

Oak Meadow

6

Basic Life Science

**Assignment Summaries and
Learning Assessments**



Oak Meadow

Grade 6

Basic Life Science

Assignment Summaries and
Learning Assessments



Oak Meadow

Oak Meadow, Inc.

Post Office Box 615

Putney, Vermont 05346

oakmeadow.com

Lesson 1

Science and the Scientific Method

ASSIGNMENT SUMMARY

- ☐ Analyze the caffeine experiment.
- ☐ Test your power of observation.
- ☐ Choice assignment
- ☐ Complete lesson 1 test.

Learning Assessment

These assessment rubrics are intended to help track student progress throughout the year. Please remember that these skills continue to develop over time. Parents and teachers can use this space to make notes about the learning the student demonstrates or any skills that might need work.

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Demonstrates knowledge of the scientific method				
Shows understanding of controlled experiments and variables				
Forms a hypothesis based on previous knowledge				
Explains the steps of the scientific method				
Reflects on experiment process and ways to gain more accurate results				

Lesson 2

The Environment

ASSIGNMENT SUMMARY

- ☐ Record your observation-specific environments.
- ☐ Choice Assignment
- ☐ Complete lesson 2 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Records observations in detail				
Shows awareness of change in the natural world				

Lesson 3

Biology

ASSIGNMENT SUMMARY

- ☐ Make a list of requirements for survival.
- ☐ Describe characteristics that contribute to an organism's success.
- ☐ Choice assignment
- ☐ Complete lesson 3 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Identifies requirements for human survival				
Shows understanding of role of environment in survival				
Identifies characteristics that contribute to the success of an organism				
Differentiates between living and nonliving things				
Identifies characteristics of living organisms				

Lesson 4

Cells

ASSIGNMENT SUMMARY

- ☐ Make a list of the levels of organization of a human organism.
- ☐ Choice assignment
- ☐ Complete lesson 4 test.
- ☐ Complete Unit I Review.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between plant and animal cells				
Differentiates between tissues and organs				
Identifies examples of tissues and organs in the human body				
Shows understanding of different levels of cellular organization				
Identifies cell structures and functions				

Lesson 5

Green Plants

ASSIGNMENT SUMMARY

- ☐ Begin sprouting a seed.
- ☐ Choice assignment
- ☐ Complete lesson 5 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Records observations in detail				
Collects data over time				
Creates accurate, labeled scientific drawings				
Demonstrates knowledge of seed structure and function				
Identifies requirements for seed germination				
Demonstrates knowledge of seed dispersal				

Lesson 6

The Seedling

ASSIGNMENT SUMMARY

- ☐ Observe and describe plant roots.
- ☐ Draw and label a picture of the parts of different plants.
- ☐ Explain the functions of the parts of a green plant.
- ☐ Choice assignment
- ☐ Complete lesson 6 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Records observations in detail				
Collects data over time				
Creates accurate, labeled, scientific drawings				
Demonstrates knowledge of root structure and function in plants				
Identifies functions of roots and leaves				

Lesson 7

Soil and Nutrients

ASSIGNMENT SUMMARY

- ☐ Research three different types of fertilizers.
- ☐ Consider different elements of gardening.
- ☐ Identify soil composition.
- ☐ Choice assignment
- ☐ Complete lesson 7 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Demonstrates knowledge of soil composition				
Shows understanding of different composting methods				
Demonstrates awareness of the relationship between healthy soil and healthy plants				
Displays focused observation skills				
Records observations in detail				
Collects data over time				

Lesson 8

Stems and Transportation

ASSIGNMENT SUMMARY

- ☐ Perform an experiment with celery.
- ☐ Perform a water vapor experiment.
- ☐ Complete the seed growth experiment.
- ☐ Choice assignment
- ☐ Complete lesson 8 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Demonstrates knowledge of the scientific method				
Shows understanding of controlled experiments and variables				
Forms a hypothesis based on previous knowledge				
Follows the steps of the scientific method				
Draws conclusions based on results				
Reflects on experiment process and ways to gain more accurate results				
Records observations in detail				
Collects data over time				

Lesson 9

Photosynthesis

ASSIGNMENT SUMMARY

- ☐ Perform a light deprivation experiment.
- ☐ Complete an assignment on photosynthesis.
- ☐ Perform a spinach dehydration experiment.
- ☐ Choice assignment
- ☐ Complete lesson 9 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between atoms and molecules				
Demonstrates knowledge of process of photosynthesis				
Provides specific examples to support statements				
Follows the steps of the scientific method				
Conducts experiments with controlled variables				
Forms a hypothesis based on previous knowledge				
Displays focused observation skills				
Records observations in detail				
Collects data over time				
Draws conclusions based on results				
Reflects on experiment process and ways to gain more accurate results				

