

# Unit 1. The Three States of Water

S T E A M

Academic Objective	Learn about liquids, solid, and gases
Vocabulary	freeze, ice, palm, melt, disappear, frozen
STEAM Project	Solids, Liquids, or Gases? 21st Century Skills: Critical Thinking, Communication

**KEY WORDS**  
Look, listen, and repeat.  
• freeze  
• ice  
• palm  
• melt  
• disappear  
• frozen

**READING**  
Listen and read.  
Water can be solid, liquid, or gas.  
Can you believe it?  
Let's take a look. We can see water change from solid to liquid and then to gas.

**WARM-UP**  
How can we turn water into a solid?

**WHAT DO YOU THINK?**  
Water looks different at different temperatures. When water gets cold, it freezes into ice. It stays like a solid forever. When it gets hot, it becomes a gas.

**CHECK YOUR UNDERSTANDING**  
1. Choose the correct answer.  
1. What is the main purpose of the experiment?  
a. To see how cold water gets hot.  
b. To see the three states of water.  
c. To watch water become gas.  
2. Water can be solid, liquid, or gas.  
a. ice b. metal c. gas  
3. Which is NOT true?  
a. Ice is frozen water.  
b. Ice melts and becomes gas.  
c. Steam is water in gas form.  
4. Look, read, and check.  
1. ☐ a. A frozen lake is solid.  
☐ b. A frozen lake is gas.  
2. ☐ a. Steam is gas.  
☐ b. Steam is liquid.  
5. Complete the chart.  
Change Effect  
The water gets cold. It freezes. It becomes \_\_\_\_\_.  
The ice gets hot. The ice \_\_\_\_\_. It becomes liquid.  
The water gets hot. It becomes \_\_\_\_\_.

**PROJECT: SOLIDS, LIQUIDS, OR GASES?**  
What items are solids, liquids, or gases?  
Look at the items below and put them in the table.  
Solid Liquid Gas  
ice chocolate milk plastic  
rice smoke snow steam  
Can any of these items change their state easily? Discuss with a friend.

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: We can freeze water to turn water into a solid.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 5, 3, 1, 6, 4

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. palm 2. melts

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the changing states of water. Help them understand three states of water.
- Refer to Background Knowledge for more characteristics of water when it is solid, liquid, or gas. Pick some substances that can be liquid, solid and gas, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. b 2. c 3. b
  - B. Look, read, and check. 1. a 2. a
  - C. Complete the chart.
    - The water gets cold. → It freezes. It becomes solid/ice.
    - The ice gets hot. → The ice melts. It becomes liquid.
    - The water gets hot. → It becomes gas.
  - D. Unscramble and write.
    - 1. disappear 2. ice 3. frozen 4. melt 5. freeze 6. palm

### [STEAM PROJECT]

- Have students fill out the table.
- Have them share the results with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
  - Step 1:
    - solid: snow, chocolate, plastic, rice
    - liquid: cola, milk
    - gas: steam, air, smoke
  - Step 2:
    - Chocolate can become liquid when it melts. Steam and snow can turn to liquid. Snow can also turn to gas.

## Unit 2. Smoke or Steam?

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Academic Objective	Learn how steam is made
Vocabulary	boil, noodles, fire, smoke, pot, steam
STEAM Project	Liquid, Gas, Liquid
	21st Century Skills: Critical Thinking, Communication, Collaboration

**2** SMOKE OR STEAM?

**KEY WORDS**  
Look, listen, and repeat.

**WARM-UP**  
Ask students and repeat what, repeat, or go?

**READING**  
Listen and read.

Kelly's dad is boiling water in the kitchen. He's making noodles for lunch.  
What's this? Is there a fire in the kitchen?  
"Dad, smoke is coming from the pot!"  
"Don't worry, Kelly. This isn't smoke. This is steam. Boiling water makes steam."  
"What is steam, dad? Why does boiling water make it?"  
"When water boils, the liquid becomes a hot gas. This is steam."

Then it meets the cold air outside the pot. It becomes small drops of liquid again.  
"It's time to eat now. The noodles look delicious!"

**Circle the key words in the reading.**  
Read and choose.  
1. When water gets hot, it does this. ☐ fire ☐ boils  
2. Tasting, this, and delicious. What am I? ☐ noodles ☐ pot

**CHECK YOUR UNDERSTANDING**

**1. Choose the correct answers.**

1. What is the main topic of the passage?  
a. How to cook noodles  
b. What steam is  
c. How to boil water

2. Water becomes a gas when it \_\_\_\_\_.  
a. boils  
b. melts  
c. freezes

**2. Look, read, and check.**

1. ☐ a. Making ice makes steam.  
☐ b. Boiling water makes steam.

