

Table of Contents

Introduction	4
--------------------	---

LIFE SCIENCE

Biomes and Ecosystems

What Is a Biome?	5
What Is a Food Chain?	6
Food Chain Crossword Puzzle	7
Food Webs	8
Deserts	9
Tropical Rain Forests	10
Evergreen Forests	11
Hardwood Forests	12
Grasslands and Prairies	13
Arctic Tundra	14
Life in a Marsh	15
Life in a Swamp	16
Life in a Bog	17

Animals and Adaptations

Animal Migration	18
How Animals Protect Themselves	19
Bird Beaks and Feet	20
How Animals Find and Catch Food	21
Animals Adapt to Their Environment	22
How Animals Reproduce	23
Spider or Insect?	24
Butterfly or Moth?	25
What Animal Are You Like?	26
Animals of Long Ago	27

Oceanography

Tide Pools	28
Sandy Beaches	29
The Ocean's Sunlight Zone	30
The Ocean's Twilight and Midnight Zones	31
Life on a Coral Reef	32
Sea Turtles	33
Marine Mammals	34
Types of Fish	35
Plankton	36

Seashell Animals	37
Seabirds	38
Sea Life Puzzle	39

Plants and Adaptations

Plants Adapt to Their Environment	40
How Plants Protect Themselves	41
How Plants Reproduce	42
Seed Dispersal	43
Unusual Plant Adaptations	44

EARTH SCIENCE

Natural Resources

What's in Our Trash?	45
Recycling	46
Fossil Fuels Give Us Energy	47
Conservation of Our Natural Resources	48
Saving Our Land and Soil	49
Silicon—From Sand to Computer Chips	50
Water Cycle	51
Air and Water Pollution	52

Geology

Structure of the Earth	53
Rock or Mineral?	54
Fire-Formed Rocks	55
Volcanoes	56
Sedimentary Rocks	57
Caves	58
Metamorphic Rocks	59
Rocks Are Recycled	60
Ores	61
Weathering and Erosion	62
Earthquakes	63
Uses of Rocks and Minerals	64
Geology Magic Square Puzzle	65
The Ocean Floor	66
Fossil Records	67

Astronomy

Our Solar System.....	68
The Moon	69
Phases of the Moon	70
The Sun and the Seasons	71
Rotation and Revolution	72
The Inner Planets	73
The Outer Planets.....	74
Outer Space Word Scramble	75
How Did the Planets Get Their Names?.....	76
Constellations	77
Why Do Stars Seem to Twinkle?	78
Traveling in Space.....	79

PHYSICAL SCIENCE

Electricity and Magnetism

Static Electricity.....	80
What Is a Battery?	81
What Is an Electric Circuit?.....	82
Conductors and Insulators	83
Voltage and Electric Safety	84
Electricity Can Produce Heat, Light, or Motion	85
Series Circuits	86
Parallel Circuits	87
Batteries in Series or Parallel	88
Electricity Word Search.....	89
What Is a Short Circuit?	90
What Type of Circuit Is It?	91
Electrical Resistance	92
An Electric Meter	93
Magnetic Attraction	94
How Does a Compass Work?	95
Magnetism and Electricity	96
Generators.....	97
Electric Motors	98

Light Energy

Light.....	99
What Is Visible Light?.....	100
Light and Objects	101
Reflection of Light	102
How We See Colors.....	103
Bending of Light Waves.....	104
Light Maze Puzzle.....	105

Heat Energy

Sources of Heat.....	106
How Heat Travels	107
Friction Causes Heat	108
Measuring Heat	109

Chemistry

States of Matter	110
Changes of State.....	111
Physical Changes.....	112
Atoms and Molecules.....	113
Mixing and Creating New Matter ...	114

Answer Key	115
------------------	-----

Introduction

Each book in the *Power Practice*™ series contains over 100 ready-to-use activity pages to provide students with skill practice. The fun activities can be used to supplement and enhance what you are teaching in your classroom. Give an activity page to students as independent class work, or send the pages home as homework to reinforce skills taught in class. An answer key is provided for quick reference.

The practical and creative activities in the science series provide the perfect way to help students develop the science process skills of observing, sorting, classifying, comparing, and analyzing.

