

All About Bridges

STEM EXPLORATIONS - Level J

1. Read the questions. Circle the best answers.

Why do we need bridges?

- a. to fly over
- b. to connect people and places
- c. to drive on

Who designs bridges?

- a. construction workers
- b. drivers
- c. engineers

Who builds bridges?

- a. construction workers
- b. drivers
- c. engineers

What are today's bridges made out of?

- a. steel and concrete
- b. stone
- c. rope and wood

2. Draw an arch bridge.

3. Draw a suspension bridge

All About Rain

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

Why is rain important to life on Earth?

- a. It helps form clouds.
- b. It keeps things alive.
- c. It is a type of precipitation.

What is *precipitation*?

- a. rain or snow that falls from the sky
- b. water from a water hose
- c. saltwater in the ocean

What is the water cycle?

- a. a system that moves water around Earth
- b. rain falling from the sky
- c. too much rain

How are clouds formed?

- a. by cooling water vapor
- b. when water droplets stick together
- c. when water is heated by the sun

What is *evaporation*?

- a. It is when water vapor turns into droplets.
- b. It is when water droplets stick together.
- c. It is when heated water changes into water vapor.

2. What do you use water for in your home?

drinking

cooking

cleaning

computers

plants

All About Snow

STEM EXPLORATIONS - Level J

1. Read the questions. Circle the best answer.

Why does the Earth need snow?

- a. It helps form clouds.
- b. It keeps things alive.
- c. It keeps the Earth cool.

What is *precipitation*?

- a. clouds
- a. water or ice that falls from the sky
- b. water that turns into vapor

What does a snow blanket do?

- a. It traps heat that helps animals stay warm underground.
- b. It traps heat that helps snow melt quickly.
- c. It keeps the ground cold.

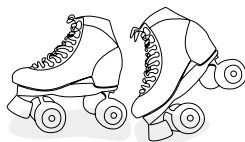
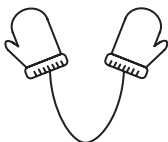
What kind of snowfall is very hard to see in?

- a. snow flurry
- b. snowstorm
- c. snow blizzard

What is an *ice crystal*?

- a. a snowflake
- b. a snowball
- c. snow blanket

2. What things do people need to prepare for snow?



Building with Rocks

STEM EXPLORATIONS - Level K

1. Read the questions. Circle the best answers.

Where do rocks come from?

- a. Earth's crust
- b. mountains
- c. magma

How many types of rock are found on Earth?

- a. ten
- b. five
- c. three

What is the name of one of the strongest rocks for building?

- a. sandstone
- b. marble
- c. granite

2. Read the question. Circle all the best answers.

Which things are made from rocks?

towers

bridges

palaces

cars

buildings

3. Look around your house. What things do you see in your house made from rocks?

floors

tables

counter tops

dishes

jewelry

fireplaces

The Changing Sun

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answers.

Why is the sun always changing in the sky?

- a. Earth is rotating around the sun.
- b. The sun moves up and down in the sky.
- c. The sun grows.

What does the Earth do when it rotates around the sun?

- a. spins
- b. bounces
- c. stops

How many times a day does the Earth rotate around the sun?

- a. one
- b. seven
- c. ten

How long does it take Earth to orbit or go all away around the sun?

- a. one week
- b. one month
- c. one year

2. Look at page 13. Draw a picture showing where the sun is when it is night and day on Earth.

Clouds and the Weather

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What are clouds made of?

- a. water vapor
- b. water droplets and dust
- c. rain

What happens when there are lots of droplets in a cloud?

- a. clouds get bigger
- b. it gets cold
- c. rain or snow fall from them

What do clouds help predict?

- a. changes in the weather
- b. temperature
- c. heat

2. Circle the kind of clouds.

Clouds that float close to the ground	<i>fog</i>	<i>nimbus</i>
Thin and wispy clouds	<i>cirrus</i>	<i>cumulus</i>
Clouds that are large and gray	<i>cirrus</i>	<i>nimbus</i>

3. Draw a picture with cumulus clouds in the sky.

Computers Everywhere

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

Why were computers invented?

