

Class

Name

Unit 1 Broken Chopstick

Translate the sentences.

1. many / Light / materials. / passes through change / its speed. / They

2. than air. / Water / is denser

3. enters water. / Because of this, / when it / light slows down

4. inside water, / an object / look at / When we / it looks different.

5. how it / changes / looks. / refraction / Light

6. the chopstick / Step 2. Put / empty cup. / into the

7. chopstick. / You / the straight / can see

8. the chopstick. / Step 3. Now, / and put in / with water / fill the cup

Class

Name

9. look straight / when it was / inside the water? / Did the chopstick

10. It / was broken. / looked like / the chopstick

11. also looked / in the water / slightly wider. / The chopstick

12. entered the water. / Light / when it / changed direction

13. reflected from the chopstick / it looked like / the chopstick was / When the light / hit our eyes, / in a different position.

14. focused. / is / Refracted / light look bigger. / It makes / things

15. the chopstick / So / too. / looked wider,

Class

Name

Unit 2 Tall Boy, Short Legs

Translate the sentences.

1. school. / the tallest boy / Rick was / in the entire

2. really long / arms and legs. / He had

3. swimming pool. / One hot summer, / went to the / Rick, Ted, and Amy

4. into the / Rick / water. / dove

5. He was / when he / saw his legs! / so surprised

6. "My legs look so short and wide! What happened to my legs?"

7. of light / Amy said, / refraction. / "It's because

8. Light / slows down. / goes into/ the water and changes / It / direction."

Class**Name**

9. look strange?" / "Why does / my legs / that make

10. your legs / "The light / in the water. / bounces off / from the sun

11. light as / only sees / Our brain / a straight line.

12. refracted. / It doesn't know / has been / the light

13. look curved / So / and strange." / your legs

14. but Rick pulled her / wanted to / Amy / into the pool. / keep talking,

15. be the only / short legs." / one with / "I can't

Class

Name

Unit 3 Pressure Changes, Volume Changes

Translate the sentences.

1. force air makes / Pressure is / on a certain area. / the amount of

2. of things? / change / Can pressure / the volume

3. Yes, pressure / of a gas. / the volume / changes

4. apply gentle pressure / When you / a little smaller. / the volume gets / to a gas,

5. high pressure to it, / And when / a lot smaller. / it gets / you apply

6. 40 ml of water / Step 1. Put / without a needle. / in a syringe

7. Step 2. Press / the changes. / and observe / the plunger lightly

8. of air / Step 3. Now, / in the syringe. / put 40 ml

9. instead of / Step 4. Repeat step 2 / water. / with air

Class

Name

10. on the plunger. / the changes / Observe / you put / based on the pressure

11. didn't change. / of water / The volume / in the syringe

12. the pressure / No matter / at 40 ml. / it stayed / you put on it,

13. when you / What about / in the syringe? / put air

14. got a little / When you / lightly, the volume / pressed the plunger / smaller.

15. the air got / When / the volume of / the plunger hard, / a lot smaller. / you pressed

16. the smaller the volume / The harder / of the air got. / the plunger, / you pressed

17. that pressure can / Now you know / a gas. / the volume of / easily change

Class

Name

Unit 4 A Bag of Chips

Translate the sentences.

1. family. / Irene / went hiking / with her

2. her favorite chips / She packed / a bag of / she got hungry. / in case

3. the top of / Irene was / the mountain! / when she reached / so proud

4. for a rest / She / her bag of chips. / and took out / sat down

5. It / to burst. / looked like / it was about

6. "Mom, look, / inflated. / chips is / the bag of looks like / It / bad!" / it's gone

7. Mom answered, / the bag inflate. / that makes / air pressure here / "It's the

8. gets lower / The air pressure / the mountain. / as you go up

Class

Name

9. up here? / Do you notice / to breathe / how it's harder

10. That's / the low / air pressure. / because of

11. lowers, / When air pressure / increases." / air volume inside it / outside the bag

12. Irene / her mom. / looked at

13. a suspicious look / She had / on her face.