Science 3–4 provides activities that illustrate and explain concepts in life science, earth science, and physical science, and the topics covered correlate with current science standards. Use the reproducible activity pages to enrich students' study of these key topics:

- Biomes and Ecosystems
- Animals and Adaptations
- Oceanography
- Plants and Adaptations
- Natural Resources
- Geology
- Astronomy
- Electricity and Magnetism
- Light Energy
- Heat Energy
- Chemistry

Use these ready-to-go activities to “recharge” skill review and give students the power to succeed!

What Is a Biome?

BIOMES AND ECOSYSTEMS

The word **biome** describes a large land area with a particular climate and vegetation. Each biome can be identified by its temperature and the amount of rainfall it receives. Desert biomes are hot and very dry. Grassland or prairie biomes are mild and dry. Hardwood and evergreen forests are cool and moist. Tropical rain forests are described as hot and very wet. The arctic tundra is very cold and dry.



Tundra



Desert



Grassland



Forest



Tropical Rain Forest

Use the words in the box to complete the sentences. You can use a word more than once.

desert

grassland

forest

tundra

rain forest

- 1 Snow covers the frozen ground in the _____ for most of the year.
- 2 You would find cows, sheep, and horses living in a _____.
- 3 A jungle is also called a tropical _____.
- 4 Cactus plants would live in a _____.
- 5 A _____ is a biome that has lots of trees growing in it.
- 6 The climate in a _____ is mild and dry.
- 7 A _____ is the biome that gets the most rain.
- 8 A _____ biome is hot and has very little rain most of the year.

What Is a Food Chain?

BIOMES AND ECOSYSTEMS

Green plants use the sun, air, and water to make food. Animals called **herbivores** eat the plants. Some animals eat other animals. They are called **carnivores**. Other animals, called **omnivores**, eat plants and animals. When plants and animals die, small organisms called **decomposers** cause their remains to decay. This process of who is eating whom is called a **food chain**.

Look at the picture. Follow the directions to mark the picture and answer the questions.



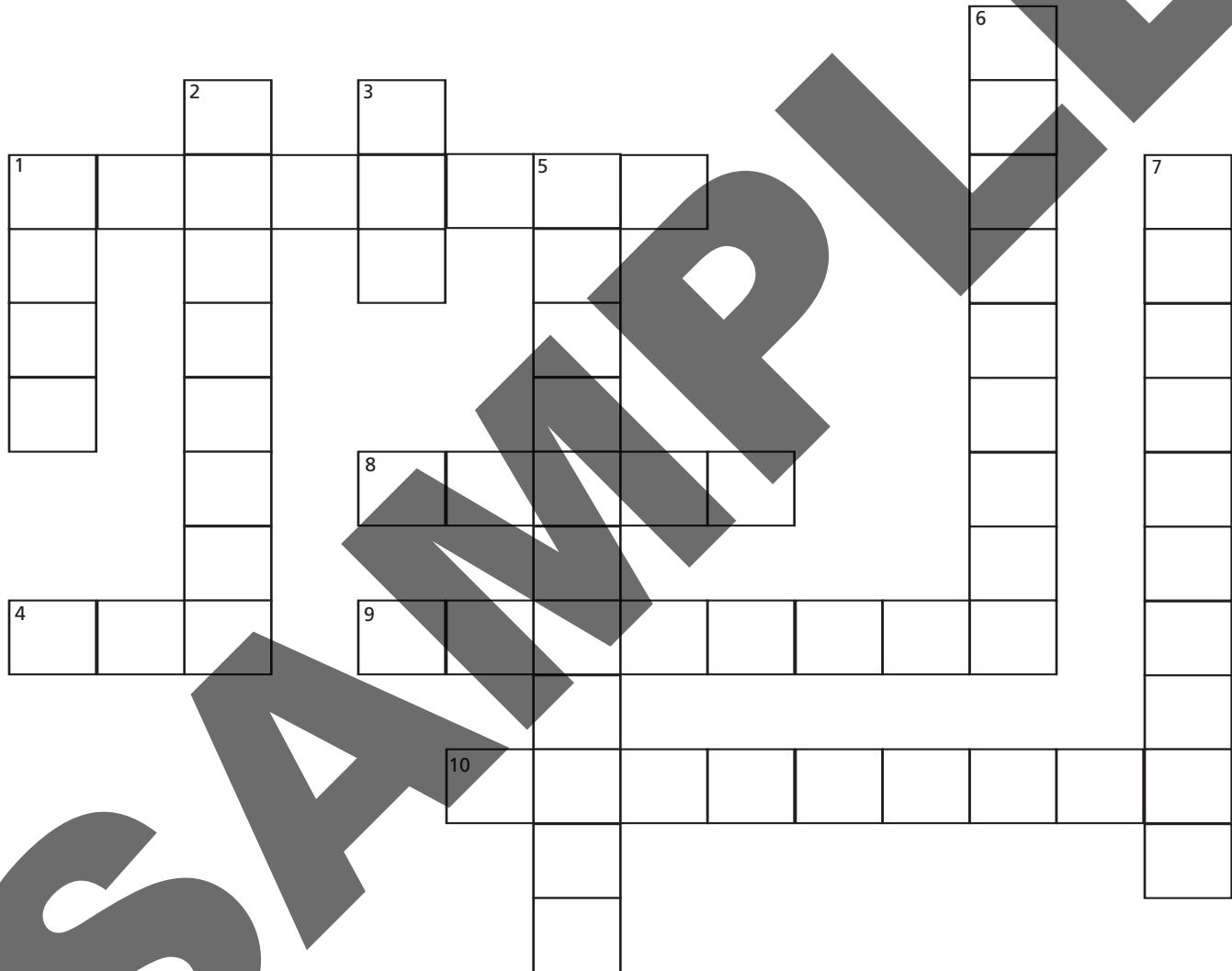
- 1 Color the food makers (producers) green.
- 2 Circle the herbivore.
- 3 Draw an X on the carnivore.
- 4 Where are most decomposers found? Circle one: air water soil