- a. to help control and steer airplanes
- b. to solve math faster than humans
- c. to help dishwashers clean faster

2. Read the question. Circle all the best answers.

What things have computers in them?

tables

phones

cars

airplanes

What things can people do on a smart phone?

make phone calls

play games

take pictures

play music

send messages

order food

make food

Facetime

What do *you* use a computer for?

schoolwork

games

reading

videos

3. Draw two kinds of computers you would like to have at your house.

Computers Then and Now

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

How big were computers long ago?

- a. They fit on a desk.
- b. They were very small.
- c. They were big and filled a whole room.

What did computers long ago *not* have?

- a. monitors
- b. keyboards
- c. printer

What are small computers that can be carried around called?

- a. desktop
- b. laptop
- c. server

2. Read the question. Circle all the best answers.

What are some parts of a computer?

monitor

keyboard

desk

screen

mouse

3. Draw a picture of a computer you use.

The Cycle of Seasons

STEM EXPLORATIONS - Level I

1. Read the question. Circle the best answer.

Why do seasons happen?

- a. The Earth orbits the sun.
- b. The sun orbits the earth.
- c. The Earth changes.

2. Circle the season when these things happen.

Winter

Spring

animals hibernate

birds migrate

it is cold

nature is quiet

2. Circle the season when these things happen.

Summer

Spring

plant crops

animals wake up

warm weather

snow melts

2. Circle the season when these things happen.

Fall

Summer

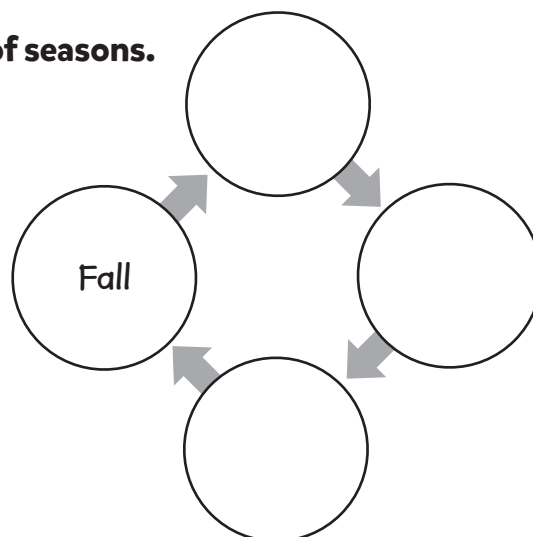
animals store food

cool air

animals grow thick fur

leaves fall

5. Complete the cycle of seasons.



Energy from the Sun

STEM EXPLORATIONS - Level J

1. Read the questions. Circle the best answers.

What is the sun?

- a. planet
- b. comet
- c. star

What is energy from the sun called?

- a. solar energy
- b. light energy
- c. electrical energy

What form is solar energy when it reaches Earth?

- a. fire
- b. light
- c. heat

What does solar energy do?

- a. cools the Earth
- b. warms the Earth
- c. waters the Earth

2. Look at page 11. Draw a picture showing heat from the sun bouncing off the Earth.

Halves and Quarters

STEM EXPLORATIONS - Level H

1. Read the questions. Circle the best answers.

How many parts does a whole cake have?

- a. one
- b. two
- c. four

What do four equal shares mean?

- a. four parts the same size
- b. four parts that are different
- c. four sizes

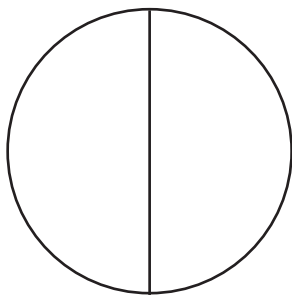
How many halves can a pizza have?

- a. one
- b. two
- c. four

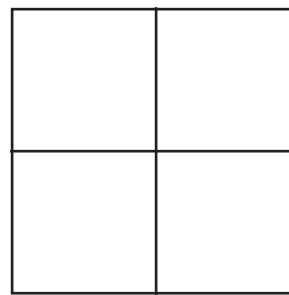
How many quarters can a pizza have?

- a. one
- b. two
- c. four

2. Color one half of the circle.



3. Color three quarters of the square.



How Light Travels

STEM EXPLORATIONS - Level K

1. Read the questions. Circle the best answer.

How does light travel?

- a. fast in straight lines
- b. fast in circles
- c. slow in circles

What kinds of objects does light pass through easily?

- a. transparent
- b. translucent
- c. opaque

What kinds of objects block or reflect light?

- a. transparent
- b. translucent
- c. opaque

What kinds of objects lets some light pass through?

