

PUZZLEWISE™

School/Home Edition

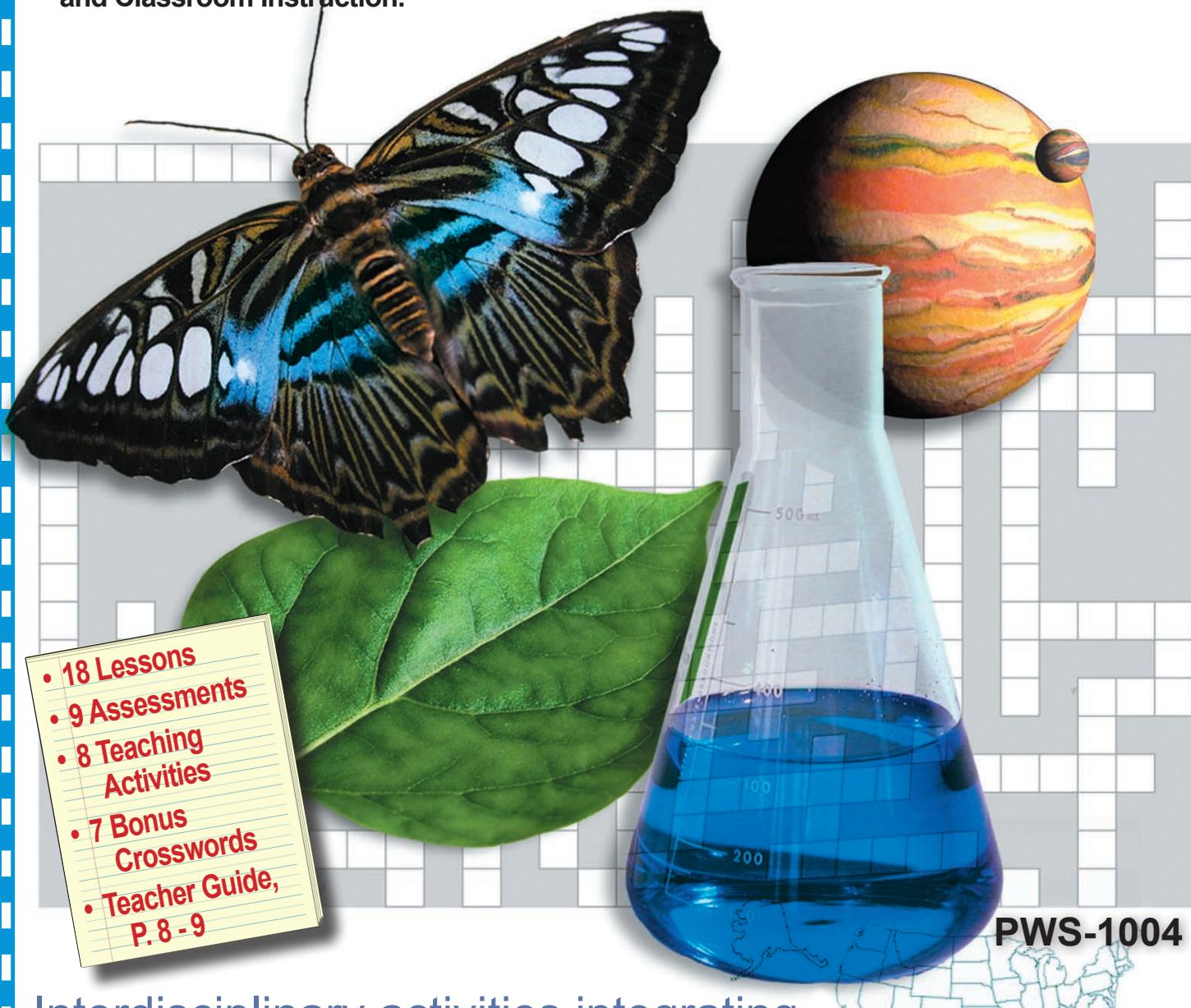
SCIENCE

Standards Based Science Literacy Program

The Building Block to Test Preparation, Science Inquiry,
and Classroom Instruction.

Supports
NSEA and state
standards.

Level 4
2009 Edition



Interdisciplinary activities integrating
science, reading, and writing!

