

# Unit 1. How Sounds Move

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Academic Objective	Learn about how we hear sounds
Vocabulary	reach, transfer, siren, matter, waterproof, spot
STEAM Project	How Sounds Transfer Through Solids
	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, sounds can move through liquids and solids, such as water and metal.

## [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: 4, 1, 5, 2, 6, 3

## [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. c 2. a

### [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. Check true (T) or false (F) for each sentence. 1. T 2. F
- C. Number the pictures in the correct order. 2, 1, 4, 3
- D. Choose the correct word. 1. b 2. a 3. a 4. a

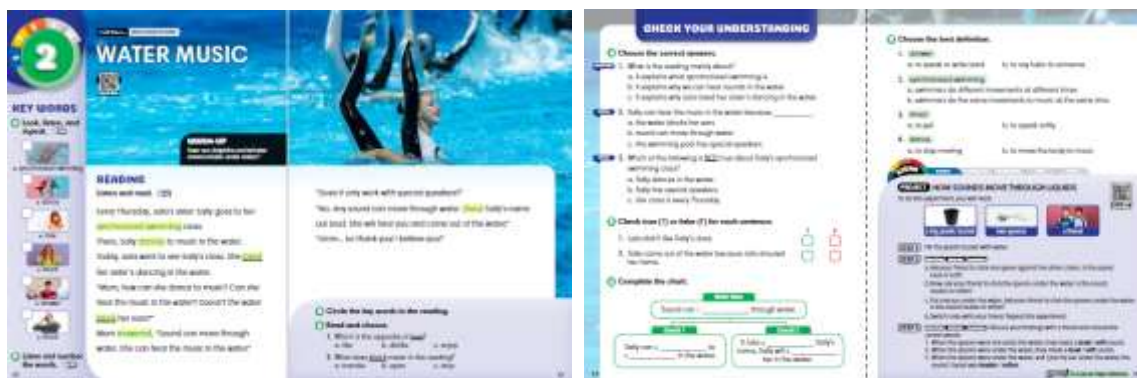
### [STEAM PROJECT]

- Have students do the experiment and answer the question.
- Have them share the answers with their partner or group.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer with reasons based on PROJECT REFERENCE.
- Answer: When the spoon hit the wall, the sound transferred from the spoon through the string to my ears.

## Unit 2. Water Music

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Academic Objective	Learn about sounds in water
Vocabulary	synchronized swimming, dance, love, block, answer, shout
STEAM Project	How Sounds Move Through Liquids
	21st Century Skills: Critical Thinking, Collaboration, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: They communicate by making noises that travel through the water.

### [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: 3, 6, 2, 1, 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. b 2. c

### [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. Check true (T) or false (F) for each sentence. 1. F 2. F
- C. Complete the chart. 1. transfer 2. dance 3. music 4. shouts 5. hear
- D. Choose the best definition. 1. a 2. b 3. a 4. b

### [STEAM PROJECT]

- Have students do the experiment and answer the question.
- Have them share the answers with their partner or group. Ask different pairs of groups to represent their answers to the class.
- Refer to PROJECT REFERENCE at the end of the book for further explanation.
- Give the answer with reasons based on PROJECT REFERENCE.
- Answer: 1. loud 2. soft 3. louder

## Unit 3. Mirror Vision

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Academic Objective	Learn about the way things look in a mirror
Vocabulary	mirror, dentist, same, raise, ambulance, driver
STEAM Project	Reflected Writing
	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: My right hand is on the right side of the mirror, but it looks like it is my left hand on my reflection looking back at me.

### [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: 5, 1, 4, 2, 3, 6

### [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. c 2. b

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know mirrors and reflected image on it.
- Refer to Background Knowledge for more information about when light hits something. Based on the answer in Warm-Up, explain what happens when the light is reflected on the mirror.

### [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. c 3. b
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart. 1. same 2. bottom 3. wrong way around
- D. Choose the best definition. 1. c 2. b 3. a 4. a

### [STEAM PROJECT]

- Have students follow the steps to do the project.
- 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: When I write a word and I hold it in front of a mirror, I can read it backward. When I write it backward and I hold it in front of the mirror, I can read it the right way around.

