**Macmillan/McGraw-Hill** **Science:** **A** **Closer** **Look** **Grade** **4**

**Life** **Science** **UNIT** **A** **-** **LIVING** **THINGS**

**CHAPTER** **1** **-** **KINGDOMS** **OF** **LIFE** **Lesson** **1** **–** **Cells**

OBJECTIVE:

- Identify five functions of living things - Compare plant and animal cells

• What are living things?

• How do plant and animal cells compare? • How are cells grouped?

• How can you see cells?

**Lesson** **2** **–** **Classifying** **Living** **Things** OBJECTIVE:

- Define, list, and compare the kingdoms of living things

- Describe and compare different types of microorganisms

• How are living things classified?

• How can organisms be grouped within a kingdom? • What kinds of organisms have only one cell?

• How are organisms named?

**Lesson** **3** **–** **The** **Plant** **Kingdom** **(12** **pp)** OBJECTIVE:

- Describe the function of a plant’s roots, stems, and leaves - Explain the processes of photosynthesis and respiration

• How do we classify plants?

• How do plants get what they need? • Why are leaves important?

• What are mosses and ferns?

• How do we use plants?

**Lesson** **4** **–** **How** **Seed** **Plants** **Reproduce** **(12** **pp)** OBJECTIVE:

- Describe pollination in flowering plants

- Describe the life cycle of a flowering plant

• How do we classify seed plants?

 • How do seeds form?

 • How do seeds grow?

• How are plants alike and different from their parents?

• What are other ways plants can reproduce?

**CHAPTER** **2** **–** **THE** **ANIMAL** **KINGDOM** **Lesson** **1** **-** **Animals** **without** **Backbones**

OBJECTIVE:

- Define animal and list the basic needs and characteristics of animals - Summarize the characteristics of groups of invertebrates

• What are invertebrates?

• What are some invertebrates? • What are arthropods?

• How are worms classified?

**Lesson** **2** **–** **Animals** **with** **Backbones** OBJECTIVE

- Define vertebrates and describe their characteristics - Describe the seven groups of vertebrates

• What are vertebrates?

• What are some other vertebrate groups? • What are mammals?

**Lesson** **3** **–** **Systems** **in** **Animals** OBJECTIVE:

- Identify the seven organ systems of animals

- Summarize the parts and functions of the seven organ systems

• How do animals move and sense changes?

• How do air and blood travel in the body? • How is food broken down?

**Lesson** **4** **–** **Animal** **Life** **Cycles** OBJECTIVE:

- Compare incomplete metamorphosis and complete metamorphosis - Summarize how traits are passed from parent to offspring

• What are the stages of an animal’s life?

• What is metamorphosis?

• How do animals reproduce? • What is inherited?

**UNIT** **B** **ECOSYSTEMS**

**CHAPTER** **3** **EXPLORING** **ECOSYSTEMS**

**Lesson** **1** **-** **Introduction** **to** **Ecosystems** OBJECTIVE:

- Identify abiotic and biotic factors in an ecosystem - Describe how ecosystems differ from each other

• What is an ecosystem?

• What are populations and communities?

**Lesson** **2** **–** **Biomes** OBJECTIVE:

- Define a biome

- Describe Earth’s six main biomes

• What is a biome?

• What are grasslands and forests? •What are deserts, taiga, and tundra? • Are there water biomes?

**Lesson** **3** **–** **Relationships** **in** **Ecosystems** OBJECTIVE:

- Explain how energy is cycled through an ecosystem

- Describe food webs and give examples of predator and prey relationships

• How do organisms depend on one another? • What is a food chain?

• What is a food web?

• What is an energy pyramid?

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**CHAPTER** **4** **–** **SURVIVING** **IN** **ECOSYSTEMS** **Lesson** **1** **–** **Animal** **Adaptations**

OBJECTIVE:

- Define adaptations and give examples of how adaptations help animals survive in their habitats

- Define and describe the types of symbiotic relationships

• What are adaptations?

• What are some other adaptations of animals?

• How else do animals survive?

**Lesson** **2** **–** **Plants** **Respond** **to** **Their** **Surroundings** OBJECTIVE:

- Describe ways in which plants respond to their environments - Describe plant adaptations

• How do plants respond to their environments?

• What are some plant adaptations?

**Lesson** **3** **–** **Changes** **in** **Ecosystems** OBJECTIVE:

- Describe how living and nonliving things cause ecosystems to change.

- Describe the effects ecosystem changes have on living organisms

• What causes an ecosystem to change?

• How do people change ecosystems?

• What happens when ecosystems change? • How can people prevent extinction?

Earth Science

**CHAPTER** **5** **SHAPING** **EARTH**

**Lesson** **1** **–** **Earth**

 OBJECTIVE:

- Identify Earth’s landforms and the features of the ocean floor - Describe the layers of Earth

• What does Earth’s land look like?

• What does it look like where water meets land?

• What is below Earth’s surface

**Lesson** **2** **–** **The** **Moving** **Crust**

OBJECTIVE:

- Describe how plate motions build mountains and cause earthquakes and volcanoes

- Explain how scientists use seismic waves to study earthquakes

 • What distorts Earth’s crust?

• What causes earthquakes?

• How do scientists study earthquakes?

• What is a volcano?

**Lesson** **3** **–** **Weathering** **and** **Erosion** OBJECTIVE:

- Define and give examples of physical and chemical weathering

- Explain how erosion helps break down and build up Earth’s land

• What is weathering?

• What is erosion?

• How do glaciers shape the land?

• How do people shape the land?

**Lesson** **4** **–** **Changes** **caused** **by** **the** **Weather** OBJECTIVE:

- Describe the effects of floods, fires, tornadoes, and hurricanes

- Explain the causes and effects of mass wasting, landslides, and avalanches

• How do floods and fire change the land?

• How do storms change the land?

• How do landslides change the land?

**Lesson** **4** **–** **Changes** **caused** **by** **the** **Weather** OBJECTIVE:

- Describe the effects of floods, fires, tornadoes, and hurricanes

- Explain the causes and effects of mass wasting, landslides, and avalanches

• How do floods and fire change the land? • How do storms change the land?

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