2. ☐ a. It becomes a small drop of liquid again.  
☐ b. It becomes a solid again.

**3. Number the pictures in the correct order.**

The water becomes steam. Kelly's dad turns on a fire. The liquid water boils. The steam meets cold air and becomes a liquid again.

**4. Look, match, and write.**

1. ☐ boil ☐ 4. ☐ noodles  
2. ☐ smoke ☐ 5. ☐ steam  
3. ☐ fire ☐ 6. ☐ pot

**5. Liquid, Gas, Liquid**  
To do this experiment, you need:

**STEP 1:** a. Fill one of the cups with warm water.  
b. Turn the other cup upside down and put it on top of the first cup.  
c. Put an ice cube on top.  
d. See what happens.

**STEP 2:** Answer the questions.

a. What happens?  
b. The water in the bottom cup is hot. It turns into hot gas directly. Then the hot gas makes the gas cold. hot. It turns into liquid / solid / gas. The liquid makes the top cup wet.  
c. Why does this happen? Discuss with a friend.

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Smoke and steam are gases. Smoke is a mixture of gas and solid particles.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 6, 1, 3, 4, 5

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. boils 2. noodles

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the properties of steam and smoke. Help them understand how steam and smoke is made.
- Briefly discuss the difference between steam and smoke as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. b 2. a 3. b
- B. Look, read, and check. 1. b 2. a
- C. Number the pictures in the correct order. 3, 1, 2, 4
- D. Look, match, and write. 1. fire 2. noodles 3. boil 4. pot 5. smoke 6. steam

### [STEAM PROJECT]

- Have students do the experiment.
- Have them discuss the results of step 1 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Answer:
- A. The water in the bottom cup is hot. It turns into hot gas slowly. Then the ice cube makes the gas cold. It turns into water. It makes the top cup wet.
- The ice cube makes the steam turn back into water because it cools the steam.

## Unit 3. Crushing Cups



Academic Objective	Learn how we can spread out our weight
Vocabulary	wet, quickly, floor, row, stand, crush
STEAM Project	Building a Paper Bridge
	21st Century Skills: Communication, Critical Thinking

**WARM-UP**  
How do you spread out your weight?  
Put a book on top of the paper cups and step on the book carefully.  
If you can stand on them without breaking them, use fewer cups next time. How many cups do you need?

**READING**  
Listen and read.  
Do you think paper cups are strong? They get **wet** **quickly**. We can break them easily. But they can be very strong! Let's see.  
Put six paper cups on the floor in two rows.

**CHECK YOUR UNDERSTANDING**  
1. Choose the correct answers.  
1. What is the main topic of the passage?  
a. How to drink from a paper cup  
b. How much we weigh  
c. How our weight can be spread out  
2. Which is **NOT** true?  
a. We can stand on six paper cups.  
b. We can't crush one paper cup easily.  
c. Paper cups get wet quickly.  
3. Six paper cups can hold about \_\_\_\_\_.  
a. 21kg b. 69kg c. 126kg  
4. Look, read, and check.  
1. ☐ a. Put a book on six paper cups.  
b. Put six paper cups on a book.  
2. ☐ a. We can stand on six paper cups.  
b. We can stand on one paper cup.  
5. Complete the chart.  
**Paper Cups**  
They get \_\_\_\_\_ quickly.  
We can \_\_\_\_\_ them easily.  
We can \_\_\_\_\_ on six of them.

**BUILDING A PAPER BRIDGE**  
We can build a strong bridge to solve some problems, you need:  
2 paper cups 1 sheet of paper  
STEP 1: a. Put two paper cups on the floor with a space between them.  
b. Put the sheet of paper on the cup to make a bridge.  
c. Put one coin on the bridge. Then put two coins on the bridge.  
STEP 2: a. Now fold the paper like this.  
b. Put the paper on top of the cups.  
c. Put the coins on the bridge. How many coins can the paper hold before it falls?  
Answer the questions.  
a. What happened and why?  
A piece of paper is strong, not strong. But when we fold the paper, we can make the paper stronger and wider.  
The weight / height of the coins is spread across the folds of the paper.

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I use paper cups to drink some juice.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 6, 1, 3, 4, 5

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. wet 2. crush

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. c 2. b 3. c
  - B. Look, read, and check. 1. a 2. a
  - C. Complete the chart.  
They get wet quickly.  
We can break them easily.  
We can stand on six of them.
  - D. Circle the correct word.  
1. stand 2. row 3. floor 4. crushes 5. quickly 6. wet

### [STEAM PROJECT]

- Have students do the experiment.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Answer:
  - Step 2  
A piece of paper is not strong. But when we fold the paper, we can make the paper stronger.
  - The weight of the coins is spread across the folds of the paper.