## Unit 4. Writing Backward

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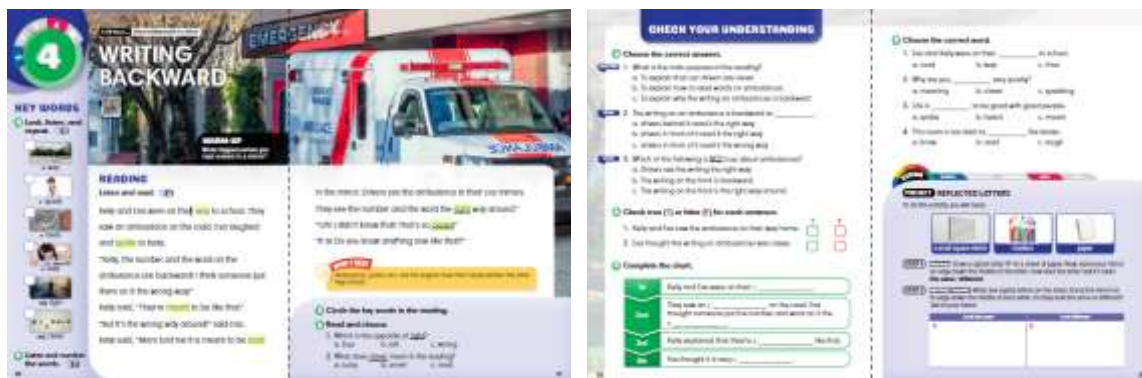
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Academic Objective	Learn about reading words in a mirror
Vocabulary	way, speak, mean, read, right, clever
STEAM Project	Reflected Letters
	21st Century Skills: Critical Thinking, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: The word appears backward in the mirror.

### [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, 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. c 2. b



### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know why words are written backward on ambulances, police cars, and fire engines.
- Refer to Background Knowledge for more about how things are reflected on mirrors. Based on the answer in Warm-Up, explain what happens when the light hits the mirror.

### [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. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart.  
1. way to school 2. ambulance 3. wrong way 4. meant to be 5. clever
- D. Choose the correct word. 1. b 2. c 3. c 4. b

### [STEAM PROJECT]

- Have students follow the steps and figure out the answer.
- 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:  
Step 1: It looks the same.  
Step 2  
Look the same: A, H, I, M, O, T, U, V, W, X, Y  
Look different: B, C, D, E, F, G, J, K, L, N, P, Q, R, S, Z



## Unit 5. Sedimentary Rocks

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Academic Objective	Learn about how sand becomes a rock
Vocabulary	finger, sedimentary, model, instead, mixture, minimize
STEAM Project	Make Candy Sedimentary Rocks
	21st Century Skills: Critical Thinking, Creativity, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: A rock looks like a hard, solid mass.

### [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, 5, 2, 6, 4, 3

### [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. c 2. b

### [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. a 3. b
- B. Check true (T) or false (F) for each sentence. 1. T 2. F
- C. Number the pictures in the correct order. 2, 4, 1, 3
- D. Choose the correct word. 1. a 2. c 3. b 4. b

### [STEAM PROJECT]

- Have students make a candy sedimentary rock. Have them draw how their rocks look like after making it.
- Have them share the drawings of the activity 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.
- Explain how real sedimentary rocks are formed based on PROJECT REFERENCE.

## Unit 6. Making Rocks From Rocks

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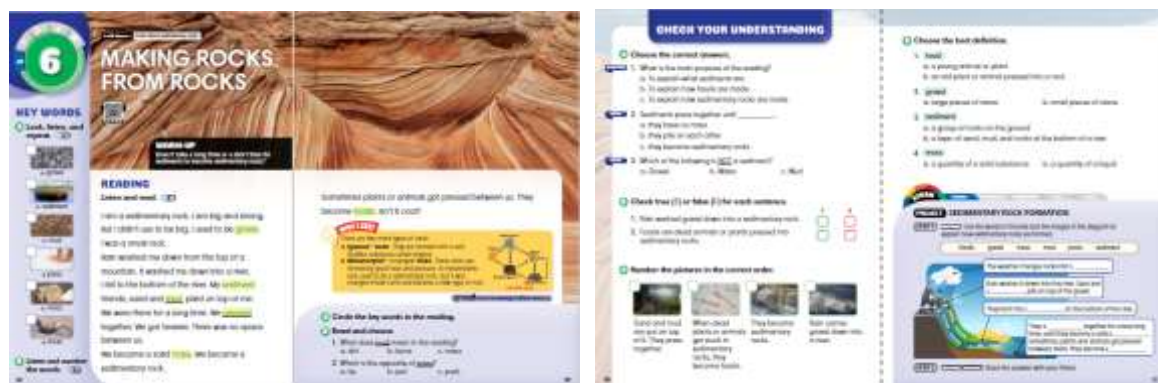
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Academic Objective	Learn about sedimentary rocks
Vocabulary	gravel, sediment, mud, press, mass, fossil
STEAM Project	Sedimentary Rock Formation
	21st Century Skills: Critical Thinking, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: It takes a long time for sediments to become sedimentary rocks.