Student Name:

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22-24	Making Things Go	Physical: Energy	
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35-37	Thank Your Parents	Life: Genetics	
38-39	Nature's Wild Side	Earth: Geology/Weather	Assessment 3: Reading
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89-91	It's A-l-i-i-i-v-e!	Life: Ecosystems	
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PuzzleWise™ Level 4 Correlations with NSEA Science Content Standards: K - 4

PuzzleWise™ Lessons	Science and Category	Standard A: Science as Inquiry	Standard B: Physical Science	Standard C: Life Science	Standard D: Earth/Space Science	Standard E: Science and Technology	Standard F: Personal and Social Perspectives	Standard G: History and Nature of Science
1. Birth to Earth	Life: Food Webs			●				
2. Earth's Seasons	Earth: Weather			●				
3. Dwarf Hamsters	Life: Animals		●					
4. Making Things Go	Physical: Energy	●						
5. Plant and Animal Cells	Life: Plants/Animals	●					●	
6. What is a Biome?	Earth: Ecosystem	●						
7. The Power of Energy	Physical/Life: Energy	●						
8. Thank Your Parents	Life: Genetics	●						
9. Nature's Wild Side	Earth: Geology/Weather	●						
10. A Scientific Investigation	Inquiry: Applications	●						
11. Making Rocks	Earth: Geology	●						
12. Solar Power	Life: Plants/Animals	●						
13. Summaries / Conclusions	Inquiry: Applications	●						
14. Water in Disguise	Physical: Energy/Chemistry	●						
15. Be Kind to Bees!	Life: Ecosystems	●						
16. Who Was Isaac Newton?	Famous Scientist/History	●						
17. Erosion	Earth: Geology/Weather	●						
18. Light the Bulb!	Physical: Energy	●						
19. Science in our World	The Nature of Science			●				
20. The Design Process	Inquiry: Applications	●		●				
21. It's the Doorbell!	Physical: Magnetism/Electricity		●					
22. Ecosystems and Technology	Life: Animals/Technology			●				
23. What is a Cloud?	Earth: Weather			●				
24. The Circulatory System	Life: Human Body			●			●	
25. It's A-l-i-i-v-e!	Life: Ecosystems			●				
26. Comparing Data	Inquiry: Applications	●					●	
27. Seesaw in Motion	Physical: Energy		●			●		
28. Full or Empty?	Earth: Environment/Energy				●			
29. Technology: Science in Action	Physical: Technology					●		

PuzzleWise™ Level 4 Correlations with Science Kits

Lesson	PuzzleWise™ Articles	Science	Category	STC	Foss	Insights
1	Birth to Earth	Life	Plants/Animals	Food Chemistry	Food and Nutrition	Reading the Environment
2	Earth's Seasons	Earth	Weather		Sun, Moon, and Stars	Sun, Moon, and Earth
3	Dwarf Hamsters	Life	Animals	Animal Studies	Structures of Life	
4	Making Things Go	Physical	Energy	Motion and Design, Magnets and Motors	Matter and Energy	
5	Plant and Animal Cells	Life	Plants/Animals	Microworlds	Structures of Life	
6	What is a Biome?	Earth	Ecosystem	Ecosystem	Environments	Reading the Environment
7	Power of Energy	Physical	Physical/Life: Energy		Matter and Energy, Solar Energy	
8	Thank Your Parents	Life	Genetics	Microworlds	Human Body, Structures of Life	
9	Nature's Wild Side	Earth	Geology/Weather	Animal Studies, Ecosystems		Sun, Moon, and Earth
10	Scientific Investigation	Inquiry	Applications		Measurement	
11	Making Rocks	Earth	Geology	Rocks and Minerals	Earth Materials	Rocks, Minerals, and Soil
12	Solar Power	Life	Plants/Animals		Solar Energy, Water, Water Planet	
13	Summaries / Conclusions	Inquiry	Applications	Plant Growth and Development	Measurement	
14	Water in Disguise	Physical	Energy/Chemistry	Land and Water	Water, Water Planet	Changes of State
15	Be Kind to Bees!	Life	Ecosystem	Animal Studies, Ecosystems	Environments, Structures of Life	Reading the Environment
16	Who Was Isaac Newton?	Earth	Scientist/History		Ideas and Inventions, Sun, Moon, and Stars	Sun, Moon, and Earth
17	Erosion	Earth	Geology/Weather	Land and Water	Earth Materials	Rocks, Minerals, and Soil
18	Light the Bulb!	Physical	Energy	Electric Circuits	Magnetism and Electricity	Circuits and Pathways
19	Science in our World	Inquiry	The Nature of Science		Ideas and Inventions	
20	Design Process	Inquiry	Applications	Ecosystem	Environments	
21	It's the Doorbell!!	Physical	Magnetism/Electricity	Electric Circuits, Sound, Magnets and Motors	Physics of Sound, Magnetism and Electricity, Models and Designs	Circuits and Pathways
22	Ecosystems and Technology	Life	Animals/Technology	Ecosystems	Environments, Ideas and Inventions	Reading the Environment
23	What is a Cloud?	Earth	Weather		Water Planet	Sun, Moon, and Earth
24	The Circulatory System	Life	Human Body	Animal Studies	Human Body	
25	It's A-i-i-i-v-e!	Life	Ecosystem	Microworlds, Ecosystems	Human Body, Structures of Life	Reading the Environment
26	Comparing Data	Inquiry	Applications		Measurement	
27	Seesaw in Motion	Physical	Energy	Motion and Design	Matter and Energy	
28	Full or Empty?	Earth	Environment/Energy		Earth Materials	Sun, Moon, and Earth
29	Technology: Science in Action	Physical	Technology		Ideas and Inventions	

