

Grade 6 Science

Unit 2: Thermal Energy

Driving question: How can containers keep stuff from warming up or cooling down?

26 lessons (investigations and weekly readings) and a words quiz. Use this pack with the unit's **Teacher Guide**, **Student Procedure Guide**, **Student Work Pages** and **Science Literacy Student Reader** (download them once from the course) to teach the whole unit without the internet.

What is in this pack

- A plan for each lesson: the lesson question, how many class days it takes, the Teacher Guide pages to follow, and the student pages to print.
- For each weekly reading: the Student Reader pages, words to know and the exercise page.
- The words quiz, ready to print, with its key at the back.

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Lesson schedule

Each investigation lesson takes the number of class days shown (about 45 minutes a day). Do each reading over a week alongside the lessons. Tick each one off as you go.

	Lesson	Days	Student pages
☐	Reading: Science Literacy Preface: Put Yourself in This Scene	1 week	—
☐	Lesson 1: Why does the temperature of the liquid in some cup systems change more than in others?	3	1 to print
☐	Lesson 2: What cup features seem most important for keeping a drink cold?	2	1 to print
☐	Lesson 3: How are the cup features that keep things cold the same or different for keeping things hot?	2	2 to print
☐	Reading: Science Literacy Collection 1: People and Temperature	1 week	1 to print
☐	Lesson 4: How does a lid affect what happens to the liquid in the cup?	3	6 to print
☐	Lesson 5: Where does the water on the outside of the cold cup system come from?	1	2 to print
☐	Reading: Science Literacy Collection 2: Water, Ice, and Temperature Change	1 week	1 to print
☐	Lesson 6: How can we explain the effect of a lid on what happens to the liquid in the cup over time?	2	3 to print
☐	Lesson 7: If matter cannot enter or exit a closed system, how does a liquid in the system change temperature?	1	1 to print
☐	Lesson 8: How does a cup's surface affect how light warms up a liquid inside the cup?	2	4 to print
☐	Reading: Science Literacy Collection 3: Temperature in Systems	1 week	1 to print
☐	Lesson 9: How does the temperature of a liquid on one side of a cup wall affect the temperature of a liquid on the other side of the wall?	1	4 to print

	Lesson	Days	Student pages
☐	Lesson 10: What is the difference between a hot and a cold liquid?	2	2 to print
☐	Lesson 11: Why do particles move more in hot liquids?	1	1 to print
☐	Reading: Science Literacy Collection 4: Temperature and Organisms	1 week	1 to print
☐	Lesson 12: How does the motion of particles compare in a sample of matter at a given temperature?	2	3 to print
☐	Lesson 13: How could the motion of particles on one side of a solid wall affect the motion of the particles on the other side of that wall?	2	3 to print
☐	Lesson 14: Does our evidence support that cold is leaving the system or that heat is entering the system?	3	3 to print
☐	Reading: Science Literacy Collection 5: Heat through Conduction	1 week	1 to print
☐	Lesson 15: How do certain design features slow down the transfer of energy into a cup?	3	7 to print
☐	Lesson 16: How can we design a cup system to slow energy transfer into the liquid inside it?	2	8 to print
☐	Reading: Science Literacy Collection 6: Insulation	1 week	1 to print
☐	Lesson 17: How can we improve our first design to slow energy transfer into the cup system even more?	2	1 to print
☐	Lesson 18: How can containers keep stuff from warming up or cooling down?	3	2 to print
☐	Reading: Science Literacy Collection 7: Heat in Nature and Design	1 week	1 to print
☐	Words quiz	—	—

Page numbers are PDF page numbers of each file, so they match what your PDF reader shows.

Reading: Science Literacy Preface: Put Yourself in This Scene

Words to know

- **global warming** — the long-term heating of Earth’s climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities
- **polar vortex** — a body of cold, rotating air encircling either of Earth’s polar regions
- **reverse image search** — the function of an internet search engine to identify the source of a digital image file
- **science literacy** — the ability to read, hear, and comprehend information about scientific topics and demonstrate understanding in discussion and through writing
- **social media** — websites and applications that allow users to participate in sharing content on the internet

Teacher’s lesson plan

Follow the Teacher Guide, PDF pages 26–29: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Preface: “Put Yourself in This Scene”: PDF pages 6–9. Look at the pictures and maps together.