Food Chain Crossword Puzzle

BIOMES AND ECOSYSTEMS

Complete the crossword puzzle. Use the words from the box for help.

decomposer	carnivore	environment	consumer	omnivore	prey
producer	herbivore	air	sun	earth	



Across

1. A green plant that makes the food
4. What all animals need to breathe
8. The planet we live on
9. An animal that eats plants and meat
10. An animal that eats plants

Down

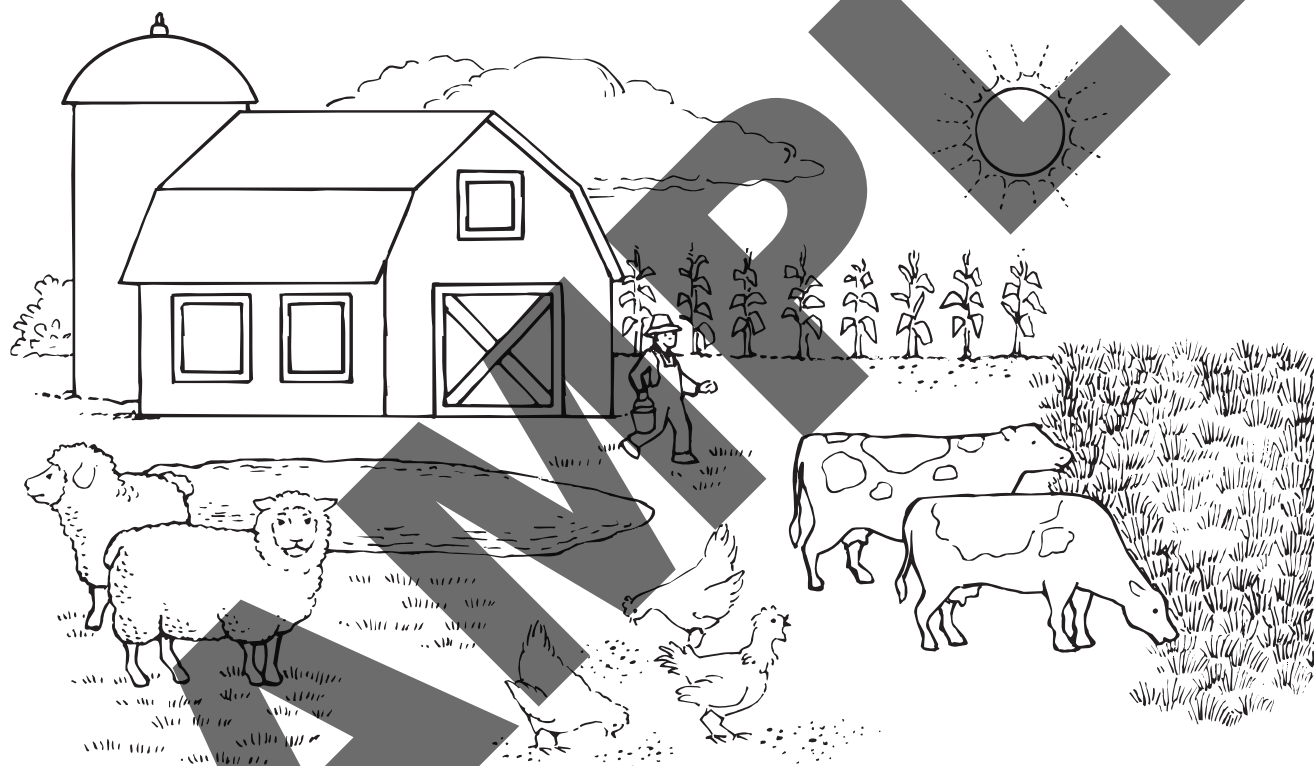
1. An animal that is hunted for food
2. Second step in a food chain; the role of animals
3. Source of energy for the food chain
5. All of our surroundings
6. An animal that eats other animals
7. Part of the food chain that causes dead plants and animals to decay