Birth to Earth

Lesson 1, Article.

Life, Plants/Animals. R: 3.0



The sun's **light energy** is the major source of **energy** for our planet. **Plants**, called **producers**, receive sunlight and make their own food in a **process** called **photosynthesis** (fo-toe-syn-the-sis). Leaves take in **carbon dioxide** and give out oxygen. Both plants and animals need light, air, water, and **nutrients** to grow and stay alive. Nutrients are minerals from the soil. All **organisms** need constant energy and matter to carry out their **function**, or purpose, in their ecosystem.

Animals

All animals depend on plants for their food and **oxygen**, the gas plants release. Animals are **consumers** because they



eat other organisms to survive. Some animals, called **herbivores** (ur-buh-vorz), only eat plants. Animals, called **carnivores**, only eat other animals. **Omnivores** eat both plants and animals.

A Food Web...

...is a **diagram** that shows how food chains are linked. In an **ecosystem**, or place where organisms **interact** with their **environment**, organisms compete with each other for **resources**.

Food Energy

Energy from food travels from one organism to another. The path that food energy travels is called a **food chain**. Plants use light energy from the sun, a rabbit eats plants, a wolf eats the rabbit, and a **scavenger** eats the wolf when the wolf dies. Then **decomposers** like **fungi** and worms return the waste back into simple minerals and nutrients for plants. This is how matter is **recycled** so new organisms grow.

Survival

All organisms want to **survive**, or live. Survival depends on how the organism behaves, and the ecosystem in which it lives. A change in the ecosystem can affect an organism's ability to survive.

The sun is the major source of energy for the Earth, and the key to plant growth, making winds, and the cause of the water cycle!