14. are safe / "So, / these chips / to eat?"

15. they / course / "Of / are! some / Can / chips?" / I have

Class

Name

Unit 5 Two Different Lenses

Translate the sentences.

1. We use / a lens / focus light. / to bend and

2. can be / Lenses / concave. / convex or

3. at the edges. / and thin / are thick in / Convex lenses / the middle

4. at the edges / on the other hand, / and thin in the middle. / Concave lenses, / are thick

5. Let's take / lenses. / at convex / a closer look

6. and a laser / a convex lens / pointer. / Step 1. Prepare

7. the laser / Step 2. Point / of the lens. / at the edge

8. curve toward / the laser beam / the middle. / You'll see

Class**Name**

9. at the middle / Step 3. Now, / of the lens. / point the laser

10. through. / The laser beam / but goes straight / doesn't curve,

11. bent toward the middle / The laser beam / the lens. / as it went through / the edge of

12. went straight / The laser beam / of the lens. / through the middle

13. it is refracted just like / When a light beam / a convex lens, / the laser beam. / passes through

14. that hit the edge / of a convex lens / to the middle. / are refracted / All light beams

15. of light, can / Sunlight, a type / through a convex lens. / also be refracted

Class

Name

Unit 6 Telescopes, Microscopes, and More!

Translate the sentences.

1. time seeing / "Wow, / a real telescope!" / it's my first

2. explained / "These are / the teacher. / Keplerian telescopes,"

3. and focuses / "A convex / far away. / light from / lens gathers

4. It makes / or closer. / look bigger / faraway things

5. in more detail. / We can / and planets / see stars

6. a concave lens / Then / into your eye." / takes this light, / and it spreads

7. concave lenses, too, / "cameras use / "Teacher," said Fran, / right?" / convex and

8. and concave / lenses. / "Cameras / use convex

Class

Name

9. Binoculars / too. / use them,

10. see far away / Convex lenses / look bigger and closer. / and make small things / help us

11. This is / lenses. / why microscopes / use convex

12. Concave lenses / a clearer image." / and give us / spread the light

Class

Name

Unit 7 The Flow of Electricity

Translate the sentences.

1. is called / the circuit / The electricity / an electric current. / flowing through

2. to turn on / Can we / a light bulb? / make a circuit

3. Prepare / a light bulb. / wires, and / a battery,

4. to each pole / Step 1. Connect / of the battery (+/-). / each wire / one end of

5. of the wires / Step 2. Connect / to the light bulb. / the other ends

6. one pole of the battery. / two wires to / Step 3. Connect / one end of

7. of the wires / the other ends / Step 4. Connect / to the bulb.

8. When / light up? / did / the bulb in Circuit 1. / turned on / It only

Class

Name

9. An electrical / certain things. / circuit needs

10. should all be / The battery, / connected. / wires, and bulb

11. be connected / The electrical / of the battery. / to both poles / conductors should

12. should be / both conductors. / connected to / The light bulb

13. was connected. / of the battery / In Circuit 2, / only one pole

14. wasn't complete. / didn't turn on / The bulb / the electrical circuit / because

15. other circuits / What / make with / them? / could you

Class

Name

Unit 8 All of the Lights

Translate the sentences.

1. Liam and / for New Year's Day. / getting ready / his dad were

2. They / a party. / to have / were going

3. a string / Liam was / of lights. / putting up

4. these lights / "Dad, / short. / are too cut the wire /Can I / in half?

5. to make / can add / Then I / the lights longer." / some thread

6. "You need / to conductors. / to connect / the bulbs

7. which conduct / They're joined / electricity. / with copper wires

8. so the lights / a conductor, / won't light up." / Thread isn't

Class

Name

9. "Is there / to know?" / I need / anything else

10. "You should / the wires are / the battery. / both poles of / check whether

11. the positive and / They should be / negative poles. / connected to

12. Otherwise / won't be / complete." / the circuit

13. a battery / go into / "The wires / pack.