# Unit 4. Super Skis

S T E A M

Academic Objective	Learn what pressure is and how it works
Vocabulary	ski, pressure, wear, area, push, spread
STEAM Project	High or Low Pressure
	21st Century Skills: Creativity, Collaboration, Critical Thinking

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Yes, I do. It is fun!

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 1, 6, 3, 4, 5

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. ski 2. wear



### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the pressure of different materials. Help them understand how pressure works.
- Refer to Background Knowledge for more information about pressure and how we use it in the real life. Pick some materials related to pressure that students have used before, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. a 2. a 3. c
- B. Look, read, and check. 1. a 2. b
- C. Complete the chart.
- Your feet are small. → You fall in the snow. → The pressure is high.
- You wear skis. The skis are big. → You don't sink. → The pressure is low.
- D. Look at the word and circle the definition.
- 1. a 2. b 3. b 4. a 5. a 6. a

### [STEAM PROJECT]

- Have students discuss the questions.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
- Step 1
- 1. b (Your weight does not change, but the pressure on the ground changes.)
- 2. The ice skates would sink into mud the most. The winter boots are the biggest, so they would sink the least.
- Step 2
- When we wear the snow shoes, our pressure on the ground changes. It gets lower. Our weight spreads out. We don't sink into the snow.



# Unit 5. Straw Flutes



Academic Objective	Learn how to make low and high sounds
Vocabulary	straw, blow, arrange, upper, hold, length
STEAM Project	High and Low Notes! 21st Century Skills: Critical Thinking

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Yes, I do. I play the piano.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 5, 3, 6, 4, 1

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. blow 2. upper

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the straws of different lengths make different sounds. Help them understand making low and high sounds.
- Refer to Background Knowledge for more information about sound pitch. Pick some instruments that students have answered in Warm-Up, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. c 2. b 3. b
  - B. Look, read, and check. 1. b 2. a
  - C. Complete the chart.
    - The length of the straw changes the sound. Fact
    - The pan flute sounds good. Opinion
    - The long straws make low sounds. Fact
  - D. Circle the correct word.
    - 1. blow 2. straw 3. upper 4. holding 5. arranges 6. length

### [STEAM PROJECT]

- Have students label from the lowest to highest sound.
- Have them share the results of step 1 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
  - 1- D (6cm)
  - 2- B (5.5cm)
  - 3- F (5cm)
  - 4- G (4.8cm)
  - 5- E (4.5cm)
  - 6- C (4.1cm)
  - 7- A (3.2cm)

## Unit 6. The Wolf and the Whistle



Academic Objective	Learn about loud and quiet sounds
Vocabulary	low, sound, growling, whistle, pocket, travel
STEAM Project	When to Whisper
	21st Century Skills: Critical Thinking, Communication, Collaboration

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: They can hear me if we are close together. They cannot hear me if we are far apart.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 6, 3, 4, 1, 5

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. whistle 2. pockets

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. b 2. a 3. c
- B. Look, read, and check. 1. a 2. b
- C. Number the pictures in the correct order. 5, 2, 3, 1, 4
- D. Look, match, and write. 1. growling 2. whistle 3. sound 4. pocket 5. low 6. travel

### [STEAM PROJECT]

- Have students answer the question and the chart.
- Have them share the results with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
- Step 1
- Tom's voice was too quiet for the situation.
- Step 2
- Small voice: in the movie theater, at nighttime, at the dinner table
- Big voice: on a noisy street, at a sports game, on the playground, at a theme park

## Unit 7. The Pine Cone's Secret



Academic Objective	Learn facts about pine cones
Vocabulary	pine cone, forest, decoration, dry, shrink, humid
STEAM Project	Pine Cone Snake
	21st Century Skills: Creativity, Collaboration, Communication

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I think the pine cone's secret is that it has something inside it.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 5, 1, 6, 3, 4

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. decoration 2. shrink

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. a 2. b 3. c
  - B. Look, read, and check. 1. a 2. b
  - C. Complete the chart.

The weather is dry.	→ The pine cone <u>opens</u> .
The weather is wet and <u>humid</u> .	→ The pine cone <u>closes</u> .
  - D. Unscramble and write.

