

Class

Name

Unit 1 Light Travels

Listen to the audio and fill in the blanks.

Track 03



Light travels in a (1)_____ line. How do we know this? Turn on a
(2)_____. The light moves away from the flashlight. It
(3)_____ in a straight line.

When light hits a (4)_____, what happens to it?

Does it keep going? Does it (5)_____ direction?

Let's find out.

You need a mirror, a flashlight, and a (6)_____.

Step 1. Put the target on the (7)_____ and shine the flashlight at it.

Step 2. Use the mirror to change the (8)_____ of the light. Make
the light go (9)_____ the target.

When light (10)_____ a mirror, it changes direction. This is called
(11)_____.

We can change the direction of the light by moving the mirror.

Look (12)_____ you.

A bus driver uses her (13)_____ mirror to see who is getting off the
bus. She doesn't need to (14)_____ her head.

Where else can you see reflections (15)_____ day?

Class

Name

Unit 2 The Bus Driver

Listen to the audio and fill in the blanks.

Track 06



Tom and Jenny (1)_____ the bus. It was 7 p.m. and the bus was
(2)_____ of people.

Tom said, "Wow, this bus is (3)_____!"

"Yes, it is," said Jenny.

After a (4)_____, Tom said, "Jenny, do you think we can
(5)_____? I don't think the bus driver can see us! There're too
many (6)_____!"

Then Jenny said, "Don't (7)_____. The bus driver can see
everything. There's a (8)_____ mirror at the front of the bus. The
(9)_____ can look in it and open the (10)_____."

Tom said, "I don't (11)_____ why I was worried. Look! This is our
(12)_____."

Class

Name

Unit 3 The Water Cycle

Listen to the audio and fill in the blanks.

Track 09



Water is always (1)_____. It is always moving.
But the total (2)_____ of water on Earth never changes.
Rain (3)_____ from a cloud into a river. It (4)_____ into
the air. It condenses into a (5)_____. Rain falls from a cloud again.
This is the (6)_____.
Let's watch and see.

Step 1. Put a (7)_____ plastic cup filled with ice in a zipper bag.
(8)_____ the bag and weigh it. Put the bag next to a
(9)_____ window.
Step 2. Day 1: The ice in the cup melts, and water drops from the cup into the
(10)_____.
Step 3. Days 2 and 3: The amount of water inside the cup decreases, and the
amount of water outside the cup (11)_____.
Step 4. Weigh the bag again. What do you (12)_____?

The water left the cup. But it didn't (13)_____ the bag. The weight
didn't change.

Why? Because the total amount of water in the bag did not change.

The (14)_____ amount of water on Earth doesn't change, either.
Water can be rain. It can be ice or a (15)_____. But it's always the
same water.

Class

Name

Unit 4 Disappeared Water

Listen to the audio and fill in the blanks.

Track 12



Kate left a glass of water by the (1)_____.

She went on vacation and (2)_____ all about it.

One (3)_____ later, she came home and looked at the

(4)_____ again. (5)_____ the water was gone!

"Mom! No one was home, but my water is (6)_____! Who drank it?"

"Nobody drank it, Kate. The water (7)_____. It became water

vapor in the air. Do you see the clouds in the (8)_____? Water

vapor goes up (9)_____ in the sky and becomes a cloud. Then it

(10)_____ water again."

Kate said, "Then it falls from the sky as (11)_____!"

"That's (12)_____! The water from your cup evaporated and

(13)_____ a cloud."

"Wow, so the water in my (14)_____ will be rain?"

"Yes, that's right."

"Water is so (15)_____!"

Class

Name

Unit 5 A Raft of Straws

Listen to the audio and fill in the blanks.

Track 15



A straw (1)_____ in water, but a coin sinks.

How can we make a (2)_____ float in water?

We can put it on a straw raft.

How can we make this (3)_____?

Let's try to design it. We can see who makes the (4)_____ raft.

Step 1. Draw a (5)_____ of your raft on paper.

Step 2. Make the raft using five straws, (6)_____, and a glue gun.

Step 3. (7)_____ coins, one at a time, on the raft. See how many coins make the raft (8)_____.

Step 4. Design a new, (9)_____ raft. Whose raft can hold the most (10)_____?

Buoyancy is a force in water. This (11)_____ pushes things upward in the water. It makes them float or sink.

Put an (12)_____ in the water. When an object has high buoyancy, it floats. When an object has low (13)_____, it sinks.

A coin is heavy. It has low buoyancy, so it sinks.

The (14)_____ raft is light. It has high buoyancy, so it floats.

Put lots of coins on the raft. Now the raft is (15)_____. It sinks!

Class

Name

Unit 6 How Does a Ship Float?

Listen to the audio and fill in the blanks.

Track 18



Clara and Brian went to the (1)_____. They saw a big ship in the (2)_____.