14. both poles." / I'm sure / connected to / they're already

Class

Name

Unit 9 More Batteries

Translate the sentences.

1. You can / each battery. / connect the opposite / poles of

2. "series / That's / called a / connection."

3. connect the / You can / of each battery. / same poles

4. "parallel / That's / connection." / a / called

5. of electrical / circuits. / both types / Let's make

6. of one battery / Step 1. Connect / the other battery. / to the negative (-) pole of / the positive (+) pole

7. positive and / Connect wires / negative poles. / to the remaining

8. negative poles of / the positive and / Step 2. Connect / together. / two batteries

Class

Name

9. one of the batteries. / Connect / each pole of / wires to

10. of the bulb / Step 3. Compare / in each connection. / the brightness

11. was a / Circuit 1 / connection. / series a parallel / connection. / Circuit 2 was

12. was brighter than / The bulb / the parallel connection. / with the series connection / the one with

13. increase / voltage. / connections / battery / Series

14. make / stronger. / the batteries / They

15. connections / as strong. / aren't / Parallel

16. But / last longer. / they make / the batteries

Class

Name

Unit 10 Electricity Everywhere

Translate the sentences.

1. home / was at / watching TV. / Sophia

2. as well. / was boring, / The TV / on the radio / so she turned

3. She plugged / the same outlet. / her phone and / the TV into

4. her brother / called / James. / She

5. play in / They went / the snow. / outside to

6. made a / They threw / snowman. / snowballs and

7. hot chocolate. / She went / to make some / back inside

8. melted and / The snow / hands wet. / made her / on her gloves

Class

Name

9. "Stop!" Her mom / from the / grocery store. / was just back

10. wet hands." / "Sophia, don't / things with / touch electrical

11. turn off / things. / "You didn't / any of / the electrical

12. electronics, into the / You plugged / phone, which are / the TV and your / same outlet."

13. could / "The plug / overheat. start / It / a fire." / could

Class

Name

Unit 11 Sea Breeze and Land Breeze

Translate the sentences.

1. Have you / at the sea coast? / ever felt / the breeze

2. a cool breeze / In the daytime, / the sea. / blows from

3. evening, / blows as well. / a cool breeze / In the

4. to the sea. / it blows / But now / from the land

5. filled with water, a bowl filled / two lamps, a bowl / Step 1. Prepare / and an incense stick.
/ with sand, a transparent box,

6. the sand and water / Turn on / 5 minutes. / the lamps and heat / for about

7. sand and water. / the heated / Step 2. Put / the box over

8. the lit / Put / into the box. / incense stick

Class**Name**

9. smoke for / the movement of / Step 3. Observe / 30 seconds.

10. the cool water / The smoke / sand. / to the warm / moved from

11. area. / sand created / The warm / a low / air pressure

12. a high / The cool / pressure area. / water created

13. low pressure. / high to / Air always / moves from

14. the sea. / the land / In the daytime, / faster than / heats up

15. blows from / A sea breeze / the land. / the sea to

16. the land / the sea. / At night, / faster than / cools down

17. to the sea. / A land breeze / the land / blows from

Class

Name

Unit 12 Flying a Kite

Translate the sentences.

1. the beach / Daniel took / with his family. / One sunny weekend, / a trip to

2. flying / "Dad, / the kite / toward us? / why is

3. it would / I thought / the sea." / fly above

4. the wind blows / to the land / in the daytime." / "Well, Daniel, / from the sea

5. fly toward the / too?" / land at night, / "Will the kite

6. after / check it out / eating dinner?" / "Why don't we

7. They / again after / to the beach / dinner. / went out

8. Now / direction. / in the opposite / it flew

Class

Name

9. opposite direction / "Does the wind / at night?" / blow in the

10. than water. / "Sand / much faster / cools down

11. the water's temperature / So the sand's / lower than / at night." / temperature is

12. to a warmer place, / a cooler place / right?" / blows from / "Wind always

13. air pressure, and / creates higher / "Cool air / lower pressure. / warm air creates

14. lower pressure," / the flow of / said Dad. / Wind is / from higher to / air as it moves

Class

Name

Unit 13 The Height of the Sun

Translate the sentences.