1. forest	2. pine cone	3. decoration	4. dry	5. shrink	6. humid
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### [STEAM PROJECT]

- Have students make the pine cone snake.
- Have students answer question.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Sample Answer:

You could use pine cones to make a wreath or other animals, like a hedgehog. You could also paint them to look like flowers.
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## Unit 8. The Story of the Pine Cone



Academic Objective	Learn why pine cones open and close
Vocabulary	pine tree, be full of, look after, protect, warm, sunny
STEAM Project	Natural Inventions
	21st Century Skills: Creativity, Collaboration, Communication, Critical Thinking

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: No, I don't. / Yes, I do. Some pine cone seeds are long and round.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 3, 1, 5, 6, 4

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. sunny 2. look after



### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the reason pine cones open and close. Help them understand different plants that also open and close.
- Refer to Background Knowledge for more information about pine cones. Pick some plants that open and close, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. a 2. c 3. b
- B. Look, read, and check. 1. a 2. a
- C. Complete the chart.
- The pine cones on the tree open on a warm and sunny day. → The wind blows the seeds out of the pine cone. → The seeds travel far away. → A pine tree grows in the forest.
- D. Circle the correct word.  
1. pine tree 2. look after 3. warm 4. sunny 5. is full of 6. protects

### [STEAM PROJECT]

- Have students match the pictures and answer the questions.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
- Step 1
- flippers → duck feet
- bullet train nose → kingfisher beak
- diving wetsuit → shark skin
- Step 2
- An elephant's trunk inspired the invention of the hose.
- The hard shell of a tortoise inspired helmets for soldiers.
- The waterproof root of the lotus plant inspired the invention of waterproof materials.
- The smelly durian fruit inspired the invention of the stink bomb.
- Velcro was inspired by the burdock plant.
- Suction cups were inspired by the tentacles of an octopus.

## Unit 9. Roll a Coin



Academic Objective	Learn how vending machines work
Vocabulary	vending machine, lay, lean, slide, roll, iron
STEAM Project	Magnet Painting
	21st Century Skills: Critical Thinking, Collaboration

The worksheet consists of two pages. Page 42 (left) is titled 'ROLL A COIN' and includes a 'KEY WORDS' section with a listening exercise, a 'READING' section with a text about vending machines, and a 'WARM-UP' section with a question about the best thing to get from a vending machine. Page 43 (right) is titled 'CHECK YOUR UNDERSTANDING' and includes a multiple-choice section, a 'Look, read, and check' section with a matching exercise, and a 'PROJECT: MAGNET PAINTING' section with instructions and a list of materials.

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I got a bag of chips from the vending machine.

### [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 1, 3, 6, 4, 5

### [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

### [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. vending machine 2. rolls

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know how vending machines work. Help them understand only some metals attach to magnets.
- Refer to Background Knowledge for more materials that use magnets. Pick some materials using magnets that students have used before, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. b 2. a 3. c
- B. Look, read, and check. 1. a 2. a
- C. Number the pictures in the correct order. 2, 1, 4, 3
- D. Look, match, and write. 1. vending machine 2. lean 3. lay 4. roll 5. slide 6. iron

### [STEAM PROJECT]

- Have students follow the instructions and answer the questions.
- Have them share the results of step 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
- The paper clip moves when the magnet moves because it is made of iron, and it is stuck to the magnet.
- Instead of the paper clip, I can move an iron ring with a magnet.

# Unit 10. Toy Coins

S T E A M

Academic Objective	Learn what sticks to magnets
Vocabulary	test, toy, real, only, size, past
STEAM Project	Metal Cereal
	21st Century Skills: Critical Thinking

**10 TOY COINS**

**KEY WORDS**  
Listen, look, and repeat.

**READING**  
Listen and read.  
Brian and Jason went to a vending machine. Brian wanted to test something. He took out some toy coins. They were made of plastic. He put them in the machine. He put in some real coins, too. Only the toy coins came out. "The size and shape of the coins is the same. What happened?" Jason said, "I know why. Real coins are made of metals. The machine has magnets in it."

**WORK-UP**  
Do you have anything metal in your pencil case?

**READ I SEE!**  
1. Coins are separate and come inside vending machines with magnets. These magnets test and sort coins from our coin money.  
2. Paper money has magnets too in it. Vending machines know when paper money is real or fake.  
3. Other things have iron in them, too. Things that we eat, like fruit and cereal, have iron in them, too.

**CIRCLE THE KEY WORDS IN THE READING.**  
1. I'm not pretend, and I'm not a toy. What am I? ☐ real ☐ test  
2. When you are working by something and you don't stop, you work ☐ only ☐ past

**CHECK YOUR UNDERSTANDING**

**1. Choose the correct answers.**  
1. What is the main idea of the reading?  
a. Plastic things stick to magnets.  
b. Plastic and metal things are the same size.  
c. Plastic things don't stick to magnets.  
2. What happens to the real coins?  
a. They stick to the magnet.  
b. They move slowly past the magnet.  
c. They move fast past the magnet.  
3. What is NOT true?  
a. Vending machines use magnets.  
b. Metal coins are made only of plastic.  
c. Plastic things don't stick to a magnet.