### [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: 4, 6, 1, 2, 5, 3

### [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. a 2. b

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read more information about rocks besides sedimentary rocks. Help them understand the rock formation.
- Refer to Background Knowledge for more information about rocks. Discuss the students' answer in Warm-Up, and explain how they are formed.
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### [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. c 3. b
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Number the pictures in the correct order. 2, 4, 3, 1
- D. Circle the best definition. 1. b 2. b 3. b 4. a

### [STEAM PROJECT]

- Have students complete the diagram.
- Have them share the answers of step 1 with their partner or group. Ask different pairs of groups to represent their results to the class.
- Answer: 1. gravel 2. mud 3. sediment 4. press 5. mass 6 fossils

## Unit 7. Fun Fossils

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Academic Objective	Learn about fossils
Vocabulary	most, bone, die, shell, clay, firm
STEAM Project	Find Ten Rock And Fossil Words
	21st Century Skills: Critical Thinking, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: Footprints are a type of fossil called “trace fossils.” Trace fossils provide information about the plant or animal that made the mark.

### [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: 4, 1, 5, 2, 3, 6

### [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. c 2. b

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read about the largest fossil. Help them understand the features of fossils.
- Refer to Background Knowledge for more kind of fossils. Based on the answers in Warm-Up, explain the features of various fossils.

### [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. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Number the pictures in the correct order. 3, 1, 4, 2
- D. Choose the correct word. 1. b 2. c 3. a 4. a

### [STEAM PROJECT]

- Have students find words from the chart. Have them distinguish the words between noun and adjective.
- Have them share the results of step 2 with their partner or group.

• Answer:

• Step 1



• Step 2

Nouns: shell, clay, gravel, bone, mixture, sediment, fossil, mud

Adjectives: firm, sedimentary



## Unit 8. Tony and the Fossil

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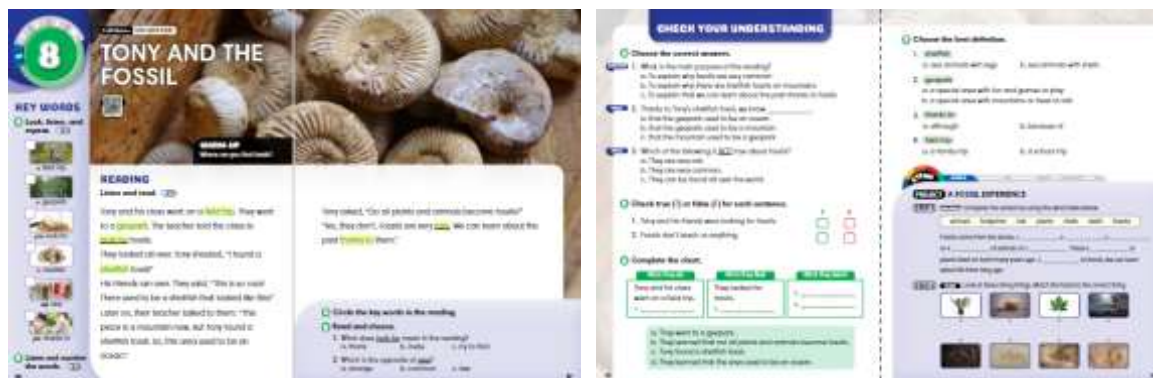
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Academic Objective	Learn more about fossils
Vocabulary	field trip, geopark, look for, shellfish, rare, thanks to
STEAM Project	A Fossil Experience
	21st Century Skills: Critical Thinking, Creativity



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: You can find fossils in rocks.

### [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: 3, 5, 6, 4, 2, 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.)