Brian said, "Clara, how can that big ship (3)_____?"

"I don't know. Let's check on the (4)_____."

They searched for how (5)_____ float.

Brian said, "It says it's because the force of water (6)_____ the ship up. It's called (7)_____."

"Yes, that's right," said Clara. "My (8)_____ says this, too. The big ship has lots of (9)_____ in it. The ship is made of heavy (10)_____. But the air makes it lighter.

The iron and air are (11)_____ than the water. So the ship floats!"

"Oh, I see!" said Brian. "That's how that (12)_____ ship can float on water."

Class

Name

Unit 7 Ice Fishing



Listen to the audio and fill in the blanks.

Track 21

Do you see people (1)_____ things on the road, street, or stairs after (2)_____ snow?

They are (3)_____ the ice.

People use salt and other (4)_____ to melt the ice. What happens when ice is mixed with salt?

Let's (5)_____.

Step 1. Put some ice cubes in a cup (6)_____ with water.

Step 2. Place a string across the ice cubes. Make sure the string (7)_____ every ice cube.

Step 3. Sprinkle some salt on the ice and the (8)_____.

Step 4. Wait for a minute. (9)_____ pull the string out of the cup and see what has happened.

Step 5. The ice and the string were (10)_____ before. Now the ice is stuck to the string!

Why is this? The (11)_____ is the salt.

Water usually freezes at zero degrees Celsius. But salt (12)_____ the freezing point of the water.

The ice touching the salt (13)_____ water.

Then the ice cubes cool down the water around them, and (14)_____ it again. The string gets frozen, too.

It (15)_____ to the ice.

Class

Name

Unit 8 Frozen

Listen to the audio and fill in the blanks.

Track 24



It was a cold (1)_____ day.

Anna was on her way to her aunt's (2)_____. Her mom was driving.

They drove (3)_____ a river. Anna looked out of the window and said, "Mom, look at that! The river is (4)_____ solid!"

Her mom said, "The (5)_____ must be very cold. Even the (6)_____ froze."

Anna said, "Does the sea freeze on a cold day like (7)_____? I haven't seen a frozen sea (8)_____."

"Not on a day like today," her mom (9)_____.

"The sea freezes in much colder weather."

Anna asked, "Why is that?"

"Because there is (10)_____ in sea water."

"Oh, I learned about that in (11)_____. Salt lowers the freezing point of water. So, does the sea freeze in much (12)_____ weather?"

"That's right, Anna!"

Class

Name

Unit 9 The Power of Pulleys

Listen to the audio and fill in the blanks.

Track 27



Try to pick up your (1)_____ at home. It's too heavy.

You can't lift it.

What could you use to (1)_____ it? You could use a pulley.

A pulley uses (2)_____ and wheels to lift things.

With one, you can lift very heavy things.

Can we (3)_____ and make our own pulley?

Let's make one and see how much (4)_____ it can lift.

Step 1. Poke three holes (near the top of the open end of the cup) in a clear cup. Cut wool yarn into three pieces of the same (5)_____.

Step 2. Tie the ends of the (6)_____ through the holes in the cup.

Tie the (7)_____ ends of the wool yarn together. Tie the three

(8)_____ of yarn to a long piece of yarn.

Step 3. Tape the other end of the long (9)_____ onto an empty roll.

Step 4. Wrap the wool yarn around the empty (10)_____.

Step 5. Slide a (12)_____ through the roll.

Step 6. Put small objects in the cup, and turn the chopstick to lift them.

A pulley is a (12)_____ machine that makes lifting heavy objects easier.

It (13)_____ weight to reduce the amount of force it takes to lift something up. Where can we see people use a (14)_____?

Class

Name

Unit 10 Inventions of the Past

Listen to the audio and fill in the blanks.

Track 30



Matthew went on a school (1)_____ to a Korean fortress.

The (2)_____ was built 200 years ago. It was (3)_____ heavy rocks.

"But they didn't have (4)_____. They didn't have big metal machines. How did they (5)_____ it?" asked Matthew.

"They used the Geojunggi. It's a special (6)_____. It easily lifts heavy things."

"How does it (7)_____?"

"It uses pulleys. They make (8)_____ easy. Tie an object to the (9)_____. The rope goes through many (10)_____. Each wheel carries some of the object's weight. The more wheels there are, the (11)_____ force you need to use."

"People were so (12)_____ back then!"

Class

Name

Unit 11 A Volcanic Eruption

Listen to the audio and fill in the blanks.

Track 33



There are rocks (1)_____ inside Earth. It's very hot inside Earth. This makes rocks melt. (2)_____ rock is called magma. There is magma inside a (3)_____. When volcanoes erupt, the molten rock (4)_____. We call it lava.