**2. Look, read, and check.**  
1. ☐ a. He took some toy coins made of plastic.  
b. He took some toy coins made of paper.  
2. ☐ a. Metal coins move slowly past the magnet.  
b. Metal coins stick to the magnet.

**3. Complete the chart.**

Cause	Effect
The _____ coins are made of plastic.	They go quickly _____ the magnet.
The _____ coins are made of a little iron.	They go _____ past the magnet.

**PROJECT METAL CEREAL**  
Iron is a type of metal in lots of foods that we eat. It's good for us. With this experiment, we can see the iron in our foods. You will need:  
breakfast cereal, a zipper bag, water, a strong magnet.

**STEP 1**  
1. Put the cereal in the zipper bag. Close the bag.  
2. Crush the cereal into powder.  
3. Add water to the bag, and mix. Leave for one hour.  
4. Put the strong magnet against the bag. Move it around.

**STEP 2**  
Answer the questions.  
1. What can you see?  
A. The water / Iron sticks to the magnet. Cereal has iron in it because it's good for us. The only / even need to eat a very small amount. Other plants / metals that are good for our health include magnesium, zinc, and copper.

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Yes, I have a pencil sharpener, a ruler, and a paper clip.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 5, 6, 1, 3, 4

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. real 2. past

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the real coins have iron in them. Help them understand different materials with iron in them.
- Refer to Background Knowledge for more information about how vending machines distinguish coins and bills. Pick some materials that students have answered in Warm-Up, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. b 2. b 3. b
  - B. Look, read, and check. 1. a 2. a
  - C. Complete the chart.
    - The toy coins are made of plastic. → They go quickly past the magnet.
    - The real coins are made of a little iron. → They go slowly past the magnet.
  - D. Circle the correct word.
    - 1. blow 2. past 3. only 4. real 5. toys 6. test

### [STEAM PROJECT]

- Have students do the experiment.
- Have them share the results of the experiment with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Answer:
  - The iron sticks to the magnet. Cereal has iron in it because it is good for us. We only need to eat a very small amount. Other metals that are good for our health include magnesium, zinc, and copper.

Academic Objective	Learn what happens to water when it freezes
Vocabulary	test tube, halfway, mix, crushed, middle, stay
STEAM Project	Salted Ice
	21st Century Skills: Critical Thinking, Collaboration

[illegible]

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: The water inside the bottle turns to ice.

**[KEY WORDS]**

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 5, 1, 6, 3, 4

**[READING]**

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. middle 2. crushed

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know water changes its volume and shape when it freezes. Help them understand liquid changes the shape and volume when it becomes solid.
- Refer to Background Knowledge for more liquids and its characteristics when changing it to solid. Pick some liquids in home, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. b 2. c 3. a, b
  - B. Look, read, and check. 1. b 2. a
  - C. Complete the chart.
    - Fill a test tube halfway with water.
    - Check the height of the water in the test tube and weigh it.
    - Put the test tube in a cup with crushed ice.
    - Check the height of the ice in the test tube and weigh it again.
  - D. Circle the correct word.
    - 1. test tubes 2. halfway 3. middle 4. mix 5. stay 6. crushed

### [STEAM PROJECT]

- Have students answer the questions.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Answer:
  - Step 2
  - 2. The bowl with ice and salt
- Salt water has a lower freezing point, so it gets colder than the ice with the pure water.



# Unit 12. Ice Breaker

S T E A M

Academic Objective	Learn why ice takes up more space than water
Vocabulary	hot, open, freezer, surprised, glass, yogurt
STEAM Project	Oil and Ice
	21st Century Skills: Critical Thinking, Creativity

**Unit 12 ICE BREAKER**

**KEY WORDS**  
Look, listen, and repeat.  
• open  
• freezer  
• surprised  
• hot  
• yogurt

**READING**  
Listen and read.  
It was a hot day. Suse opened the freezer. She was surprised. "Mom, I put a water bottle in the freezer. Now it's broken!" Her mom came to see.  
"Why did it break?" Suse asked.  
"When water freezes, it gets bigger. The ice broke the glass bottle."  
"Oh! When I put my yogurt in the freezer, the plastic pack gets bigger. Is that why?"  
It's because the yogurt has water in it, isn't it?

**COMPREHENSION**  
1. What is the main idea of the reading?  
a. Water gets bigger when it freezes.  
b. Water shrinks when it freezes.  
c. Glass breaks in the freezer.  
2. Why was Suse surprised?  
a. The water turned to ice.  
b. The ice broke the glass bottle.  
c. The yogurt pack expanded.  
3. The yogurt has \_\_\_\_\_ in it.  
a. water b. ice c. gas

**CHECK YOUR UNDERSTANDING**  
1. Look, read, and check.  
a. Now the glass bottle is broken.  
b. Now the glass bottle is mixed.  
2. Complete the chart.  
The water in the glass bottle expands. The glass \_\_\_\_\_ breaks easily when it expands.  
The \_\_\_\_\_ in the plastic yogurt pack expands. It doesn't break. Plastic doesn't break easily when it \_\_\_\_\_.