### [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. c 2. b



### [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. a 3. b
- B. Check true (T) or false (F) for each sentence. 1. T 2. F
- C. Complete the chart. 1. a 2. c 3. d 4. b
- D. Choose the best definition. 1. b 2. b 3. b 4. b

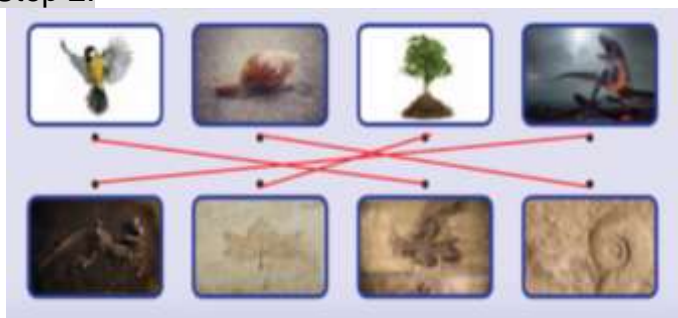
### [STEAM PROJECT]

- Have students complete the paragraph about fossils.
- Have them share the answers of the blanks with their partner or group. Ask different pairs of groups to represent their answers to the class.

Answer:

Step 1: 1. shells 2. teeth 3. footprints 4. hair 5. plants 6. animals 7. Thanks

Step 2:



## Unit 9. Bouncing Sounds

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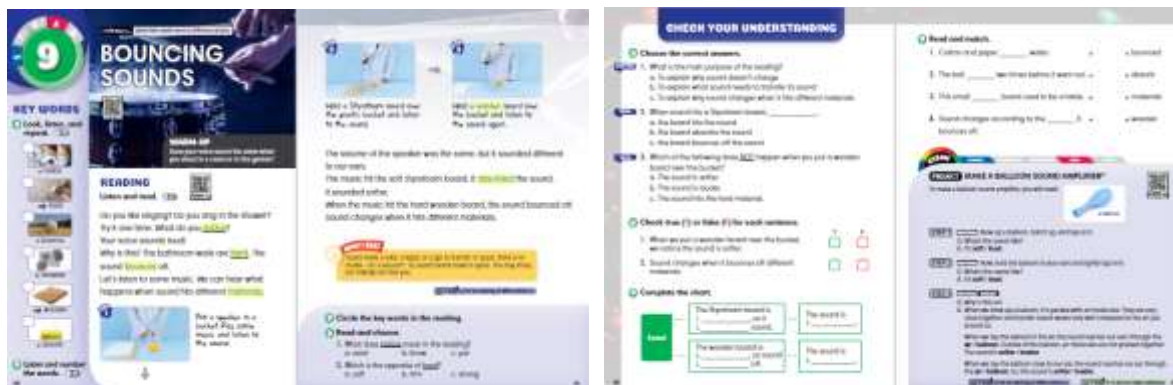
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Academic Objective	Learn about how sound reacts to different surfaces
Vocabulary	notice, hard, bounce, material, wooden, absorb
STEAM Project	Make a Balloon Sound Amplifier
	21st Century Skills: Critical Thinking, Collaboration



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: No, it doesn't. My voice sounds different when I shout in different places.

### [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, 4, 1, 5, 6, 3

### [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. b 2. a

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know what sounds need to transfer. Help them understand about sound and matter.
- Refer to Background Knowledge for more information about sound and echo. Based on the answers in Warm-Up, explain why it sounds different in a room and in the garden.

### [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. a
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart.  
1. soft 2. absorbs 3. softer 4. hard 5. bounces 6. louder
- D. Read and match.  
1. absorb 2. bounced 3. wooden 4. materials

### [STEAM PROJECT]

- Have students make a balloon sound amplifier.
- Have them share the results of steps 1, 2, and 3 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 with reasons based on PROJECT REFERENCE.
- Answer:  
Step 1: It's soft.  
Step 2: It's loud.  
Step 3: air, softer, balloon, louder

# Unit 10. Mountain Echo

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Academic Objective	Learn what an echo is
Vocabulary	excited, breeze, amazing, worth, difficult, echo
STEAM Project	How Do Echoes Work?
	21st Century Skills: Critical Thinking, Collaboration, Communication



## [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: My voice travels far. I can hear my voice echo.

## [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, 5, 4, 3, 6, 2

## [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. c 2. b

### [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. Check true (T) or false (F) for each sentence. 1. T 2. F
- C. Number the pictures in the correct order. 4, 2, 3, 1
- D. Choose the best definition. 1. b 2. a 3. a 4. b

### [STEAM PROJECT]

- Have students do the experiment about how echoes work.
- 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 with reasons based on PROJECT REFERENCE.
- Answer:
- The sound waves travel through the tube. They hit the pie pan and bounce off. They travel back through the other tube. You hear the echo.