Lesson 10

Flowers and Plant Reproduction

ASSIGNMENT SUMMARY

- ☐ Draw and label a picture of a flower.
- ☐ List ten plants that your family eats and classify them as fruits, seeds, or both.
- ☐ Choice assignment
- ☐ Complete lesson 10 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Creates accurate, labeled scientific drawings				
Differentiates between seeds and fruits of plants				
Provides specific examples to support statements				
Identifies different types of plants				
Demonstrates knowledge of the structure and function of the parts of a flower				
Identifies different methods of pollination				

Lesson 11

How Plants Sense and Respond

ASSIGNMENT SUMMARY

- ☐ Explain plant responses to light.
- ☐ Perform a gravitropism experiment.
- ☐ Choice assignment
- ☐ Complete lesson 11 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Displays focused observation skills				
Differentiates between phototropism and gravitropism				
Records observations in detail				
Provides specific examples to support statements				
Demonstrates knowledge of role of plant hormones				

Lesson 12

Cell Division

ASSIGNMENT SUMMARY

- ☐ Perform cultivation experiment.
- ☐ Choice assignment
- ☐ Complete lesson 12 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Explains the process of cell division				
Differentiates between asexual and sexual reproduction in plants and animals				
Displays focused observation skills				
Records observations in detail				
Provides specific examples to support statements				
Collects data over time				
Draws conclusions based on results				

Lesson 13

Groups of Living Things

ASSIGNMENT SUMMARY

- ☐ Describe a classification system you use.
- ☐ Develop a classification system for food.
- ☐ Identify similar organisms based on classification.
- ☐ Choice assignment
- ☐ Complete lesson 13 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Sorts and classifies items according to various criteria				
Demonstrates knowledge of scientific classification system				
Provides specific examples to support statements				

Lesson 14

Other Types of Living Organisms

ASSIGNMENT SUMMARY

- ☐ Write a research report.
- ☐ Choice assignment
- ☐ Complete lesson 14 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between protists, bacteria, and fungi				
Provides specific examples to support statements				
Research report: Uses multiple sources				
Research report: Demonstrates good note-taking skills				
Research report: Organizes information using an outline, idea web, etc.				
Research report: Applies skills in spelling, grammar, and writing to create a rough draft				
Research report: Provides both in-text and full citations for all sources				
Research report: Revises, edits, and proofreads to create a polished final report				

Lesson 15

The Plant Kingdom

ASSIGNMENT SUMMARY

- ☐ Find specimens of different groups of plants.
- ☐ Research one or two types of plants.
- ☐ Choice assignment
- ☐ Complete lesson 15 test.
- ☐ Complete Unit II Review.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Identifies plant specimens in local environment				
Creates detailed, labeled scientific drawings				
Displays focused observation skills				
Provides specific examples to support statements				
Identifies four main botanical classifications for plants				
Demonstrates understanding of role and significance of pioneer organisms				

Lesson 16

The Animal Kingdom

ASSIGNMENT SUMMARY

- ☐ Classify animals in different ways.
- ☐ Give information about different types of animals.
- ☐ Choice assignment
- ☐ Complete lesson 16 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Sorts and classifies animals according to different criteria				
Differentiates between vertebrates and invertebrates				
Provides specific examples to support statements				

Lesson 17

Simple Animals

ASSIGNMENT SUMMARY

- ☐ Identify traits and give examples of different types of animals.
- ☐ Draw a picture of a coral reef.
- ☐ Choice assignment
- ☐ Complete lesson 17 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Creates detailed, labeled scientific drawings				
Differentiates between different types of simple organisms				
Provides specific examples to support statements				

Lesson 18

More Animal Phyla

ASSIGNMENT SUMMARY

- ☐ Explain the difference between arthropods and chordates.
- ☐ Visit a pet store, farm, or animal shelter, and classify the animals according to the phylum to which they belong.
- ☐ Choice assignment
- ☐ Complete lesson 18 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Sorts and classifies animals according to different criteria				
Differentiates between arthropods and chordates				
Provides specific examples to support statements				