**PROJECT OIL AND ICE**  
Let's see what happens when you freeze oil and water. You will need:  
STEP 1: Pour water and oil into the same cup.  
STEP 2: What do you see?  
A. Water and oil do not break / mix together. The water goes to the top / bottom of the cup. The oil goes to the top / bottom. This is because oil is denser / less dense than water.  
STEP 3: What happened?  
A. The water and oil froze. The ice / oil is at the top of the cup. This is because ice is less dense than water.  
STEP 4: Try this experiment with oil and different liquids like soda, milk, and juice. Does the same thing happen?

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I like regular yogurt more because it is easy to drink. / I like frozen yogurt more because it feels like eating ice cream.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 1, 3, 6, 4, 2, 5

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. freezer 2. glass

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. a 2. b 3. a
- B. Look, read, and check. 1. a 2. b
- C. Complete the chart.
- The water in the glass bottle expands. → The glass breaks. → Glass breaks easily when it expands.
- The water in the plastic yogurt pack expands. → The plastic pack expands. It doesn't break. → Plastic doesn't break easily when it expands.
- D. Look, match, and write.
- 1. glass 2. yogurt 3. freezer 4. open 5. hot 6. surprised

### [STEAM PROJECT]

- Have students do the experiment and circle the answers.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer and with reasons based on PROJECT REFERENCE.
- Answer:
- Step 1
- Water and oil do not mix together. The water goes to the bottom of the cup. The oil goes to the top. This is because oil is less dense than water.
- Step 2
- The water and oil froze. The ice is at the top of the cup. The oil is at the bottom of the cup. This is because ice is less dense than oil.
- Step 3
- The same thing happens with oil and different liquids like soda, milk and juice.

# Unit 13. Rock-breaking Rivers

S T E A M

Academic Objective	Learn how rocks turn into sand
Vocabulary	bottom, near, pile, bring, river, turn into
STEAM Project	Sand Art
	21st Century Skills: Creativity, Communication

**KEY WORDS**  
Look, listen, and repeat.  
a. bottom  
b. pile  
c. bring  
Listen and number the words.

**WARM-UP**  
What do you like best about going to the beach?

**READING**  
Listen and read.  
At the top of the mountain, there are big rocks.  
At the bottom, there are smaller rocks.  
Near the sea, there is sand.  
What makes this happen? Let's find out.

**CHECK YOUR UNDERSTANDING**  
1. Choose the correct answers.  
2. Why is there sand by the sea?  
3. What is NOT true about rivers?  
4. Look, read, and check.

**PROJECT: SAND ART**  
Let's make a picture out of sand. You will need:  
STEP 1 Sketch your drawing here first.  
STEP 2 a. Set up a bowl of sand and a bottle of glue next to a piece of paper.  
b. Put glue on the paper where you want the sand to go.  
c. Pour the sand on the glue. Make sand art.  
STEP 3 Show your drawing with the class.

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I like playing in the sand the best.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 6, 1, 2, 3, 4, 5

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)
- Scan the QR code to view the experiment.

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. near 2. bring

### [AHA! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the rivers break up rocks and turn them into sand. Help them understand that it takes long time for the water to break a large rock into sand.
- Refer to Background Knowledge for more explanation about how rocks become soil. Pick some activities that students have answered in Warm-Up, and briefly discuss it as time allows.

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. b 2. a 3. a
- B. Look, read, and check. 1. b 2. a
- C. Number the pictures in the correct order. 2, 4, 1, 3
- D. Unscramble and write. 1. turn into 2. bottom 3. near 4. pile 5. bring 6. river

### [STEAM PROJECT]

- Have students make a sand art.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.

# Unit 14. Adventures of Spring Water

S T E A M

Academic Objective	Learn how water changes the land around it
Vocabulary	spring water, flow, begin, trip, through, ocean
STEAM Project	Bodies of Water
	21st Century Skills: Critical Thinking, Communication

## 14 ADVENTURES OF SPRING WATER

**KEY WORDS**  
Look, listen, and repeat.

1. **flow**  
a. spring water  
b. flow  
c. begin  
d. trip  
e. through  
f. ocean

2. **listen and number the words.**

**READING**  
Listen and read.

**WARM-UP**  
What does spring water come from?

Now she was a big river. She flowed slowly. She kept going. She flowed to the ocean. She was so happy! She traveled around the world.