Check for understanding

- Use one of today’s words in a sentence of your own.

Lesson 1: Why does the temperature of the liquid in some cup systems change more than in others?

LESSON QUESTION

Why does the temperature of the liquid in some cup systems change more than in others?

Plan about **3 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 30-50: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 6-10

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
Why does the temperature of the liquid in some cup systems change more than in others?

Lesson 2: What cup features seem most important for keeping a drink cold?

LESSON QUESTION

What cup features seem most important for keeping a drink cold?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 51–64: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 11–13

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
What cup features seem most important for keeping a drink cold?

Lesson 3: How are the cup features that keep things cold the same or different for keeping things hot?

LESSON QUESTION

How are the cup features that keep things cold the same or different for keeping things hot?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 65–77: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 14–16
- Investigation Plan — Student Work Pages, PDF pages 5–6

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How are the cup features that keep things cold the same or different for keeping things hot?

Reading: Science Literacy Collection 1: People and Temperature

Words to know

- **alloy** — a mixture of a metal, such as iron, with other metal or nonmetal elements
- **fluid** — matter that does not hold a fixed shape and is able to flow; gases and liquids
- **fossil fuel** — a substance, such as coal or petroleum, formed over millions of years from fossilized organisms
- **insulation** — material that reduces the transfer of energy
- **ore** — a sediment or rock that contains valuable metals
- **radiate** — to send out in a straight line from a center
- **scale** — a graduated series of measurements; a proportion between two sets of measurements
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 78-84: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 1: "People and Temperature": PDF pages 10-19. Look at the pictures and maps together.

Student pages to print

- Exercise Page 1 — Student Work Pages, PDF pages 87-88

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 4: How does a lid affect what happens to the liquid in the cup?

LESSON QUESTION

How does a lid affect what happens to the liquid in the cup?

Plan about **3 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 85–107: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 17–21
- Explanations and Predictions of Lids and Covers — Student Work Pages, PDF pages 7–8
- Initial Model of Mass Loss in the Cup with No Lid — Student Work Pages, PDF pages 9–10
- Manipulative Mat for a Model of Matter at the Surface of the Liquid — Student Work Pages, PDF pages 11–12
- Procedure: Measuring Changes in Mass in the Cups — Student Work Pages, PDF pages 13–14
- Progress Tracker — Student Work Pages, PDF pages 15–16

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How does a lid affect what happens to the liquid in the cup?

Lesson 5: Where does the water on the outside of the cold cup system come from?

LESSON QUESTION

Where does the water on the outside of the cold cup system come from?

Plan about **1 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 108–119: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 22–24
- Water Droplet Investigation — Student Work Pages, PDF pages 17–18

For the teacher

- Teacher Reference — Teacher Guide, PDF pages 343–346

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
Where does the water on the outside of the cold cup system come from?

Reading: Science Literacy Collection 2: Water, Ice, and Temperature Change

Words to know

- **climate change** — a change in global or regional climate patterns revealed by data diverging from averages in continuous trends
- **downwelling** — the sinking of higher-density fluid in a surrounding fluid
- **glacier** — a slow-moving mass or river of ice formed by the accumulation and compaction of snow on mountains or near the poles
- **system** — a set of factors that work together
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material
- **upwelling** — the rising of lower-density fluid in a surrounding fluid

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 120–128: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 2: “Water, Ice, and Temperature Change”: PDF pages 20–29. Look at the pictures and maps together.

Student pages to print

- Exercise Page 2 — Student Work Pages, PDF pages 89–90

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 6: How can we explain the effect of a lid on what happens to the liquid in the cup over time?

LESSON QUESTION

How can we explain the effect of a lid on what happens to the liquid in the cup over time?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 129–140: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 25–27
- Analogy Map for Chips and Marbles — Student Work Pages, PDF pages 19–20
- Particle Representations for Matter in the Cup System — Student Work Pages, PDF pages 21–22

For the teacher

- Teacher Reference — Teacher Guide, PDF pages 347–349

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation: How can we explain the effect of a lid on what happens to the liquid in the cup over time?