Food Webs

BIOMES AND ECOSYSTEMS

The sun, water, soil, and air are nonliving parts of an ecosystem. All the plants and animals are the living parts. Within any ecosystem there will be several different food chains. Many of these food chains overlap and interact. We call these overlapping food chains **food webs**. Parts of the food web depend on other parts.

Look at the picture. Follow the directions to mark the picture and answer the questions.



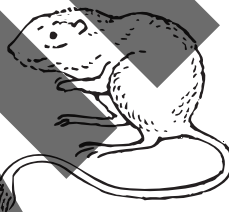
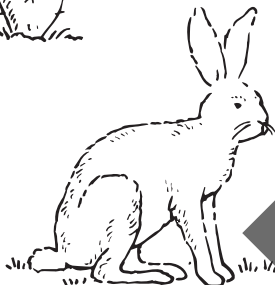
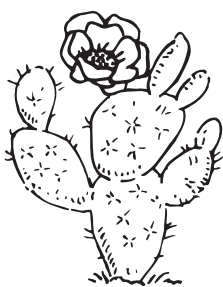
- 1 Draw a line from the sun to two producers.
- 2 Name 3 animals that eat the plants: _____, _____, _____.
- 3 Put a ✓ by all the things that need water.
- 4 The chickens and cows depend on the _____ to take care of them. In return, they provide food for him to eat.
- 5 Circle the animal that can give the farmer food and wool.

Deserts

BIOMES AND ECOSYSTEMS

A **desert** is a hot, dry biome that receives 10 inches (25.4 cm) or less of rainfall a year. Plants and animals that live in a desert have to be adapted to living with very little water. Cactus plants store water in their stems. Their leaves are small spines. Some desert animals sleep during the day and come out at night when it is cooler.

Look at the pictures and complete the descriptions.



1 I am a very tall cactus that can store water inside my stem. I am a _____.

2 I have big ears, which give off heat to cool me off as I hop very fast. I am a _____.

3 I like to run instead of fly. I eat lizards and snakes. I am a _____.

4 I hunt at night and howl to call my friends. I am a _____.

5 I am a small cactus that makes a fruit that looks like a pear. I am a _____.

6 I get my name because I can jump very high. I can go a long time without drinking water. I am a _____.

Tropical Rain Forests

BIOMES AND ECOSYSTEMS

Most tropical **rain forests** are found near the equator. These forests are hot all year long and receive at least 90 inches (229 cm) of rain a year. A tropical rain forest grows in layers. The tallest trees stick out above the **canopy**. The **understory** is home to smaller trees. The **forest floor** is shady. There are more kinds of plants and animals in a tropical rain forest than in any other biome.

Read each statement. Write T if the statement is true or F if it is false.

- 1 _____ Many birds live in the canopy layer.
- 2 _____ The forest floor is very sunny.
- 3 _____ Tropical rain forests are always hot and humid.
- 4 _____ Tropical rain forests are always green.
- 5 _____ Vines and orchid plants grow on tropical tree branches.
- 6 _____ Some animals live in the trees and never descend to the ground.
- 7 _____ We can eat a lot of the fruits that grow in a tropical rain forest.
- 8 _____ Tropical rain forests are the wettest biome.
- 9 _____ Most tropical rain forests are found in the far northern parts of the earth.
- 10 _____ Many animals we see in a zoo really come from a tropical rain forest.

