



SCIENCE • GRADE 3

Check Understanding Assessments

FOCUScurriculum

Curriculum materials for **your** content standards

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Introduction

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Check Understanding Assessments

The following is a sampling of assessments found in each *Focus on New York Standards* book. They are designed to assist you in evaluating your students' knowledge of New York's Core Curriculum in Science. Check Understanding assesses the content of each *Focus on New York Standards* book. You will find multiple choice and short answer questions that assess literal and interpretive comprehension of each book's content. In addition, these assessments will evaluate your students' ability to synthesize and apply the content and concepts identified in the New York Elementary Science Core Curriculum. Students will obtain valuable practice in answering 1-point and 2-point response questions they will encounter on the New York Grade 4 Elementary-Level Science Test.

Below Level



STANDARD 4: The Physical Setting

NYC • Grade 3 • Unit 2: Energy

Key Idea 4

Performance Indicator 4.1

Performance Indicator 4.2

Assessments

Heat Is Energy

Print pages 20–22 of this PDF for the assessments.

Check Understanding

Shade the circle next to the correct answer or write your answer on the lines provided.

1. People wear jackets outside when it is winter. How do jackets help people stay warm?

- Ⓐ Jackets keep all heat energy from leaving the body.
- Ⓑ Jackets keep most heat energy from leaving the body.
- Ⓒ Jackets keep all heat energy from entering the body.
- Ⓓ Jackets keep most heat energy from entering the body.

2. A pan is put on a stove and the heat is turned on. In a few minutes the handle of the pan becomes hot. What allowed the handle of the pan to become hot?

- Ⓐ radiation
- Ⓑ convection
- Ⓒ conduction
- Ⓓ insulation

3. Heat and temperature are two different things. Explain what temperature is. [1]

Explain what heat is. [1]

Check Understanding

Shade the circle next to the correct answer or write your answer on the lines provided.

4. A student puts a pot of cold water on a stove. She turns the stove on. The water becomes warmer. Identify what happened. [1]

Explain why it happened. [1]

5. What form of energy causes an ice cube to melt?

- (A) electrical
- (B) heat
- (C) mechanical
- (D) magnetic

6. Which instrument would you use to measure heat?

- (A) graduated cylinder
- (B) pan balance
- (C) thermometer
- (D) ruler

7. A student rubs his hands together and they get warm. What forms of energy were transferred?

- (A) mechanical to heat
- (B) electrical to magnetic
- (C) light to heat
- (D) mechanical to sound

Assessment Scoring Guidelines

1. Answer B is correct.
2. Answer C is correct.
3. Temperature is a measurement of heat.

Heat is a form of energy caused by the movement of tiny particles in matter.

4. Heat was transferred from the stove to the pot and then to the water.

The hot stove created tiny particles in the pot to move around. This generated heat in the pot. Then the moving particles in the pot started bumping into particles in the water. This caused the water to become warmer.

5. Answer B is correct.
6. Answer C is correct.
7. Answer A is correct.



STANDARD 4: The Living Environment

NYC • Grade 3 • Unit 4:
Plant and Animal Adaptation

Key Idea 3
Key Idea 5
Key Idea 6

Performance Indicator 3.1
Performance Indicator 5.2
Performance Indicator 6.1

Assessments

How Plants Survive

Print pages 20–22 of this PDF for the assessments.

Check Understanding

Shade the circle next to the correct answer.

Note that question 1 has only three choices.

1. A group of plants grows under a tree. As the tree grows, its leaves block sunlight from the plants. Each generation of plants grows farther away from the tree. When the plants move, which process are they using to survive?
 - Ⓐ food production
 - Ⓑ adaptation
 - Ⓒ reproduction
2. The function of a plant's stem, stalk, or trunk is to
 - Ⓐ get energy from the sun
 - Ⓑ hold the plant in place
 - Ⓒ carry water through the plant
 - Ⓓ take nutrients from the soil
3. What are the reproductive structures of plants?
 - Ⓐ flowers
 - Ⓑ roots
 - Ⓒ leaves
 - Ⓓ stems
4. If a plant does not get enough sunlight, it will
 - Ⓐ stop making food
 - Ⓑ reproduce more often
 - Ⓒ grow deeper roots
 - Ⓓ move to different place

Check Understanding

Write your answers in the chart or on the lines provided.

