Pearson

Science 3

Semester A Summary:

In this course, the student will explore forces and motion, simple machines, magnets, and several topics related to life science. These topics include plant and animal life cycles. The student will have many opportunities to test hypotheses, experiment, and make real world connections.

Semester A Outline

1. **Course Overview**
    1. Course Overview
2. **Forces and Motion**
    1. Forces and Motion Introduction
    2. States of Matter
        - In this lesson, you will plan and carry out an investigation where you will measure states of matter.
    3. Objects in Motion and at Rest
        - In this section, you will describe objects in motion.
    4. Tug of War
        - In this section, you will describe how unbalanced forces affect moving and non-moving objects.
    5. Changes in Motion
        - In this section, you will analyze data collected regarding an object's motion at different speeds and directions.
    6. Patterns of Motion
        - In this section, you will predict how an object's motion will behave.
    7. Moving a Feather Part 1 Portfolio
        - In this section, you will investigate how balanced and unbalanced forces affect the motion of an object.
    8. Moving a Feather Part 2 Portfolio
        - In this section, you will record how balanced and unbalanced forces affect the motion of an object.
    9. Moving a Feather Part 3 Portfolio
        - In this section, you will summarize the results of your investigation about how balanced and unbalanced forces affect the motion of an object.
    10. Forces and Motion Apply
        - In this section, you will design a museum activity to teach people about balanced and unbalanced forces and motion.
    11. Force and Motion Review
    12. Forces and Motion Unit Test

3. **Simple Machines**
    1. Simple Machines Introduction
    2. Machines and their Uses
        - In this section, you will make a list of simple machines, tell how they are used, and learn how compound machines are different from simple machines.
    3. Simple Machines: Plan
        - In this section, you will develop a plan to build a simple machine.
    4. Simple Machines: Design
        - In this section, you will use a design to build a simple machine.
    5. Simple Machines: Explain
        - In this section, you will write an explanation about how the simple machine works.
    6. Simple Machines Apply
    7. Simple Machines Review and Reflect
    8. Simple Machines Unit Test
4. **Magnets**
    1. Magnets Introduction
    2. Characteristics of Magnets
        - In this section, you will describe characteristics of magnets.
    3. Investigating Magnets
        - In this section, you will describe how a magnet affects objects that are not touching it.
        - In this section, you will investigate how a magnet affects objects that are not touching it.
    4. Electric Charges
        - In this section, you will explain electric charges.
        - In this section, you will investigate how a magnet affects objects that are not touching it.
    5. Magnets and Electricity
        - In this section, you will explain how a magnet or electricity affects objects that are not touching.
    6. Magnets are Useful Portfolio
        - In this section, you will solve problems using magnets.
    7. Designing Magnet Solutions
        - In this section, you will design a solution to a problem by using magnets.
    8. Magnet Solutions Portfolio
        - In this section, you will solve problems using magnets.
    9. Improving Design Solutions Portfolio
        - In this section, you will improve your magnet solution.
    10. Magnet Apply
        - In this section, you will explain how to use magnets to solve a problem.
    11. Magnet Review
    12. Magnets Unit Test
5. **Plant and Animal Life Cycles**
    1. Plant and Animal Life Cycle Intro
    2. Animal Life Cycles
        - In this section, you will identify parts of the life cycle of animals.

3. Plant Life Cycles
    - In this section, you will identify parts of the life cycle of plants.
4. Life Cycle Comparison
    - In this section, you will compare the life cycles of living things in a venn diagram.
    - In this section, you will model the life cycles of living things.
5. Plant Needs
    - In this section, you will identify what plants need to grow, develop, and reproduce.
6. Investigate Properties of Soil
    - In this section you will describe soil.
    - In this section you will analyze soil data.
7. Plant Needs Portfolio: Plan
    - In this section, you will investigate what a plant needs to grow and change.
8. Plant Needs Portfolio: Investigate
    - In this section, you will investigate what a plant needs to grow and change.
9. Plant Needs Portfolio: Communicate
    - In this section, you will explain what a plant needs to grow, change, and reproduce.
10. Plants and Animal Life Cycles Apply
    - In this section, you will create a display about the life cycles of plants and animals as well as the basic needs of plants.
11. Plant and Animal Life Cycles Review
12. Plant and Animal Life Cycles Unit Test

6. Heredity

1. Heredity Unit Introduction
2. Influences on Traits
    - In this section, you will determine the difference between inherited traits and traits that are affected by the environment.
3. Plant Trait Variations
    - In this section, you will analyze data about differences in traits in a plant population.
    - In this section, you will organize data.
4. Inherited Traits of Plants
    - In this section, you will compare data to find differences in inherited traits among offspring of different plant parents.
    - In this section, you will analyze graphs to compare data.
    - In this section, you will examine seeds to determine possible traits of trees and seeds.
5. Comparing Inherited Traits in Animals
    - In this section, you will compare differences in inherited traits among offspring of different animal parents.
6. Comparing Offspring to Parent
    - In this section, you will explain why offspring may be similar to or different from their parents.
7. Environmental Influences
    - In this section, you will identify which traits in an organism are affected by the environment.