**Circle the key words in the reading.**

**Read and choose.**  
1. I am water that comes from the ground. I am good to drink. ☐ trip ☐ spring water  
2. When you go into something and come out the other side, you go ☐ through ☐ flow

**CHECK YOUR UNDERSTANDING**

**Choose the correct answers.**  
1. What is the main idea of the reading?  
a. How water changes the land around it  
b. Where spring water comes from  
c. All water in the sea comes from the sky

2. How is soil made?  
a. It is made with seawater.  
b. Rivers break rocks and turn them into soil.  
c. Rivers turn sand into soil.

3. Where did the river **begin** go?  
a. Down a mountain. b. Into the sea c. Through a city

**Look, read, and check.**  
1. ☐ a. The river flowed down a mountain.  
b. The river flowed up a mountain.  
2. ☐ a. The river broke rocks and made soil.  
b. The river broke soil and made rocks.

**Complete the chart.**  
Spring water  out of the ground.  
She flowed past a big rock.  
She flowed down the   
She broke the  and made   
She kept going. She flowed to the

**Look at the word and circle the definition.**

1. **flow**  
a. when a liquid moves  
b. to go into and out of something

2. **spring water**  
a. water that comes from the sky  
b. water that comes from the ground

3. **begin**  
a. to finish  
b. to start

4. **through**  
a. to move away from something  
b. to go into and out of something

5. **trip**  
a. a house  
b. a journey or vacation

6. **ocean**  
a. the sea  
b. a small river

**PROJECT: BODIES OF WATER**  
Rivers, oceans, and springs are three bodies of water. Let's look at these and some others.

**STEP 1** How look and label the pictures.

**STEP 2** How many of these bodies of water have you seen?

**STEP 3** How do you think they are formed? Discuss as a class.

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Spring water comes from water in the ground.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 1, 3, 6, 5, 4

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. spring water 2. through

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
- A. Choose the correct answers. 1. a 2. b 3. c
- B. Look, read, and check. 1. a 2. a
- C. Complete the chart.
- The spring water flowed out of the ground. → She flowed past a big rock. → She flowed down the mountain. → She broke the rocks and made soil. → She kept going. She flowed to the ocean.
- D. Look at the word and circle the definition.  
1. a 2. b 3. b 4. b 5. b 6. a

### [STEAM PROJECT]

- Have students label the pictures.
- Have them share the results of steps 1 to 3 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer:
- Step 1
- top row: spring water, waterfall
- bottom row: river, ocean, lake
- Step 2
- I have seen all five of them.
- Step 3
- I think spring water is formed by water going into the ground and forming a lake or river in the ground, and then it comes back out of the ground in another spot.
- I think waterfalls are formed when water goes over rocks and drops down to a lower spot.
- I think rivers are formed by many smaller streams flowing together into one large river.
- I think oceans have always been on Earth, but they are supplied with water from rivers and rain.
- I think lakes are formed by glaciers and other thick snow packs and rivers.



# Unit 15. Building Worlds



Academic Objective	Learn about virtual reality and how it is made
Vocabulary	headset, forward, backward, creator, film, special
STEAM Project	Making a Virtual World
	21st Century Skills: Critical Thinking, Collaboration, Communication

**Unit 15 BUILDING WORLDS**

**KEY WORDS**  
Look, listen, and repeat.

**WARM-UP**  
Do you want to use a VR headset? Why or why not?

**READING**  
Listen and read.  
Do you know what VR is? VR means virtual reality. You wear a headset. You turn it on. You enter a new world! Walk in Paris. Walk forward and backward. Walk on the moon! Look up and down. You can do anything you want. VR feels real. But it's not. Virtual world creators make these worlds. They film things around us. They use a special camera.

**CHECK YOUR UNDERSTANDING**

1. Choose the correct answers.  
1. What is the main idea of the reading?  
a. How to turn on a VR headset  
b. What VR is and who makes it  
c. How VR headsets are made  
2. What place does the reading NOT mention?  
a. The moon b. The ocean c. Paris  
3. What THREE things do virtual world creators use to make a VR video?  
a. A special camera  
b. A special dress  
c. A special computer program

2. Look, read, and check.  
1. ☐ a. VR feels real, but it's not real.  
☐ b. VR feels real, and it is real.  
2. ☐ a. They film with a normal camera.  
☐ b. They film with a special camera.

3. Complete the chart.

Virtual Reality	Real World
We wear a VR headset to enter new worlds.	
We can look up and down, and walk and...	
It feels... but it's not.	

**PROJECT: MAKING A VIRTUAL WORLD**  
Virtual reality can take you to many places, real or imagined. What virtual world would you make?  
STEP 1: Where we can go: \_\_\_\_\_  
What you can do: \_\_\_\_\_  
What you can see: \_\_\_\_\_  
STEP 2: Share your video idea with the class.