Lesson 7: If matter cannot enter or exit a closed system, how does a liquid in the system change temperature?

LESSON QUESTION

If matter cannot enter or exit a closed system, how does a liquid in the system change temperature?

Plan about **1 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 141–148: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 28–29

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation: If matter cannot enter or exit a closed system, how does a liquid in the system change temperature?

Lesson 8: How does a cup's surface affect how light warms up a liquid inside the cup?

LESSON QUESTION

How does a cup's surface affect how light warms up a liquid inside the cup?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 149–165: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 30–33
- Explaining Temperature Changes in Each Cup — Student Work Pages, PDF pages 23–26
- Investigating Light's Effect on Warming Up Water — Student Work Pages, PDF pages 27–32
- Light Measurement Template — Student Work Pages, PDF pages 33–34

For the teacher

- Teacher Reference — Teacher Guide, PDF pages 350–351

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How does a cup's surface affect how light warms up a liquid inside the cup?

Reading: Science Literacy Collection 3: Temperature in Systems

Words to know

- **closed system** — a set of factors working together into which no new matter or energy is introduced and from which no matter or energy is removed
- **insulation** — material that reduces the transfer of energy
- **system** — a set of factors that work together
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 166–172: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 3: “Temperature in Systems”: PDF pages 30–41. Look at the pictures and maps together.

Student pages to print

- Exercise Page 3 — Student Work Pages, PDF pages 91–92

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 9: How does the temperature of a liquid on one side of a cup wall affect the temperature of a liquid on the other side of the wall?

LESSON QUESTION

How does the temperature of a liquid on one side of a cup wall affect the temperature of a liquid on the other side of the wall?

Plan about **1 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 173–182: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 34–35
- Class Investigation: Heat or Cold Through the Cup Wall — Student Work Pages, PDF pages 35–38
- Data Set and Analysis: Heat or Cold Across the Cup Wall — Student Work Pages, PDF pages 39–40
- Small-Group Investigation: Heat or Cold Through the Cup Wall — Student Work Pages, PDF pages 41–44

For the teacher

- Teacher Reference — Teacher Guide, PDF pages 352–353

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How does the temperature of a liquid on one side of a cup wall affect the temperature of a liquid on the other side of the wall?

Lesson 10: What is the difference between a hot and a cold liquid?

LESSON QUESTION

What is the difference between a hot and a cold liquid?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 183–195: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 36–39
- Reading: Reading on James Joule's Experiment — Student Procedure Guide, PDF pages 70–74

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
What is the difference between a hot and a cold liquid?

Lesson 11: Why do particles move more in hot liquids?

LESSON QUESTION

Why do particles move more in hot liquids?

Plan about **1 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 196–205: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 40–42

For the teacher

- Teacher Reference — Teacher Guide, PDF pages 354–357

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
Why do particles move more in hot liquids?

Reading: Science Literacy Collection 4: Temperature and Organisms

Words to know

- **blubber** — a layer of dense fat that provides thermal insulation
- **fluid** — matter that does not hold a fixed shape and is able to flow; gases and liquids
- **hyperthermia** — the condition of having a body temperature above normal
- **hypothermia** — the condition of having a body temperature below normal
- **insulation** — material that reduces the transfer of energy
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material
- **thermoregulation** — a body's ability to maintain a temperature within a certain range for survival

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 206–213: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 4: “Temperature and Organisms”: PDF pages 42–53. Look at the pictures and maps together.

Student pages to print

- Exercise Page 4 — Student Work Pages, PDF pages 93–94

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 12: How does the motion of particles compare in a sample of matter at a given temperature?

LESSON QUESTION

How does the motion of particles compare in a sample of matter at a given temperature?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 214–226: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 43–44
- Particle Interactions in Gases, Part A — Student Work Pages, PDF pages 45–48
- Particle Interactions in Gases, Part B — Student Work Pages, PDF pages 49–50

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How does the motion of particles compare in a sample of matter at a given temperature?