8. Heredity Unit Apply
    - In this section, you will construct a visual model to show which traits are affected by the environment and which traits are not.
9. Heredity Review
10. Heredity Unit Test

Semester B Summary:

In this course, the student will explore variation and change, such as the characteristics of living versus non-living organisms and environmental change, and life science topics. These include habitats, fossils, and weather and climate. The student will have many opportunities to test hypotheses, experiment, and make real world connections.

Semester B Outline

1. Course Overview
1. Science 3 B Course Overview

2. Variation and Change
1. Variation and Change Introduction
2. Features of Living Things
    - In this section, you will make a list of common features of living things.
3. Living Things and Non Living Thing
    - In this section, you will distinguish between living things and nonliving things.
4. Compare Living and Non Living Things
    - In this section, you will examine nonliving things that seem to be alive and living things that do not seem to be alive.
5. Characteristics of Living Things
    - In this section, you will explain what characteristics living things have.
6. Trait Variation
    - In this section, you will identify how a variation in a trait may allow an organism to survive in an environment.
7. Variation and Reproduction
    - In this section, you will research how a variation may help an organism find a mate and reproduce.
8. Variation and Change Apply
    - In this section, you will use data to explain how an organism's variation may help the organism survive, find a mate, and reproduce.
9. Variation and Change Review
10. Variation and Change Unit Test

3. Habitats
1. Habitats Introduction
2. Resources in Habitats
    - In this section, you will identify the things in a habitat that organisms need to live.
3. Types of Resources
    - In this section, you will identify resources as basic materials, produce materials, or nonmaterials.
    - In this section, you will discover how living in a group can be both good and bad for an animal and investigate natural resources and conservation.
4. Living Things in Habitats

- In this section, you will find examples of relationships between living things and their habitat.

5. Habitats
    - In this section, you will explain how the parts of a habitat depend on each other.
6. Survival
    - In this section, you will analyze data to explain which organisms in a group have the best chance of survival.
7. Habitats Apply
8. Habitats Review and Reflect
9. Habitats Unit Test

4. Environmental Changes

1. Environmental Changes Introduction
2. Population Survival
    - In this section, you explore how physical and behavioral adaptations can help animals to survive.
3. Impact of Reproduction Rates
    - In this section, you will make a claim about how reproduction rates affect the survival of a population.
4. Environmental Changes: Research
    - In this section, you will research a solution to a problem caused when people change the environment, harming plant and animal life.
5. Environmental Changes: Analyzing
    - In this section, you will make a claim about wildlife corridors.
6. Environmental Changes: Discussion
    - In this section, you will give effective feedback to peers.
7. Environmental Changes: Discussion
8. Environmental Changes Apply
9. Environmental Changes Review
10. Environmental Changes Unit Test

5. Fossils

1. Fossils Introduction
2. Fossil Formation
    - In this section, you will collect information about how fossils form.
3. Fossil Clues
    - In this section, you will make a list of the information that fossils tell us about time periods in the past.
4. Fossil Discovery
    - In this section, you will record observations about organisms that no longer exist.
5. Extinction
    - In this section, you will research an organism that no longer exists. You will also research the organism's environment.
6. Characteristics of Organisms
    - In this section, you will describe the unusual features of an organism that lived long ago in a different environment.
7. Fossils Apply
    - In this section, you will make a model to show how fossils form and what they tell us about the past.
8. Fossils Review and Reflect

9. Fossils Unit Test

6. Weather and Climate

1. Weather and Climate Introduction
2. Climate
    - In this section, you will investigate and understand that the water cycle is important to life on Earth.
    - In this section, you will define the different aspects of climate across the different regions of the Earth
3. Climate Data
    - In this section, you will interpret climate data in four different regions of the world.
4. Comparing Climates
    - In this section, you will compare the climates in different parts of the world using tables and charts.
    - In this section, you will compare the climates in different parts of the world.
5. Weather Data
    - In this section, you will measure a weather feature over time.
6. Comparing Weather Data
    - In this section, you will analyze weather patterns and use weather data to make estimates.
7. Weather Trends
    - In this section, you will create a bar graph to track a single weather feature during a season.
8. Weather Hazards Portfolio: Research
    - In this section, you will make a list of dangerous kinds of weather.
9. Weather Hazards Portfolio: Design
    - In this section, you will research how humans can reduce the effects of dangerous weather.
10. Weather Hazards Portfolio: Analyzing
    - In this section, you will make a claim about how a solution to reducing the effects of dangerous weather can be both good and bad.
11. Weather Hazards Portfolio: Feedback
    - In this section, you will analyze a friend's solution for reducing the effects of dangerous weather.
12. Weather and Climate Review and Reflect
13. Weather and Climate Unit Test