Lesson 19

Vertebrates

ASSIGNMENT SUMMARY

- ☐ Research and write a one-page report on a reptile or bird.
- ☐ Categorize vertebrates according to the five classifications.
- ☐ Explain the difference between gills and lungs.
- ☐ Choice assignment
- ☐ Complete lesson 19 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between fish and amphibians				
Differentiates between warm-blooded and cold-blooded animals				
Sorts and classifies animals according to different criteria				
Research report: Uses multiple sources				
Research report: Demonstrates good note-taking skills				
Research report: Organizes information using an outline, idea web, etc.				
Research report: Applies skills in spelling, grammar, and writing to create a rough draft				
Research report: Provides both in-text and full citations for all sources				
Research report: Revises, edits, and proofreads to create a polished report				

Lesson 20

Animal Life Cycles

ASSIGNMENT SUMMARY

- ☐ Identify your inherited traits.
- ☐ Write a one-page essay expressing your views on genetic engineering.
- ☐ Choice Assignment
- ☐ Complete lesson 20 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Demonstrates understanding of inherited traits				
Identifies different types of reproduction				
Differentiates between dominant and recessive genes				
Demonstrates knowledge of the benefits and risks of genetic engineering				
Provides specific examples to support statements				
Essay: Uses multiple sources				
Essay: Provides full citations for all sources				
Essay: Revises, edits, and proofreads to create a polished final essay				
Identifies stages of butterfly metamorphosis				
Creates accurate, labeled scientific drawings				
Identifies stages of human development				

Lesson 21

Animal Behavior

ASSIGNMENT SUMMARY

- ☐ Describe the characteristics of your own niche.
- ☐ List and categorize the food in your diet.
- ☐ Choice assignment
- ☐ Complete lesson 21 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between learned and instinctive behavior				
Traces dietary sources				
Differentiates between herbivores, carnivores, and omnivores				
Differentiates between predators, prey, and scavengers				
Demonstrates knowledge of how niches vary among different organisms				
Provides specific examples to support statements				

Lesson 22

Food Chains

ASSIGNMENT SUMMARY

- ☐ Differentiate between a food chain and a food web.
- ☐ Draw the food chain for a single meal.
- ☐ Draw a chart of the food web of which you are a part.
- ☐ Choice assignment
- ☐ Complete lesson 22 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Demonstrates knowledge of food chain				
Identifies examples related to personal experience				
Differentiates between food chain and food web				
Differentiates between producers, consumers, and decomposers				
Shows understanding of relationship between dietary choices and environmental issues				

Lesson 23

Ecology and the Environment

ASSIGNMENT SUMMARY

- ☐ Choose an animal or plant and describe its habitat.
- ☐ Describe your own personal habitat.
- ☐ Choice assignment
- ☐ Complete lesson 23 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Demonstrates knowledge of animal habitats				
Shows awareness of role and importance of a balanced ecosystem				
Identifies ways in which an ecosystem can be out of balance				
Shows understanding of relationship between living and nonliving things in an environment				

Lesson 24

Populations

ASSIGNMENT SUMMARY

- ☐ Explain the difference between a census and a sample, and a population and a community.
- ☐ Compute a bird population using the sampling and census methods.
- ☐ Create a line graph showing population change over time.
- ☐ Choice assignment
- ☐ Complete lesson 24 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between a census and a sample of a population				
Differentiates between a population and a community				
Compares accuracy of different methods of measuring populations				

Lesson 25

The Balance of Nature

ASSIGNMENT SUMMARY

- ☐ Explore how human activities affect natural habitats.
- ☐ Write about how to save a species from extinction.
- ☐ Choice assignment
- ☐ Complete Unit III review.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Shows awareness of the effect of human activity on natural habitats				
Provides specific examples to support statements				
Identifies ways to protect endangered species from extinction				
Demonstrates knowledge of global warming				
Shows understanding of relationship between deforestation and global warming				

Lesson 26

Human Life

ASSIGNMENT SUMMARY

- ☐ Explain the difference between oxidation and digestion.
- ☐ Research food pyramids and charts.
- ☐ Track food intake and categorize into food groups.
- ☐ Choice assignment
- ☐ Complete lesson 26 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between digestion and oxidation				
Collects and categorizes data about diet				
Compares different types of balanced diets				
Applies knowledge of balanced diets to personal diet				
Shows understanding of the roles of different food groups in a balanced diet				