Lesson 13: How could the motion of particles on one side of a solid wall affect the motion of the particles on the other side of that wall?

LESSON QUESTION

How could the motion of particles on one side of a solid wall affect the motion of the particles on the other side of that wall?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 227–240: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 45–50
- Investigating Particle Collisions Within and Between Solids — Student Work Pages, PDF pages 51–52
- Investigating Particle Collisions in Different States of Matter — Student Work Pages, PDF pages 53–54

For the teacher

- Answer Key — Teacher Guide, PDF page 358

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation: How could the motion of particles on one side of a solid wall affect the motion of the particles on the other side of that wall?

Lesson 14: Does our evidence support that cold is leaving the system or that heat is entering the system?

LESSON QUESTION

Does our evidence support that cold is leaving the system or that heat is entering the system?

Plan about **3 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 241–253: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 51–54
- Evidence Sorting Chart — Student Work Pages, PDF pages 55–56
- Modeling What Is Happening at the Cup Wall — Student Work Pages, PDF pages 57–58

For the teacher

- Teacher Reference 1 — Teacher Guide, PDF page 359
- Teacher Reference 2 — Teacher Guide, PDF pages 360–383

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
Does our evidence support that cold is leaving the system or that heat is entering the system?

Reading: Science Literacy Collection 5: Heat through Conduction

Words to know

- **dilate** — to make wider or more open
- **fossil fuel** — a substance, such as coal or petroleum, formed over millions of years from fossilized organisms
- **insulation** — material that reduces the transfer of energy
- **system** — a set of factors that work together
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 254–260: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 5: “Heat through Conduction”: PDF pages 54–63. Look at the pictures and maps together.

Student pages to print

- Exercise Page 5 — Student Work Pages, PDF pages 95–96

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 15: How do certain design features slow down the transfer of energy into a cup?

LESSON QUESTION

How do certain design features slow down the transfer of energy into a cup?

Plan about **3 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 261–274: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 55–57
- Evaporative Cooling — Student Work Pages, PDF pages 59–60
- Features of Cups that Keep Drinks Cool — Student Work Pages, PDF pages 61–62
- Final Cup Consensus — Student Work Pages, PDF pages 63–64
- How Double Walls Work — Student Work Pages, PDF pages 65–68
- How Light Warms Up Matter — Student Work Pages, PDF pages 69–70
- How Styrene, Neoprene, and Cardboard Sleeves Work — Student Work Pages, PDF pages 71–74

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How do certain design features slow down the transfer of energy into a cup?

Lesson 16: How can we design a cup system to slow energy transfer into the liquid inside it?

LESSON QUESTION

How can we design a cup system to slow energy transfer into the liquid inside it?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 275–284: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 58–59
- Cold Cup Challenge — Student Work Pages, PDF pages 75–82
- Design Evaluation: Peer Feedback — Student Work Pages, PDF pages 83–84
- Reference: Regular light and temperature test — Student Procedure Guide, PDF page 65
- Reference: Bright light and temperature test — Student Procedure Guide, PDF page 66
- Reference: Environmental Impact Test — Student Procedure Guide, PDF page 67
- Reference: Price check test — Student Procedure Guide, PDF page 68
- Reference: Diameter test — Student Procedure Guide, PDF page 69

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How can we design a cup system to slow energy transfer into the liquid inside it?

Reading: Science Literacy Collection 6: Insulation

Words to know

- **buoyant** — the characteristic of an object or material that rises upward as a result of its having lower density than its surrounding medium
- **compression** — reduction in volume (which causes increase in pressure)
- **insulation** — material that reduces the transfer of energy
- **radiate** — to send out in a straight line from a center
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material
- **viscous** — the stickiness or thickness of a liquid

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 285–291: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 6: “Insulation”: PDF pages 64–73. Look at the pictures and maps together.

Student pages to print

- Exercise Page 6 — Student Work Pages, PDF pages 97–98

Check for understanding

- Use one of today's words in a sentence of your own.

Lesson 17: How can we improve our first design to slow energy transfer into the cup system even more?

LESSON QUESTION

How can we improve our first design to slow energy transfer into the cup system even more?