# Unit 11. Sort with Sieves

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Academic Objective	Learn about sorting things of different sizes
Vocabulary	pure, substance, soybean, separate, sort, sieve
STEAM Project	How to Separate Mixtures
	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: To make a pasta salad, I need noodles, tomatoes, broccoli, cheese, bacon, and salad dressing.

## [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: 4, 5, 1, 2, 6, 3

## [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. a 2. c

### [CHECK YOUR UNDERSTANDING]

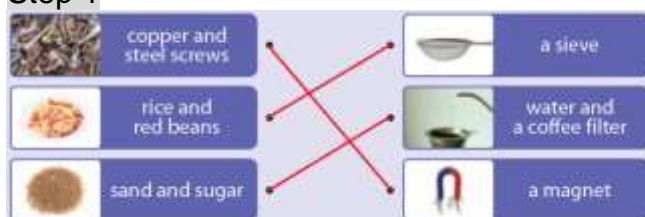
- Give students 5-10 minutes to write their answers. Remind them to not refer to the reading or previous pages to check their understanding.
- Elicit answers from students. If there are any disagreements between students on the answers, have them cite the lines in the text that support their choices. 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. a
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart. 1. sort 2. size 3. large 4. big 5. small 6. rice
- D. Choose the correct word. 1. b 2. b 3. c 4. a

### [STEAM PROJECT]

- Have students answer the questions and fill in the blanks.
- Have them share the results of problems 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.

• Answer:

• Step 1



• Step 2

- 1. magnet 2. stick 3. sieve 4. separate 5. red beans 6. mixture 7. sugar



## Unit 12. The Incredible Beach-Cleaning Machine

S T E A M

Academic Objective	Learn more about ways we can sort things
Vocabulary	clean up, mess, strange, pick up, waste, take away
STEAM Project	Sort Your Waste 21st Century Skills: Critical Thinking, Collaboration, Communication

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: You can separate sand from water by draining the water through a coffee filter or through evaporation.

### [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, 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. b 2. b

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know how to separate and recycle things. Help them understand why aluminum shouldn't be put in the regular waste.
- Refer to Background Knowledge for more information about aluminum. Based on answers in Warm-up, share more ways of separating things.

### [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. a 3. b
- B. Check true (T) or false (F) for each sentence. 1. T 2. T
- C. Complete the chart.  
1. Sorts 2. waste 3. picks up 4. stays 5. falls
- D. Choose the best definition. 1. b 2. b 3. a 4. b

### [STEAM PROJECT]

- Have students answer the question and sort the waste.
- 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. yogurt cups 2. plastic bottle 3. soda can 4. chicken bones 5. jam jar 6. milk carton  
7. apple 8. food can
- 
- Step 2  
Garbage: chicken bones, apple  
Plastic and Paper: yogurt cups, plastic bottle, milk carton  
Metal: food can, soda can  
Glass: jam jar  
Placed in two bins: jam jar (glass or plastic, depending on what it is made of)