Lava is very hot. It's very (5)_____. It breaks things around it. But it also makes things.

Lava (6)_____ and becomes hard. It makes islands and new land. Let's make a mini volcano and watch it (7)_____.

Step 1. Put 50g of baking soda in a plastic (8)_____.

Step 2. Add 3-4 drops of red food (9)_____ and about 10 drops of kitchen detergent.

Step 3. Close the bottle and (10)_____ it to mix the contents well.

Step 4. Place the plastic bottle on a large (11)_____. Make a volcano around the bottle using (12)_____.

Step 5. When the volcano is (13)_____, open the lid of the bottle.

Step 6. Pour vinegar in the volcano (14)_____ and observe what happens.

Fake lava came out of our (15)_____ volcano. It looked real!

There are volcanoes all over the world.

Is there one in your country?

Class

Name

Unit 12 Volcanoes: Good or Bad?

Listen to the audio and fill in the blanks.

Track 36



Ka-boom!

Liam watches the (1)_____. A volcano is erupting in another country. He is (2)_____.

Liam says, "Dad, are we in (3)_____?"

"Don't worry, we're (4)_____ here."

"But (5)_____ are so dangerous. They cause fire and

(6)_____."

"They are dangerous," Dad says, "but they are not all bad. Volcanoes create

(7)_____. We went to Hawaii last year. Hawaii was

(8)_____ volcanoes."

"That's cool!" says Liam. "What else can volcanoes do?"

"Well, hot (9)_____ under the surface heats up water. It makes hot

(10)_____ that we can visit. It makes water vapor, too. We can

turn this water vapor into (11)_____."

"Volcanoes are amazing! Can we go to a hot spring this

(12)_____?"

Class

Name

Unit 13 The Faults in Our Earth

Listen to the audio and fill in the blanks.

Track 39



The (1)_____ of Earth is called the crust. It is like a puzzle made up of about 20 (2)_____ pieces.

These pieces are always moving. But they move very (3)_____. We can't feel them move.

When one of these (4)_____ slides past another piece, Earth's surface (5)_____. This is called a fault.

There are (6)_____ all over the world.

Let's see how they are made.

Step 1. (7)_____ three books together with their spines facing up. Place them on a (8)_____.

Step 2. Slide the books so that the book in the (9)_____ moves away from you.

Step 3. (10)_____ the books again. This time, make the book in the middle slide (11)_____ you.

Step 4. Put the three books in a line. Lift them up and (12)_____ your hands so the book in the middle (13)_____.

The surface of Earth is like these books.

When we moved the books, the "(14)_____" broke. We made a fault.

Earthquakes (15)_____ at faults.

Class

Name

Unit 14 Earthquake Safety

Listen to the audio and fill in the blanks.

Track 42



"Dad, what was that? The desk just (1)_____!"

Dad ran over to Dina. He (2)_____ her hand and took her under the kitchen table.

He checked his (3)_____ for some news reports.

"What's happening?" asked Dina.

"It's an (4)_____. It's very dangerous. It can make

(5)_____ fall down. It can (6)_____ people, too."

"What should we do? Will we be okay?" Dina asked.

"Don't (7)_____. When things start shaking, get under the

(8)_____ like we did. It might get (9)_____. If it does, we should turn off the power and the (10)_____. We should leave our house.

Use the (11)_____. Don't use the elevator. (12)_____

your head. Go out to an open space like a (13)_____ or a park."

"Don't worry, Dad! I know we'll be okay."

Class

Name

Unit 15 Machines All Around

Listen to the audio and fill in the blanks.

Track 45



(1)_____ help us in our everyday lives. They can be big or small, simple or (2)_____. A clock and a plane are both machines. Even the (3)_____ on your pants is a simple machine!

Mechanical (4)_____ work with machines. They think of new machines and make old ones work (5)_____. These machines make our lives (6)_____.

Mechanical engineers work in many (7)_____.

They make cars, planes, (8)_____, and even robots!

They do so many (9)_____ things! They design, build, and (10)_____ new machines.

Turn on a light switch. Take a glass of cold milk from the (11)_____.

Say (12)_____ to a mechanical engineer!

Class

Name

Unit 16 Underwater Explorers

Listen to the audio and fill in the blanks.

Track 48



It's important to (1)_____ the past. The past can help us understand the (2)_____.

Archaeologists look all over Earth. They dig in the (3)_____ to learn about our past.

They find (4)_____, walls, and bones. They study and (5)_____ from them.

But over 70 percent of Earth's surface is (6)_____ with water.

Do people look for (7)_____ underwater?

Yes, (8)_____ archaeologists do.

They swim deep in the water. They swim in rivers and (9)_____.

They even swim (10)_____ in the sea!

They find ships, (11)_____, and even houses underwater.

These objects can (12)_____ us about people who lived long ago.