- a. transparent
- b. translucent
- c. opaque

What kinds of objects have no shadow?

- a. transparent
- b. translucent
- c. opaque

2. Draw a picture and label two opaque objects.

Light Energy

STEM EXPLORATIONS - Level J

1. Read the questions. Circle the best answer.

How does light energy help make all life on Earth work?

- a. It gives living things natural and artificial light for food and sight.
- b. It helps people see far away.
- c. It helps eyes see shapes and colors.

What kind of light energy is made by humans?

- a. natural
- b. artificial
- c. moonlight

What do plants change sunlight into?

- a. food
- b. water
- c. leaves

2. Read the questions and circle all the best answers.

What things do we have because of light energy?

colors green plants daylight food sight

Where are sources of natural light?

lightning glow worms fireflies fire sun

What are sources of artificial light?

fire candles moon traffic lights lamps

Made of Wood

STEM EXPLORATIONS - Level H

1. Read the questions. Circle the best answers.

Why is wood one of the most used materials on Earth?

easy to find

easy to work with

doesn't break

very strong

comes from trees

doesn't scratch

What kind of wood comes from trees that keep their leaves?

a. hardwood

b. softwood

What kind of wood comes from trees that shed their leaves in the fall?

a. hardwood

b. softwood

What is wood called that is chopped, steamed, and mixed?

a. hardwood

b. softwood

c. pulp

What is paper made of?

a. wood pulp

b. hardwood

c. softwood

2. Draw three things made of wood.

Phases of the Moon

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

Where does moonlight come from?

- a. Earth
- b. Moon
- c. Sun

What does the moon orbit?

- a. Earth
- b. Moon
- c. Sun

How does the moon look during the waxing phases?

- a. dark
- b. bigger
- c. smaller

How does the moon look during the waning phases?

- a. dark
- b. bigger
- c. smaller

Does the moon change?

- a. no
- b. yes

2. Draw these moons.

full moon	crescent moon	half moon
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The Right Tools

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What were the first tools made from?

- a. wood
- b. plants
- c. stones

What kind of tools help us communicate with people?

- a. stones, plants, and chopsticks
- a. pen, phone, and computers
- b. saw, scissors, and razors

2. Read the questions. Circle the all the best answers.

Which of these are tools?

- | | | | | |
|--------|-------|--------|------------|----------|
| hammer | grass | pencil | saw | scissors |
| broom | phone | house | chopsticks | fork |

What tools do you use at school?

- | | | | | |
|----------|---------|----------|---------|------------|
| computer | pencils | scissors | stapler | calculator |
|----------|---------|----------|---------|------------|

3. Write the two words that make up each compound word.

everywhere anytime

chopsticks anywhere

Shapes All Around

STEM EXPLORATIONS - Level K

1. Read the questions. Circle the best answers.

What are flat shapes called?

- a. solid shapes
- b. plane shapes
- c. 3-D shapes

What do all polygons have?

- a. side and corners
- b. curved lines
- c. openings

What do all ellipses have?

- a. sides and corners
- b. curved lines and no corners
- c. openings

How are polygons and ellipses alike?

- a. They both have corners.
- b. They both have curves lines.
- c. They both are plane shapes.

2. Draw a picture using these shapes: rectangle, triangle, square, and star.

Sound and Communication

STEM EXPLORATIONS - Level J

1. Read the questions. Circle the best answers.

Where does sound energy come from?

- a. communication
- b. vibrations
- c. talking

What do all living things use sound for?

- a. growing
- b. moving
- c. communication

Why do some animals use echolocation for finding things?

- a. They can't feel things.
- b. They can't make sounds.
- c. They can't see very well.

Living things that do not have ears to hear can the vibrations of sound energy.

- a. see
- b. feel
- c. smell

2. Read the question. Circle all the best answers.

What sounds do people make with their voices?

singing

talking

thinking

laughing

crying

Sound Waves

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What makes sound energy?

- a. vibrations
- b. talking
- c. waves

What carries sound energy to the ear?

- a. vibrations
- b. sound waves
- c. pitch

What sound that bounces off hard surfaces called?

- a. echo
- b. vibrations
- c. wave

When is sound volume softer?

- a. when sound waves get bigger
- b. when sound waves are closer
- c. when sound waves get smaller

2. Read the question. Circle all the best answers.

Which of these objects make sounds?

drums

horns

cars

watermelon

rocks

Telling Time

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What do clocks measure?