## Unit 13. Drops of Water

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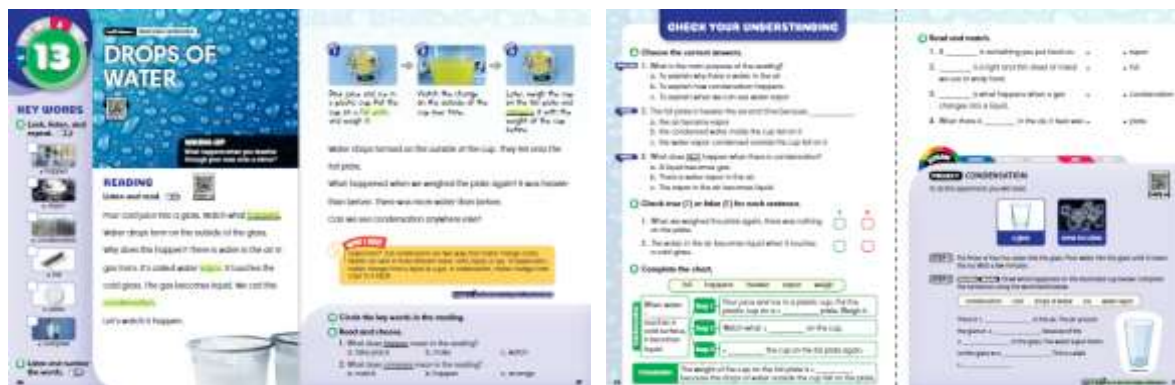
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Academic Objective	Learn about water condensation
Vocabulary	happen, vapor, condensation, foil, plate, compare
STEAM Project	Condensation
	21st Century Skills: Critical Thinking, Collaboration



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: The mirror fogs up.

### [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, 6, 4, 3, 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.)
- 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. a 2. a

### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know evaporation and condensation. Help them understand water's three different states, solid, liquid, or gas.
- Refer to Background Knowledge for information about evaporation and condensation. Based on answers in Warm-up, share more examples of evaporation and condensation in daily life.

### [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. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart. 1. vapor 2. foil 3. happens 4. Weigh 5. heavier
- D. Read and match. 1. plate 2. Foil 3. Condensation 4. vapor
- 

### [STEAM PROJECT]

- Have them do the experiment.
- Have students fill out each blank and draw the result on the illustrated cup.
- Have them share the answers of step 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 with reasons based on PROJECT REFERENCE.
- Answer:
- 1. water vapor 2. cool 3. ice 4. drops of water 5. condensation

## Unit 14. Hot Water, Cold Lid

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Academic Objective	Learn more about condensation
Vocabulary	by oneself, careful, suddenly, lid, normal, boiling
STEAM Project	Condensation in Nature 21st Century Skills: Critical Thinking

The image shows three pages from a student workbook. The first page is titled '14 HOT WATER, COLD LID' and includes a 'KEY WORDS' section with words like 'boil', 'lid', 'steam', and 'condensation'. It also has a 'READING' section with a story about a boy who accidentally drops a hot lid into a pot of boiling water. The second page is titled 'CHECK YOUR UNDERSTANDING' and contains several multiple-choice and true/false questions about the story. The third page is titled 'CONDENSATION IN NATURE' and features a diagram of a water cycle with labels for 'evaporation', 'condensation', 'precipitation', and 'collection'. It also includes a matching exercise.

### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: They fog up, and I can't see through them. / They become covered with condensation so that I can't see.

### [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: 3, 4, 6, 1, 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. c 2. a

### [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. c 3. b
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart.
- Who: Tony and his mom
- What: It is about Tony cooking ramen and seeing the boiling water form condensation on the inside of the lid of the pot.
- Where: They are in the kitchen.
- When: Before he put the powder in the pot.
- Why: The water vapor from the boiling water hit the cold lid and cooled, forming the water drops.
- D. Choose the correct word. 1. c 2. b 3. c 4. b

### [STEAM PROJECT]

- Have students complete the diagram.
- Have them share the answers 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. cold air 2. rain 3. clouds 4. sun 5. condensation 6. vapor 7. liquid water
- Step 2
- 1. liquid water 2. vapor 3. condensation 4. clouds 5. rain



## Unit 15. Protecting the Environment

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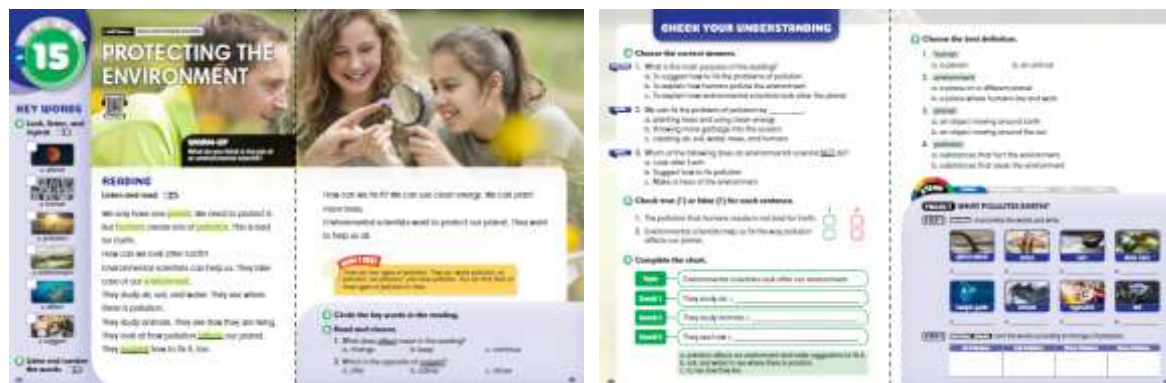
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Academic Objective	Learn about environmental scientists
Vocabulary	planet, human, pollution, environment, affect, suggest
STEAM Project	What Pollutes Earth? 21st Century Skills: Critical Thinking, Collaboration