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Yes, I do. I think it would be fun to experience things that I might not get to see in real life.

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 6, 1, 3, 4, 5

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. special 2. creator



### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. b 2. b 3. a, c
  - B. Look, read, and check. 1. a 2. b
  - C. Complete the chart.
    - We wear a VR headset to enter new worlds.
    - We can look up and down, and walk forward and backward.
    - It feels real, but it's not.
  - D. Circle the correct word.
    - 1. special 2. forward 3. headset 4. backward 5. filmed 6. creator

### [STEAM PROJECT]

- Have students answer the questions.
- Have them share the results of their video idea with their partner or group. Ask different pairs of groups to represent their results to the class.
- Sample Answer:
  - Where we can go: deep into the ocean
  - What we can see: fish, sharks, and other animals, shipwrecks, caves
  - What you can do: explore the deepest parts of the ocean

# Unit 16. Flower Power

Academic Objective	Learn about plants and botanists
Vocabulary	know, world, climb, trouble, medicine, fun
STEAM Project	Be a Botanist
	21st Century Skills: Creativity, Critical Thinking, Communication

**Unit 16. Flower Power**

**KEY WORDS**  
Look, listen, and repeat.

- world
- climb
- trouble
- medicine

**READING**  
Listen and read.

Do you like flowers, trees, and plants?  
Why not be a botanist?  
Botanists work with plants.  
They look at plants all day.  
They know all about plants.  
Some botanists travel all over the world.  
They climb mountains. They find new plants.  
They help plants that are in trouble.  
Botanists see how plants grow.

**WARM-UP**  
What flowers are you seeing?

They can grow plants, too.  
Some botanists even make medicines with plants.  
Doesn't it sound fun?

**CHECK YOUR UNDERSTANDING**

1. Choose the correct answers.

- What is the main idea of the reading?  
a. What botanists are and what they do  
b. How a plant grows from a seed  
c. Why botanists are needed
- What do botanists do all day?  
a. Climb mountains b. Look at plants c. Travel all over the world
- What things can botanists do with plants?  
a. Make medicines with them b. Break them c. Grow them

2. Look, read, and check.

- a. They help plants that are in trouble.  
b. They help plants that are upset.
- a. Some botanists travel all over the world.  
b. Some botanists travel only one country.

3. Complete the chart.

grow	know	medicines	new	trouble
all over the world and find	can	about plants	all	
from plants	help plants that are in			

**PROJECT BE A BOTANIST**  
Imagine you are a botanist. You traveled around the world and discovered a new plant.

**STEP 1** First, draw a picture of your new plant.

**STEP 2** Answer the questions.

- Where did you find your plant?
- What is special about it?
- Does it have any trouble? What is the trouble?

**STEP 3** How does your plant with the class. Whose plant is the most unique?

## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Rose, tulip, carnation, daffodil, petunia, pansy, lily, iris

## [KEY WORDS]

- Have students look at the picture and play the audio. Have them repeat each word while looking at the picture to match the photograph and sound. Give simple explanations and examples when necessary.
- After practicing each word, play the audio again.
- Give students time to complete the exercise. Then have them check their answers in pairs or as a class.
- Answer: 2, 1, 3, 6, 4, 5

## [READING]

- Play the audio once. After playing the audio, do choral reading and ask the students to repeat after you. Ask the students to point at each word as they read it.
- If necessary, have them read the text one more time by doing popcorn reading. (Have students take turns reading one line from the story. After they read one line, they call on another classmate to read the next line.)

## [SHORT ACTIVITIES]

- Have students circle the key words to help them understand their meaning.
- Have them individually answer question D. Check the answer as a class and give a simple explanation if necessary.
- Answer: 1. medicine 2. know

### [CHECK YOUR UNDERSTANDING]

- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. For purpose, inference, or topic questions, elicit reasons why distractors are incorrect choices (ex. not in text, inaccurate, minor detail, etc.).
- Answer:
  - A. Choose the correct answers. 1. a 2. b 3. a, c
  - B. Look, read, and check. 1. a 2. a
  - C. Complete the chart.
    - travel all over the world and find new plants
    - can grow plants
    - know all about plants
    - make medicines from plants
    - help plants that are in trouble
  - D. Look at the word and circle the definition. 1. a 2. a 3. b 4. a 5. b 6. b

### [STEAM PROJECT]

- Have students answer the questions.
- Have them share the results of steps 1 and 2 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Sample Answer:
  - Step 2
  - 1. It grows in the mountains.
  - 2. It grows without help from people. It can be used to dye clothes.
  - 3. Yes. The fruit is blue and shaped like stars. It tastes like a mix of strawberries and bananas.