- a. days
- b. time
- c. hours

What kind of clock has a screen and numbers instead of hands?

- a. analog
- b. digital
- c. sundial

What does a clock count?

- a. time that has passed in one week
- b. time that has passed in one day

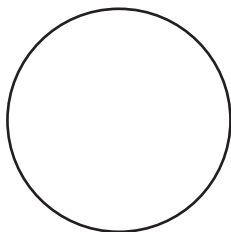
2. Complete the sentences by circling the correct word.

There are sixty seconds in a(n) *hour* *minute*

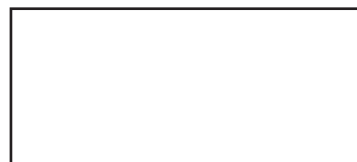
There are sixty minutes is a(n) *day* *hour*

There are twenty-four hours in a(n) *day* *minute*

3. Draw an analog clock face with the time showing 3:00.



4. Draw a digital clock with the time showing 12:00.



Thermometers

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What do thermometers measure?

- a. heat
- b. time
- c. wind

What do we call the amount of heat in something?

- a. energy
- b. temperature
- c. matter

What kind of thermometer uses a glass tube with liquid to measure temperature?

- a. basic
- b. digital
- c. meat

2. Read the question. Circle all the best answers.

Who uses thermometers in their jobs?

farmers doctors policeman weatherman bakers

What kind of thermometers does your family use?

basic digital ear meat

Thunderstorms

STEM EXPLORATIONS - Level I

1. Read the questions. Circle all the best answers.

What do most thunderstorms have?

rain

lightning

thunder

tornadoes

winds

When do most thunderstorms happen?

morning

afternoon

early evening

late at night

What can cause damage in a thunderstorm?

rain

lightning

thunder

tornadoes

wind

2. Read the question. Circle the best answers.

What cannot hurt you in a thunderstorm?

a. lightning

b. rain

c. thunder

What can lightning do in a storm?

a. start a mudslide

b. start a fire

c. turn into a tornado

3. Draw a picture of a tornado.

What Are the Five Senses?

STEM EXPLORATIONS - Level H

1. Read the questions. Circle the best answers.

When do we use all five senses?

- a. sleeping
- b. eating
- c. reading

What does our tongue do?

hearing sight smell taste touch

What does our nose do?

hearing sight smell taste touch

What are our eyes used for?

hearing sight smell taste touch

What are our ears used for?

hearing sight smell taste touch

What is our skin used for?

hearing sight smell taste touch

2. Look at page 7 and draw a picture of all five sense organs on the body.

What Is a Gas?

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What type of matter takes up space but cannot be seen?

- a. gas
- b. liquid
- c. solid

What is the layer of gases that covers and protects Earth?

- a. vapor
- b. atmosphere
- c. matter

What type of matter can become another kind of matter?

- a. solid
- b. liquid
- c. gas

What is thunder?

- a. seeing gas move
- b. hearing gas move
- c. feeling gas move

2. Read and circle all the words that have a short /i/ sound.

invisible

mix

filled

air

wind

living

this

alive

ice

tiny

What Is a Liquid?

STEM EXPLORATIONS - Level H

1. Read the questions. Circle the best answer.

What is most of the human body and the Earth made of?

- a. gas
- b. liquid
- c. solid

What happens when liquids are heated?

- a. become thicker
- b. become thinner
- c. stay the same

What is heated rock that turns into liquid called?

- a. volcano
- b. lava
- c. oil

2. Read the questions. Circle all the best answers.

What are some thick liquids?

honey syrup water juice lava

What are some thin liquids?

water juice oil milk honey

3. Draw some things that can hold liquids.

What Is a Solid?

STEM EXPLORATIONS - Level I

1. Read the questions. Circle the best answer.

What type of matter has a fixed size?

- a. gas
- b. liquid
- c. solid

What shapes do solids have?

- a. fixed shape
- b. no shape
- c. flowing shape

What can solids do without breaking apart?

- a. bounce and float
- b. burn
- c. bend and stretch

2. Read the question. Circle all the best answers.

What are the three kinds of solids?

soft

hard

strong

thick

tough

3. Circle the words where the letter y makes the long /e/ sound.

easy

heavy

stay

many

carry

way