Plan about **2 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 292–301: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 60–61

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How can we improve our first design to slow energy transfer into the cup system even more?

Lesson 18: How can containers keep stuff from warming up or cooling down?

LESSON QUESTION

How can containers keep stuff from warming up or cooling down?

Plan about **3 class days** for this lesson.

Teacher's lesson plan

Follow the Teacher Guide, PDF pages 302–312: the steps, materials and timing for this lesson.

Student pages to print

- Student procedures for this lesson — Student Procedure Guide, PDF pages 62–64
- Let's Answer Questions from Our Driving Question Board! — Student Work Pages, PDF pages 85–86

Check for understanding

- Explain your answer to the lesson question, using evidence from your investigation:
How can containers keep stuff from warming up or cooling down?

Reading: Science Literacy Collection 7: Heat in Nature and Design

Words to know

- **climate change** — a change in global or regional climate patterns revealed by data diverging from averages in continuous trends
- **global warming** — the long-term heating of Earth’s climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities
- **hypothesis** — a proposed, unproven explanation made as the basis to start an investigation
- **insulation** — material that reduces the transfer of energy
- **positive feedback loop** — a phenomenon in nature in which the more something occurs, the stronger or more likely that thing’s effect becomes
- **radiate** — to send out in a straight line from a center
- **scale** — a graduated series of measurements; a proportion between two sets of measurements
- **temperature** — the measure of the average kinetic energy of the particles that make up a substance or material

Teacher’s lesson plan

Follow the Teacher Guide, PDF pages 313–319: the steps, materials and timing for this lesson.

Read

Read Science Literacy Student Reader, Collection 7: “Heat in Nature and Design”: PDF pages 74–84. Look at the pictures and maps together.

Student pages to print

- Exercise Page 7 — Student Work Pages, PDF pages 99–104

Check for understanding

- Use one of today’s words in a sentence of your own.

WORDS QUIZ

Thermal Energy

Name: _____ Date: _____

Circle the letter of the best answer.

1. Which word means “the sinking of higher-density fluid in a surrounding fluid”?
 - a) viscous
 - b) downwelling
 - c) ore
 - d) social media
2. Which word means “a graduated series of measurements; a proportion between two sets of measurements”?
 - a) dilate
 - b) blubber
 - c) downwelling
 - d) scale
3. Which word means “the function of an internet search engine to identify the source of a digital image file”?
 - a) hypothesis
 - b) constrict
 - c) insulation
 - d) reverse image search
4. Which word means “to make wider or more open”?
 - a) dilate
 - b) fluid
 - c) glacier
 - d) thermoregulation
5. Which word means “the ability to read, hear, and comprehend information about scientific topics and demonstrate understanding in discussion and through writing”?
 - a) compression
 - b) science literacy
 - c) alloy
 - d) scale
6. Which word means “the long-term heating of Earth’s climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities”?
 - a) positive feedback loop
 - b) science literacy
 - c) constrict
 - d) global warming

- 7.** Which word means “to cause to lose water”?
- a) scale
 - b) dehydrate
 - c) closed system
 - d) hyperthermia
- 8.** Which word means “reduction in volume (which causes increase in pressure)”?
- a) ore
 - b) compression
 - c) dehydrate
 - d) thermoregulation
- 9.** Which word means “a slow-moving mass or river of ice formed by the accumulation and compaction of snow on mountains or near the poles”?
- a) glacier
 - b) hypothermia
 - c) ore
 - d) alloy
- 10.** Which word means “to make narrower; the opposite of dilate”?
- a) constrict
 - b) radiate
 - c) science literacy
 - d) insulation
- 11.** Which word means “a sediment or rock that contains valuable metals”?
- a) glacier
 - b) hypothermia
 - c) ore
 - d) thermoregulation
- 12.** Which word means “websites and applications that allow users to participate in sharing content on the internet”?
- a) social media
 - b) dehydrate
 - c) positive feedback loop
 - d) open system

FOR THE TEACHER

Answers

Unit quiz key

1. b 2. d 3. d 4. a 5. b 6. d 7. b 8. b 9. a 10. a 11. c 12. a