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I think an environmental scientist studies ways to help and improve the environment.

### [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, 5, 3, 6, 4, 2

### [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. a 2. c



### [WOW! I SEE!]

- Direct students' attention for further detail.
- Have them read the context to know the types of pollution. Help them understand differences between each type.
- Refer to Background Knowledge for more information about environmental scientist. Based on the answer in Warm-Up, explain what environmental scientists do.

### [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. a 3. c
- B. Check true (T) or false (F) for each sentence. 1. F 2. T
- C. Complete the chart. 1. b 2. c 3. a
- D. Choose the best definition. 1. a 2. b 3. b 4. a

### [STEAM PROJECT]

- Have students answer the questions and sort the types of pollution.
- Have them share the answers 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. liquid waste 2. noise 3. cars 4. steel cans  
5. plastic bags 6. smoke 7. shouting 8. foil
- Step 2
- Air Pollution: cars, smoke
- Soil Pollution: steel cans, foil
- Water Pollution: liquid waste, plastic bags
- Noise Pollution: noise, shouting

## Unit 16. Geologists Study Earth

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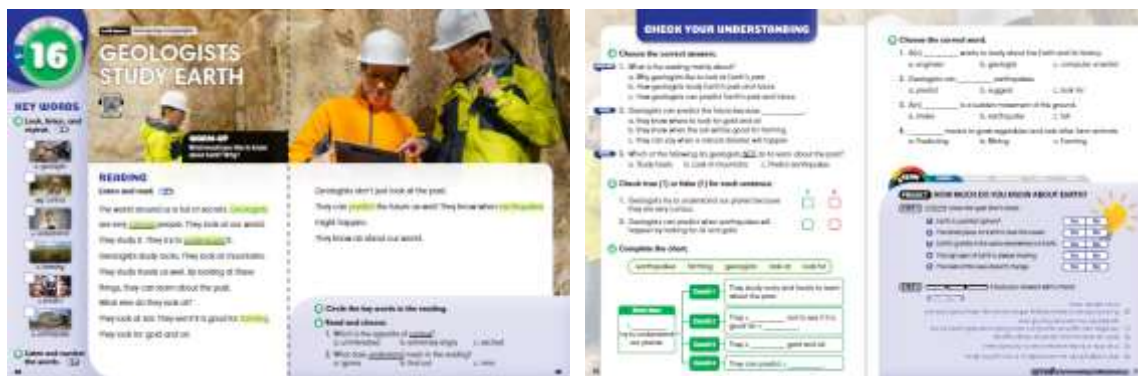
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Academic Objective	Learn about geology and geologists
Vocabulary	geologist, curious, understand, farming, predict, earthquake
STEAM Project	How Much Do You Know About Earth? 21st Century Skills: Critical Thinking, Collaboration, Communication



### [WARM-UP]

- Discuss the warm-up question to see how much background information students possess about the topic.
- Sample Answer: I would like to know why Earth is the only planet we know of with so much life on it. I think it is interesting that our planet is so special.

### [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, 5, 2, 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. a 2. b

### [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. c
- B. Check true (T) or false (F) for each sentence. 1. T 2. F
- C. Complete the chart.  
1. Geologists 2. look at 3. farming 4. look for 5. earthquakes
- D. Choose the correct word. 1. b 2. a 3. b 4. c

### [STEAM PROJECT]

- Have students solve the quiz.
- Have them share the answers of step 1 with their partner or group. Share the facts about earth with the class.
- Answer: 1. No 2. Yes 3. No 4. Yes 5. No