A Food Web

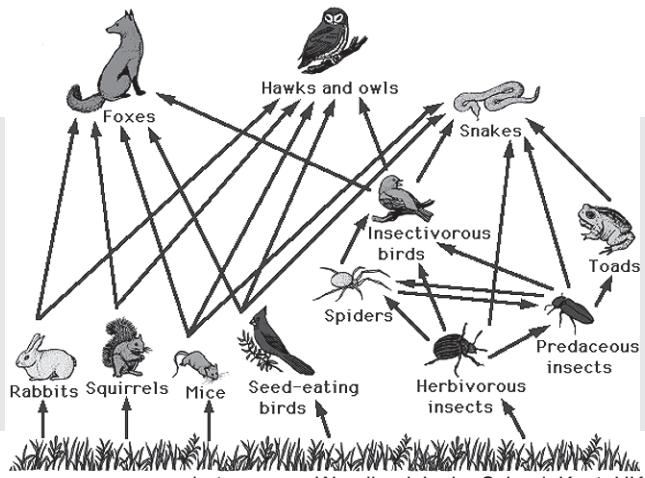
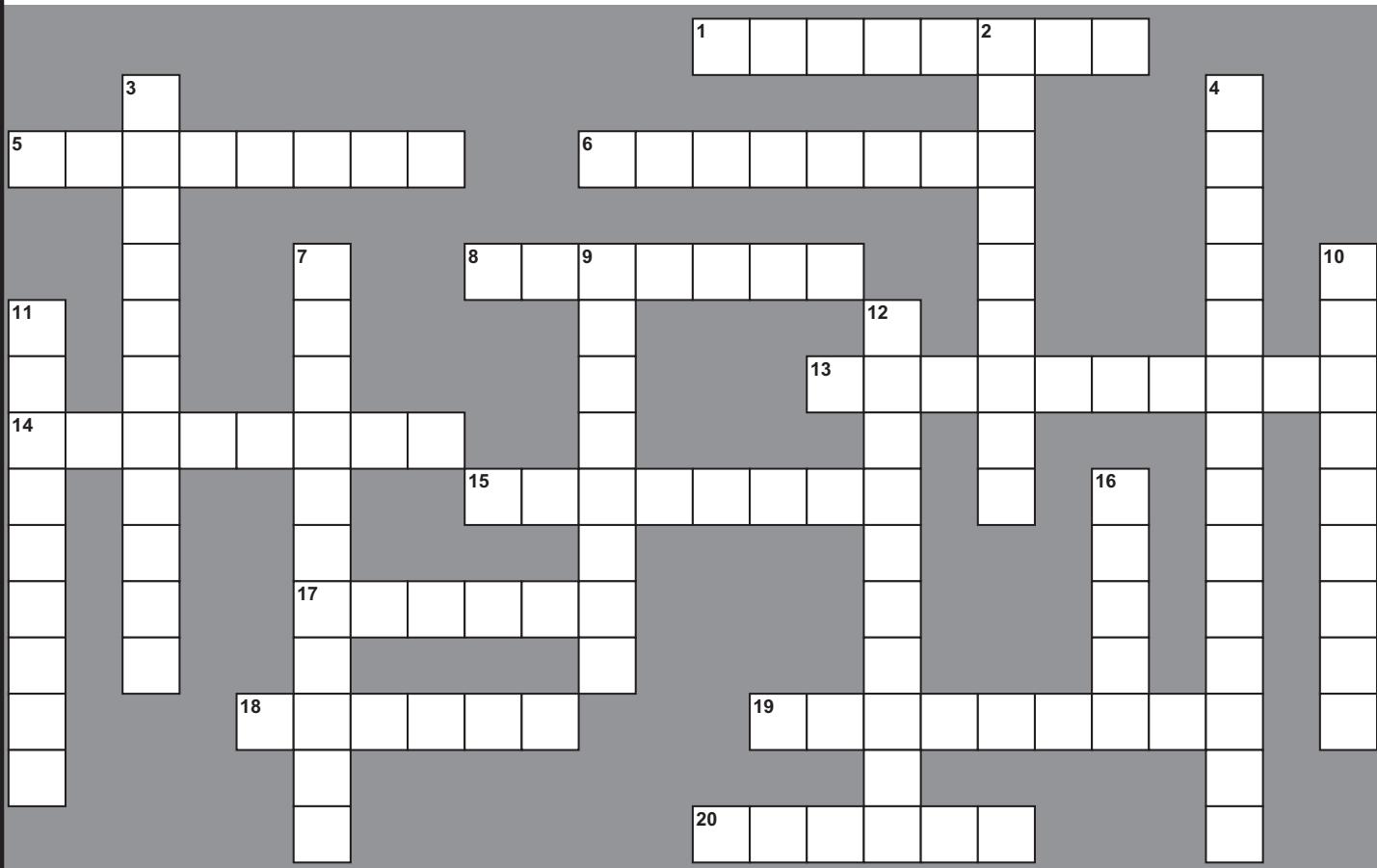


photo source: Woodland Junior School, Kent, UK



Be wise! Reading non-fiction is a smart idea. Suggested readings: P. 47, P. 84.

**ACROSS**

- 1 The name for plants because they make their own food.
- 5 The purpose of a system. P. 57.
- 6 An organism that eats other organisms to survive.
- 8 A diagram that shows how many food chains are linked. (2 words.)
- 13 An organism that eats dead organisms and waste.
- 14 An organism that eats both plants and animals.
- 15 All food chains start with this.
- 17 The only organisms that make their own food energy.
- 18 Parts working together for a purpose.
- 19 Minerals found in food and soil.
- 20 The food chain shows food _____ moving through the ecosystem.

DOWN

- 2 An organism that only eats animals.
- 3 The habitat or place where organisms live. (e_____) P. 57.
- 4 The process of plants making their own food.
- 7 The part of the leaf cell that produces food for the plant. P. 106.
- 9 The name for every form of life. P. 57.
- 10 An organism that eats only plants.
- 11 The place where organisms interact with their environment.
- 12 A measurement of size; 1 of these plus 99 more make a meter. ★
- 16 A food _____ shows the food path from one organism to another.



