

Instant STEM Activities

1

Core Ideas and Practices

Includes

- Physical, Life, Earth and Space Sciences
- Engineering, Technology, and Applications of Science
- Informational Text
- Project-based Activities
- STEM Occupations

We Get Energy from the Sun

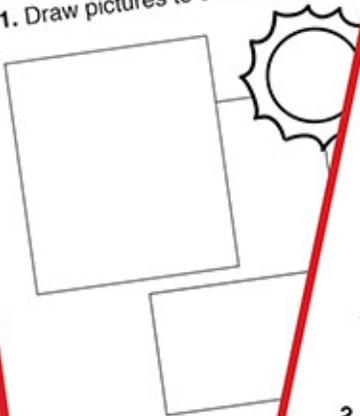
The Sun is the main source of energy for all living things.

The Sun warms the air.
The Sun warms the land and water.

The Sun gives us light.
The Sun makes it possible to grow food.

Think About It!

1. Draw pictures to show three things

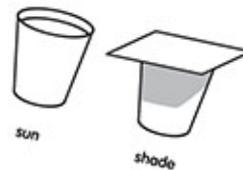


Experiment: What Does Sunlight Do to Water?

Find out what sunlight does to water.

What You Need

- 2 plastic cups containing equal amounts of water
- Thermometer



What You Do

1. Ask an adult to help you take the temperature of the water in both cups. The temperature should be the same in both cups.
2. Put one cup of water in a sunny spot.
3. Put the other cup of water in a shady spot.
4. Predict what will happen to the temperature of the water in each cup.
5. Wait two hours. Then take the temperature of the water again.

Designed for teachers with parents in mind.

Use this resource to help students gain practice in the following:

Grade 1 Standards—Reading: Informational Text

Key Ideas and Details

- Ask and answer questions about key details in a text.
- Identify the main topic and retell key details of a text.
- Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

- Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
- Know and use various text features to locate key facts or information in a text.
- Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Integration of Knowledge and Ideas

- Use the illustrations and details in a text to describe its key ideas.
- Identify the reasons an author gives to support points in a text.

Next Generation Science Standards—Eight Practices of Science and Engineering

- 1. Asking questions (for science) and defining problems (for engineering)**
- 2. Developing and using models**
- 3. Planning and carrying out investigations**
- 4. Analyzing and interpreting data**
- 5. Using mathematics and computational thinking**
- 6. Constructing explanations (for science) and designing solutions (for engineering)**
- 7. Engaging in argument from evidence**
- 8. Obtaining, evaluating, and communicating information**

Instant STEM Activities Grade 1
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As we live in a rapidly changing society, exposure to and fluency in Science, Technology, Engineering, and Mathematics (STEM) ensures that children will gain the skills they will need to succeed in the 21st century. It is essential that children gain practice in becoming good problem solvers, critical thinkers, innovators, inventors, and risk takers.

Teaching Tips for Parents

Encourage Topic Interest

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

What I Know... What I Wonder... What I Learned... (KWL Chart)

Introduce each STEM unit by asking what your child thinks he or she knows about the topic, and what your child wonders about the topic. Complete this activity as a brainstorming session. Once your child has had a chance to complete the questions, combine the information to create a chart for display. Throughout the study, periodically update your child's progress in accomplishing the goal of what she or he wanted to know, and validate what he or she wondered about and has learned.

Vocabulary List

Keep track of new and content-related vocabulary on chart paper for your child's reference. Encourage your child to add words to the list. Classify the word list into the categories of nouns, verbs, and adjectives. In addition, have your child create a personal science dictionary as part of his or her learning log.

Learning Logs

Keeping a learning log is an effective way for your child to organize thoughts and ideas about the STEM concepts presented and examined. Your child's learning log also provides insight on what follow-up activities are needed to review and to clarify concepts learned.

Some ideas for a learning log include keeping a special notebook, a binder or folder to hold papers, or a scrapbook. A learning log could include the following types of entries:

- Your child's personal reflections
- Questions that arise
- Connections discovered
- Labeled diagrams and pictures
- Definitions for new vocabulary
- KWL Chart

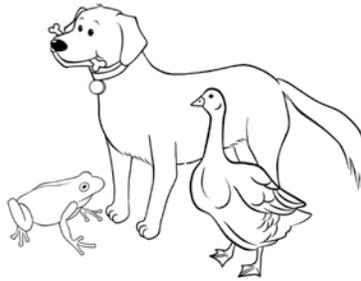
Living Things

All living things need air, water, and food.
All living things grow and change.

People are
living things.



Animals are
living things.



Plants are
living things.



Think About It!

1. What do all living things need?

2. Is a squirrel a living thing? How do you know?



“Living Things”—Think About It! (continued)

3. Look at the pictures below. Circle the things that are living. Tell a partner how you know each thing is alive.

a) toy car



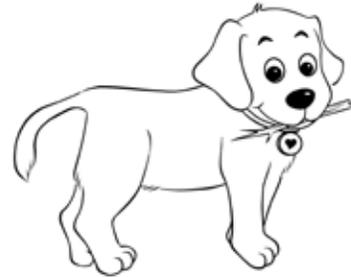
b) teddy bear



c) man



d) dog



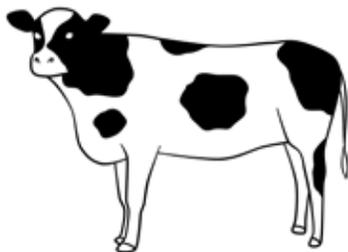
e) feather



f) stool



g) cow



h) flower





Living Things Collage

Look for pictures of living things in magazines.
Cut out the pictures and glue them below.

Write a sentence about living things.



Nonliving Things Collage

Look for pictures of nonliving things in magazines.
Cut out the pictures and glue them below.

Write a sentence about nonliving things.

My Body

Draw a line from each label to the right part of the body.

hair

ear

nose

wrist

chin

arm

neck

chest

stomach

foot

head

eyebrow

hand

eye

mouth

elbow

shoulder

knee

leg

ankle



Your Body Helps You

Your brain helps you to learn and think.



Your lungs help you breathe.



Your heart pumps blood around your body.



Your muscles help your body move.



Your stomach and intestines digest the food you eat.



Your bones help hold up your body.



"Your Body Helps You"—Think About It!

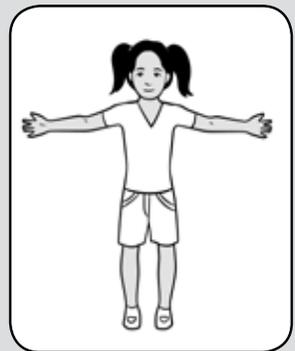
Solve each riddle. Use the words below.

bones fingers brain muscles lungs heart teeth

1. We help your body move. _____
2. You use us to bite an apple. _____
3. I help you to learn and think. _____
4. I help you hold a brush. _____
5. We help you breathe. _____
6. I help you pump blood around your body. _____
7. We help hold up your body. _____

Brain Stretch

Arms help you to reach and to carry things.
Feet help you to stand and move so you
do not fall.



Tell a partner what ways other body parts help you.



Your Five Senses

Cut out and glue pictures from magazines to show each of the senses.

Sight



I use my eyes to see things.

Here are some things I can see.

Hearing



I use my ears to hear things.

Here are some things I can hear.

Touch



I use my fingers to touch things.

Here are some things I can touch.

continued next page 

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