5. The diagrams below show the same tree branch during each of the four seasons in New York State. [2]



A



B



C



D

Identify the seasons shown in *A*, *B*, *C*, and *D*.

A	
B	
C	
D	

6. Describe **one** way animals help plants reproduce. [1]

Assessment Scoring Guidelines

1. Answer B is correct.
2. Answer C is correct.
3. Answer A is correct.
4. Answer A is correct.

5.

A	Summer
B	Spring
C	Winter
D	Autum

6. Animals like squirrels bury nuts (seeds) in the ground.
Burrs get stuck on animals and drop off in a new place.

Above Level



STANDARD 4: The Physical Setting

NYC • Grade 3 • Unit 3: Simple Machines

Key Idea 5

Performance Indicator 5.1

Assessments

Force, Motion, and Simple Machines

Print pages 20–22 of this PDF for the assessments.

Check Understanding

Shade the circle next to the correct answer or write your answers on the lines provided.

- Two balls are rolling toward each other at the same speed. The green ball is more massive than the pink ball. What will happen when the balls collide?
 - Both balls will change directions.
 - Neither ball will change direction.
 - The pink ball will change the direction of the green ball.
 - The green ball will change the direction of the pink ball.
- In the winter, the sidewalk to school becomes slippery. Sprinkling salt on the sidewalk helps to melt some of the ice. This makes walking to school easier. Which statement explains why walking is easier without the ice?
 - Friction is reduced.
 - Gravity is reduced.
 - Friction is increased.
 - Gravity is increased.

- Contact forces and noncontact forces affect motion. Identify **one** contact force. [1]

Explain how the contact force works. [1]

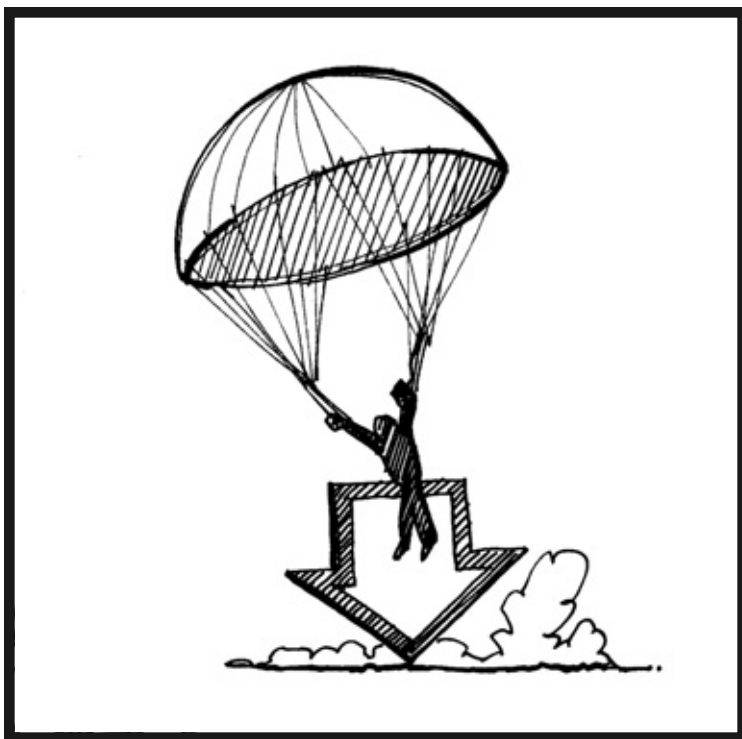
Note that question 4 has only three choices.

- A student rides a bike on smooth pavement. She then turns on to a rough gravel surface. The bicycle is likely to move
 - slower
 - faster
 - at the same speed

Check Understanding

Write your answers on the lines provided.

5. The diagram below shows a person parachuting to the ground.



Identify **two** forces acting on a jumper's parachute. [1]

1) _____

2) _____

Explain why both forces are important. [2]

Assessment Scoring Guidelines

1. Answer D is correct.
2. Answer C is correct.
3. Collision
Collision occurs when one object bumps into another.

Friction
Friction occurs when one object rubs against another.
4. Answer A is correct.
5. Gravity
Gravity pulls the jumper down, bringing him back to the ground.

Resistance
The air pushes against the parachute, causing friction, so that the jumper does not fall too quickly.