.
- 7. Answers will vary. Ensure that students label their drawing and explain the purpose of their invention.

Saying "I Am Sorry!" pp. 83-84

- 1. Apologizing means saying "I am sorry" to someone.
- It might be hard to apologize right away if you still feel angry.
- 3. Students' responses will vary. Check to see that students have provided a personal opinion to support their answer.
- 4. You can take some time to calm down, then think about what happened.
- 5. Responses will vary. Consider providing time for students to share and discuss their responses.

Gossip, pp. 85-86

- It is not gossip because what Pedro is saying would not make Lisa feel angry, hurt, or embarrassed, and it is not private information.
- 2. When we say a story is partly true, it means that some information is true and other information is not.
- 3. Students' responses will vary. Check that students have provided a personal opinion to support their answer.
- 4. It is okay to repeat gossip to an adult if you hear about something dangerous and you want to keep someone safe.
- 5. Possible answers include
 - · You can make sure you do not start gossip.
 - · You can make sure you do not repeat gossip.
 - When someone tries to tell you gossip, you can say you do not want to hear gossip and walk away.

Old Cat and Little Cat, pp. 87-88

- 1. Old Cat is not sure that Little Cat will be still and guiet.
- Little Cat shows she has lots of energy when she jumps and hops about at the beginning of the story, when she chases the dragonfly, and when she chases the butterfly.
- Old Cat does not get angry. Students might suggest one or both of the following reasons:
 - Old Cat does not say anything after Little Cat chases the dragonfly.
 - Old Cat speaks softly when he tells Little Cat to choose one thing and stick to it.

4. The lesson "Choose one thing to do and stick to it" is explicitly stated in the story. Other lessons that might be seen in this story include "Keep your promises" and "Listen to your elders."

- 5. Real cats cannot talk or fish with a fishing pole.
- 6. Responses will vary. Accept any title that is suitable. Possible titles include
 - The Two Cats
 - · Two Cats Go Fishing
 - · Little Cat Catches a Fish
 - · Little Cat Learns a Lesson

The Ant and the Dove, pp. 89-90

- 1. The ant was thirsty because it was a very hot summer day.
- 2. The dove was afraid she might crush the ant if she pulled him out of the water with her beak.
- 3. *First:* The dove dropped the leaf so it landed in the water right beside the ant. *Second:* The ant climbed onto the leaf. *Third:* The leaf floated to the edge of the river. *Fourth:* The ant climbed back onto land.
- 4. The bird catcher cried out in pain after he had been bitten. The noise made the dove look down and see the bird catcher, so the dove knew she should fly away to a safe place.
- 5. Answers will vary.

The Broken Promise, pp. 91-92

- The young man got angry because the children were being cruel to the turtle by poking it with sticks and throwing stones at it
- 2. The turtle gave the young man a huge feast to thank him for making the children run away and stop being cruel.
- The young man was greedy because he was rich after opening the first box, but he opened the second box because he thought it also had money in it. He wanted to be even richer.
- 4. Possible answers include
 - A turtle talks.
 - · A turtle has servants who make a feast.
 - The young man suddenly looks like a very old man because he opened a box.
- 5. Possible lessons include
 - · When you make a promise, keep it.
 - Do not be greedy or something bad might happen to you.

The Happy Man, pp. 93-94

- 1. The two most important characters in this story are the chief and the happy man.
- The chief is trying to solve the problem of how to become happy.
- The servant thinks the chief should find a man who is happy and put on his shirt. Then the man's happiness will go into the chief's body.

- The chief is surprised because the happy man is not wearing a shirt.
- 5. The story suggests that the chief can solve his problem by thinking happy thoughts.
- 6. Students might suggest lessons such as
 - Getting everything you want might not make you happy.
 - If you want to be happy, you should think happy thoughts.
 - · Being rich and powerful does not guarantee happiness.

The Man and the Coconuts, pp. 95-96

- The man was going to eat the coconuts. He went to look for coconuts when he saw he was almost out of food.
- 2. The man had to travel far because people had already taken all the coconuts from the trees near the village.
- 3. The boy says this because he knows the road is bumpy and the coconuts will fall off the cart if the man goes too quickly. Then the man will have to stop to pick up the coconuts.
- 4. The boy says this because he knows the man will not have to waste time picking up his coconuts if he goes slowly.
- The man is the foolish person in this story. He makes the mistake of going too quickly twice before he learns it is better to go slowly.

The Shepherd Boy and the Wolf, pp. 97-98

- Three things that are part of a shepherd's job are taking the sheep to a field where they can eat grass, making sure that no sheep get lost, and making sure that wolves do not eat any sheep.
- 2. The boy took the sheep up a hill because on the hill was a field of grass where the sheep could eat.
- 3. The boy was bored and he thought it would be fun to make the villagers run up the hill for no reason.
- The story says that the villagers were huffing and puffing after they ran up the hill.
- The boy was selfish because he did not care that his way of having fun was not fun for the villagers who had to run up the hill.
- 6. The villagers did not come because they thought the boy was lying again and there was no wolf.

Where Does Milk Come From? pp. 99-100

- The nutrients in milk come from the grass and hay that cows eat.
- Today there are machines that can milk many cows at the same time.
- 3. The driver of a milk truck checks the milk to make sure it looks fresh and healthy. The driver also delivers the milk to the factory.
- 4. Two foods made from milk are cheese and yogurt.
- Factories make sure milk is safe to drink by heating the milk to kill germs.
- Cows eat for eight hours a day, so they eat lots of grass. A farmer needs large fields to provide enough grass for all the cows.

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