Lesson 27

Proteins

ASSIGNMENT SUMMARY

- ☐ Explain how toxins are removed from the body.
- ☐ Plan balanced meals for two days.
- ☐ Identify the vitamins and minerals in the food you eat.
- ☐ Choice assignment
- ☐ Complete lesson 27 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Explains the process by which toxins are removed from the body				
Applies knowledge of nutrition to meal planning				
Identifies vitamin and mineral content of different foods				
Understands role and significance of essential amino acids				
Understands the role and significance of complete proteins				

Lesson 28

The Digestive System

ASSIGNMENT SUMMARY

- ☐ Explain the difference between the urinary and digestive systems.
- ☐ Draw a picture of your digestive system.
- ☐ Choice assignment
- ☐ Complete lesson 28 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Explains the process of digestion in the human body				
Identifies individual parts of the digestive system and the role of each				
Differentiates between the urinary and the digestive systems				

Lesson 29

The Respiratory System

ASSIGNMENT SUMMARY

- ☐ Describe how the respiratory system cleans the air we breathe.
- ☐ List the functions of the trachea.
- ☐ Breathe on a mirror or window and explain what happened and why it happened.
- ☐ Draw and color or paint a picture of the respiratory system.
- ☐ Choice assignment
- ☐ Complete lesson 29 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Explains the process of respiration				
Identifies individual parts of the respiratory system and the role of each				
Creates accurate, labeled scientific drawings				

Lesson 30

The Circulatory System

ASSIGNMENT SUMMARY

- ☐ Explain the roles of capillaries, arteries, and veins.
- ☐ Write about the three types of blood cells.
- ☐ Explore how pulse rate changes with exercise.
- ☐ Choice assignment
- ☐ Complete lesson 30 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between capillaries, veins, and arteries				
Demonstrates knowledge of different types and functions of blood cells				
Identifies individual parts of the circulatory system and the role of each				
Demonstrates knowledge of how the respiratory system and circulatory system are connected				

Lesson 31

The Lymphatic and Endocrine Systems

ASSIGNMENT SUMMARY

- ☐ Differentiate between open and closed organ systems.
- ☐ Explain what a hormone is.
- ☐ Identify which endocrine gland is acting in each of the examples.
- ☐ Choice assignment
- ☐ Complete lesson 31 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between open and closed organ systems				
Demonstrates knowledge of the function and organs of the lymphatic system				
Identifies individual parts of the endocrine system and the role of each				
Demonstrates knowledge of how hormones are related to body changes				

Lesson 32

The Skeletal System

ASSIGNMENT SUMMARY

- ☐ Identify what type of joint each specified one is.
- ☐ Find your bones and draw them.
- ☐ Choice assignment
- ☐ Complete lesson 32 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between different types of joints				
Demonstrates knowledge of the function and parts of the skeletal system				

Lesson 33

The Muscular System

ASSIGNMENT SUMMARY

- ☐ Describe several skeletal or striated muscles.
- ☐ Describe muscle use in daily life.
- ☐ Choice assignment
- ☐ Complete lesson 33 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between different types of muscles				
Differentiates between roles of muscles, tendons, and ligaments				
Demonstrates knowledge of the function and parts of the muscular system				
Provides specific examples to support statements				
Identifies importance of muscular health in daily life				

Lesson 34

The Nervous System

ASSIGNMENT SUMMARY

- ☐ Explain the difference between a neuron and a synapse.
- ☐ List the three major parts of the brain and describe their main functions.
- ☐ Choice assignment
- ☐ Complete lesson 34 test.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Differentiates between neurons and synapses				
Differentiates between roles of the different parts of the brain				
Demonstrates knowledge of the function and parts of the nervous system				
Provides specific examples to support statements				
Identifies importance of protecting the spinal cord from injury				

Lesson 35

The Senses

ASSIGNMENT SUMMARY

- ☐ List your five sense organs and describe the role of each.
- ☐ Describe how your senses work together.
- ☐ Give an example of how your instincts or intuition have been used in your life.
- ☐ Write a description or short story about living without the sense of taste or smell.
- ☐ Choice assignment
- ☐ Complete final unit review.

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Demonstrates knowledge of role of sensory organs in daily life				
Shows understanding of how senses work together				
Demonstrates knowledge of the function and parts of different sensory organs				
Provides specific examples to support statements				

Lesson 36

Final Projects

ASSIGNMENT SUMMARY

☐ Final projects

Learning Assessment

SKILLS	Developing	Consistent	Competent	Notes
Reflects on learning experiences				
Demonstrates awareness of the interrelatedness of scientific topics covered in this course				