1. ever noticed / the sun? / Have you / something about

2. The height / differs from / season to season. / of the sun

3. in the sky / The height / of the day. / of the sun / affects the length

4. too. / the temperature, / It affects

5. Step 1. Set a lamp / at a steep / a bowl of sand. / angle to

6. using the lamp / the sand / Step 2. Heat / for 5 minutes.

7. the sand. / set the lamp / Step 3. Now, / angle to / at a shallow

8. the temperature. / heat the sand / Step 4. Once again, / and measure / for 5 minutes

Class

Name

9. formed a / when the lamp / It was higher / steep angle. / and the sand

10. is like / This is / in summer. / what the sun

11. on a / it shines / When the sun / narrower area. / is at its highest,

12. increases. / energy in / The heat / that area

13. heated / is / up. / The ground temperature / The / rises.

14. That's why / is high. / it is hot / when the sun / in summer

15. is low. / it is cold / when the sun / That's why / in winter

Class

Name

Unit 14 The Length of the Day

Translate the sentences.

1. It's too / outside. / play / cold to

2. Emily / at home / instead. / reads books

3. the window. / She reads / through / by the sunlight

4. at 5 p.m.! / so bright / In summer, / it was

5. solar altitude / She / and the sun. / learns about

6. the day. / during / changes / Solar altitude

7. It / as well. / the seasons / changes with

8. at an angle. / learns that / Earth is / She

Class**Name**

9. and farther away / around the sun, / from the sun. / we get closer / As it revolves

10. its maximum. / the summer, / is at / During / solar altitude

11. at its / minimum. / During the winter, / solar altitude is

12. And she / to come again! / can't wait / for summer

Class

Name

Unit 15 Electricity from the Sun

Translate the sentences.

1. We can't / electricity. / without / imagine a world

2. burning coal / But most / or gases. / comes from / of our electricity

3. creates / This / pollution. It / causes / change. / climate

4. turn light / Solar engineers / into electricity. / from the sun

5. This is / for the / planet. / much better

6. power / many uses. / Solar / has

7. more effective. / Solar engineers / solar power / work to make

8. solar energy / They plan, / projects. / design, and implement

Class

Name

9. with solar power. / There are / problems

10. It only / is shining. / makes power / when the sun

11. only 2% of / solar power. / As a result, / comes from / the world's electricity

12. the future of / solar power is / the planet. / But / essential to

13. is very / of solar engineers / The work / important.

14. Their hard work / stronger and cheaper. / can make / solar power

15. place. / They can / the world / a cleaner / help make

Class

Name

Unit 16 Web Developer

Translate the sentences.

1. your favorite singer. / You want / tickets for / to buy

2. You click / the tickets. / button for / on the "Buy"

3. Too many / the website. / people are / using

4. manage to / put the / your basket. / tickets in / You

5. the button / You want to pay, / for it. / can't find / but you

6. it at / You find / of the page. / the bottom

7. you / Finally, / "Pay." / click But / out. / have sold / the tickets

8. were / slow! / too / You this / Doesn't /annoying? / sound

Class

Name

9. job. / Web developers / an important / have

10. what websites / look like. / They design

11. easy to / Text / read. / should be

12. Buttons / to find. / should be / easy

13. the technical side / They / of the website. / also design

14. use them. / when many people / shouldn't crash / They

15. Websites / to use. / are fun

16. difficult / they're / to design! / But