1. The major source of energy for our planet is
- A. Energy from water
 - B. Energy from wind
 - C. Energy from food
 - D. Energy from sunlight
2. Every food chain begins with
- A. Sunlight
 - B. Producers
 - C. Consumers
 - D. Decomposers

3. Draw a food chain below.

Be sure to:

- **Draw and label** the source of **energy** at the beginning of your food chain.
- **Draw and label** the **organisms** in your food chain.
- Include at least one **producer**, one **consumer**, and one **decomposer**.
- **Draw arrows** to show the path that food energy travels in your food chain.

Use words, labeled pictures, and/or labeled diagrams in your answer.

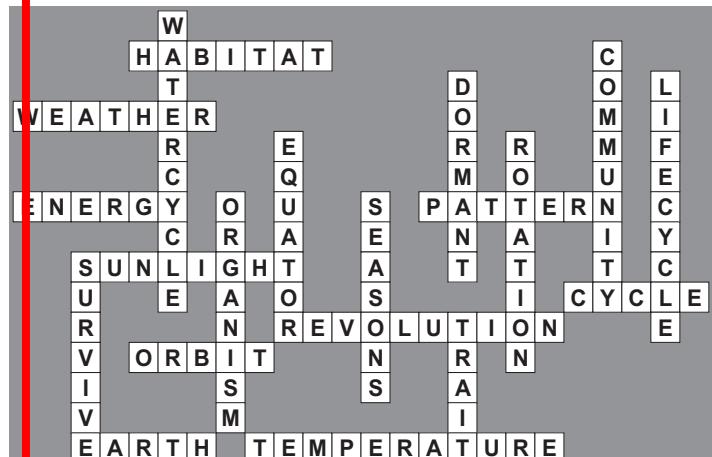
Make a Food Web! Students write the name of all the organisms that live in the rainforest ecosystem on individual file cards. Plan on using 50+ cards. Tape cards to the wall. Students cut lengths from a ball of yarn and connect the different animals and plants in the food web. What predator/prey relationships exist? Which organisms depend on others? What if a certain plant died? Which organisms would have less food?

Keys: Crossword Puzzles

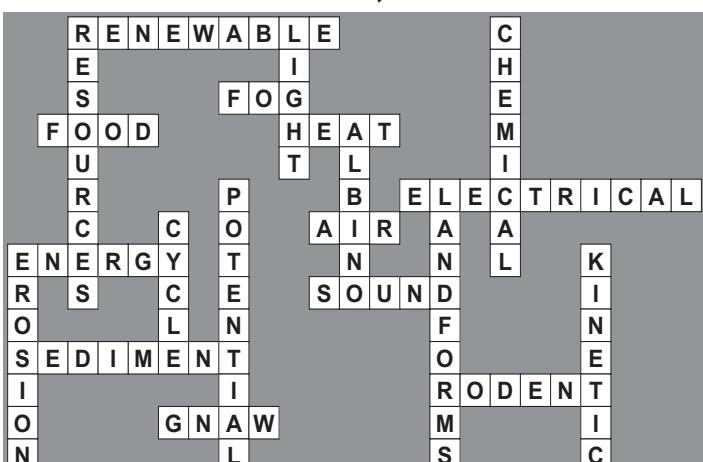
Lesson 1, P. 13.



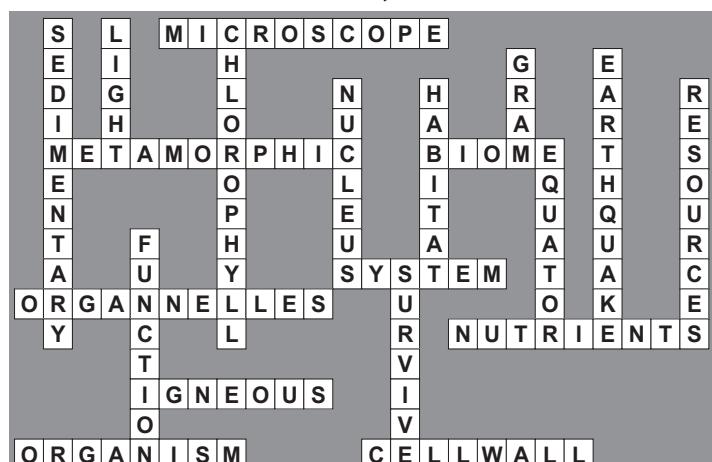
Lesson 2, P. 16.



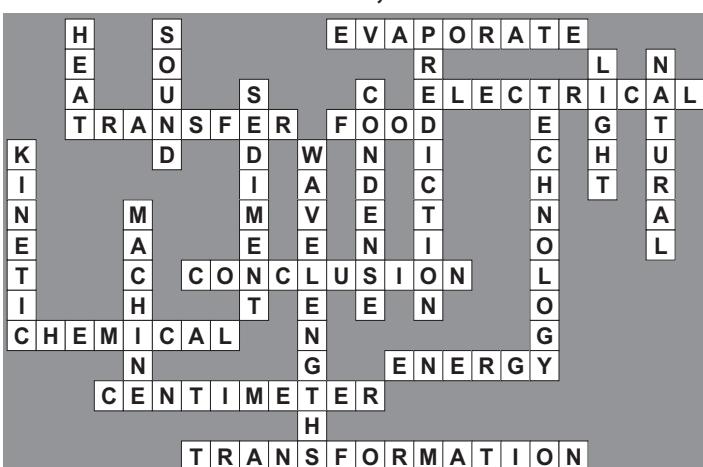
Lesson 3, P. 23.



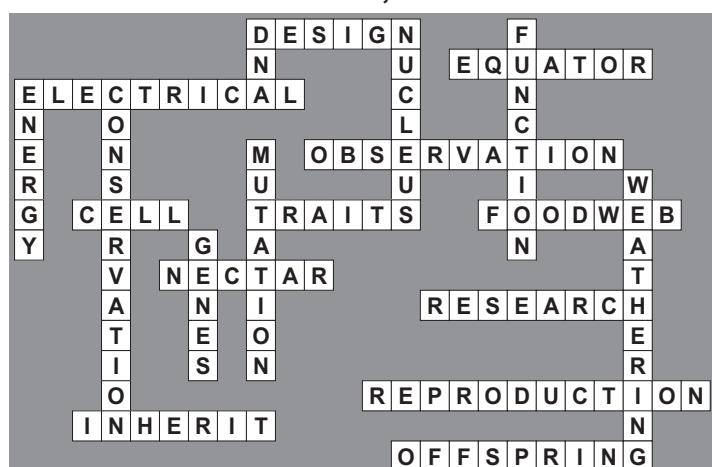
Lesson 4, P. 26.



Lesson 5, P. 33.



Lesson 6, P. 36.



Keys: Multiple Choice Activities

Lesson 1 (P. 14):

1. D
2. A

Lesson 2 (P. 17):

1. B
2. D

Lesson 3 (P. 24):

1. D
2. C

Lesson 4 (P. 27):

1. A
2. B

Lesson 5 (P. 34):

1. A
2. B

Lesson 6 (P. 37):

1. D
2. C

Lesson 7 (P. 46):

1. A
2. C

Lesson 8 (P. 49):

1. D
2. B

Lesson 9 (P. 56):

1. D
2. A

Lesson 10 (P. 59):

1. C
2. A

Lesson 11 (P. 66):

1. D
2. A

Lesson 12 (P. 69):

1. A
2. C

Lesson 13 (P. 78):

1. D
2. A

Lesson 14 (P. 81):

1. A
2. C

Lesson 15 (P. 88):

1. B
2. D

Lesson 16 (P. 91):

1. A
2. C

Lesson 17 (P. 98):

1. B
2. D

Lesson 18 (P. 101):

1. D
2. B

Answer Bank

This science book's 26 lessons, 9 assessments, and 34 puzzles intertwine for spiral learning.

As this is an actual lesson from the book and all the resources needed to solve the puzzle are not available in this sample, the authors have provided this Answer Bank, for this sample only, to help you solve the puzzle.

Omnivore Decomposer Function Energy Sunlight Plants Ecosystem Organism Centimeter

Carnivore Chain Photosynthesis Herbivore Environment Chlorophyll Producer System

Nutrient Consumer Food web

PUZZLEWISE™

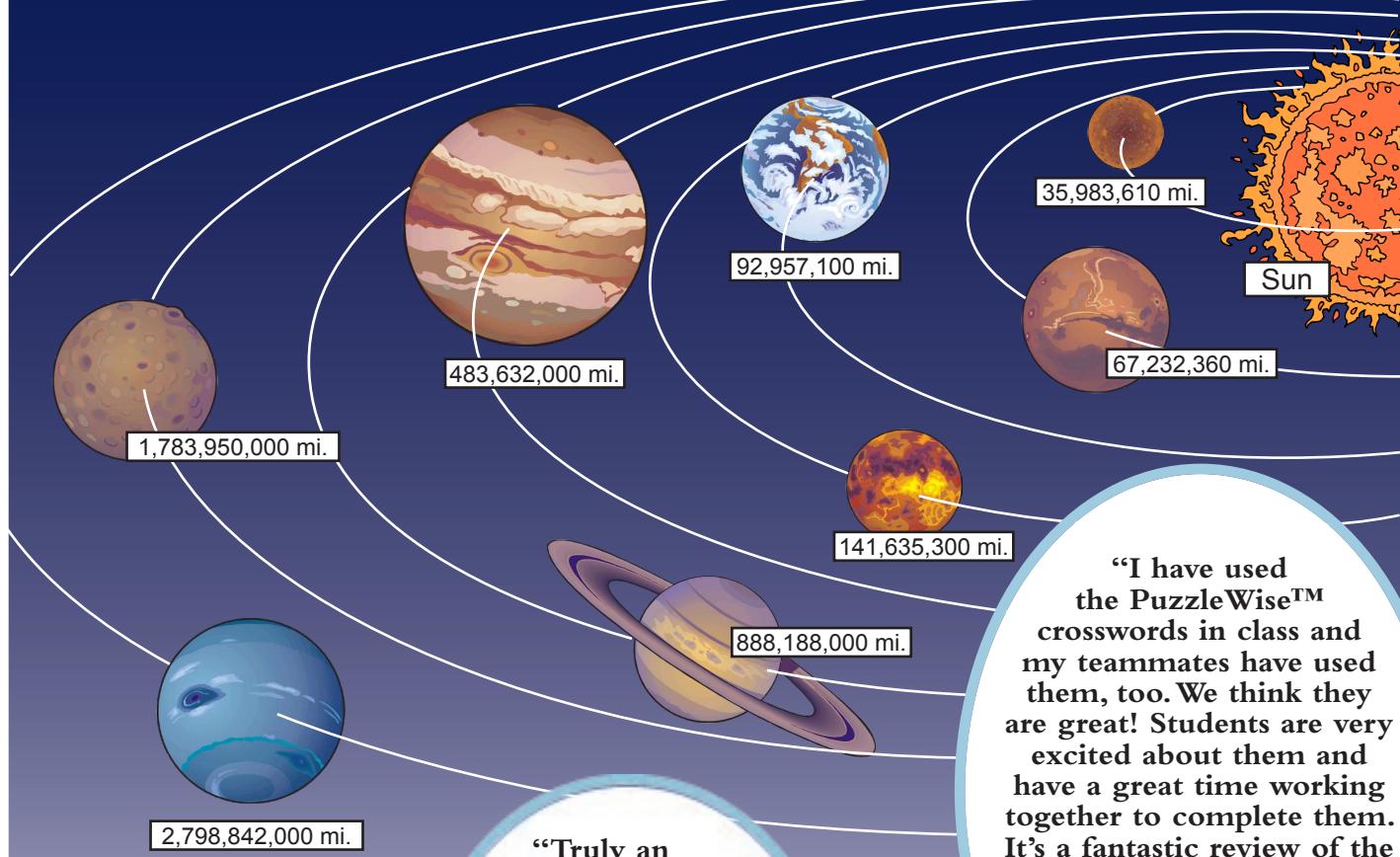
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—Dr. Betsy Rogers
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“These puzzles stretch your mind to new limits.”

—Larissa V.
Student

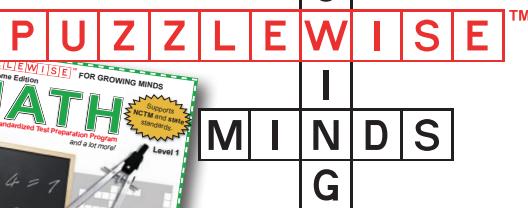
“I have used the PuzzleWise™ crosswords in class and my teammates have used them, too. We think they are great! Students are very excited about them and have a great time working together to complete them. It’s a fantastic review of the vocabulary and concepts. PuzzleWise™ crosswords have been perfect!”

—Wendy Tedford,
Fourth Grade Teacher

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