

Grade Level: 6

Course Title: Science

Topic/Concept: Be A Scientist

Time Allotment: 3 weeks

Unit Sequence: 1

Major Concepts to be learned:

1. Investigate how science is done
2. How scientists work
3. How gravity works

Expected Skills to be demonstrated:

1. Make hypothesis how gravity works
2. Explain how gravity works
3. Discuss how scientist do their jobs
4. Explain why scientists use models and how models help scientists understand

PA Standards/Anchors:

Eligible Content:

3.2

3.2.7

Instructional Strategies:

Assessments:

Group work
Discussion
Lecture
Experiments/Projects

- Worksheets
- Tests
- Quizzes
- Projects

Grade Level: 6

Course Title: Science

Topic/Concept: Matter and Energy

Time Allotment: 9 weeks

Unit Sequence: 2

Major Concepts to be learned:

1. Matter and Energy

Expected Skills to be demonstrated:

1. Explore how different substances float on top of each other
2. Explore how to learn about something that cannot be seen
3. Identify measurements and physical properties of matter
4. Explore what chemical changes are
5. Compare and contrast physical changes and chemical changes
6. Compare and contrast chemical changes
7. Compare and contrast different kinds of mixtures
8. Compare and contrast metals, nonmetals, and metalloids

PA Standards/Anchors:

Eligible Content:

3.4

3.4.7

Instructional Strategies:

Assessments:

Group work
Discussion
Lecture
Experiments/Projects

- Worksheets
- Tests
- Quizzes
- Projects

Grade Level: 6

Course Title: Science

Topic/Concept: Cells and Classification of Living Things

Time Allotment: 9 weeks

Unit Sequence: 3

Major Concepts to be learned:

1. Cells and classification of living things

Expected Skills to be demonstrated:

1. Differentiate between living and nonliving things
2. Identify cells as a basic unit of living things
3. Explain why cells divide
4. Explore differences between cells of plants and animals
5. Compare and contrast photosynthesis and respiration
6. Explore how to classify living things
7. Explore movement of materials through barriers
8. Describe the kingdoms containing most microbes, and explain why viruses are not included among them

PA Standards/Anchors:

Eligible Content:

3.3 3.2
3.6 3.1
3.8

3.3.7 3.2.7
3.6.7 3.1.7
3.8.7

Instructional Strategies:

Assessments:

Group work
Discussion
Lecture
Experiments/Projects

- Worksheets
- Tests
- Quizzes
- Projects

Grade Level: 6

Course Title: Science

Topic/Concept: Astronomy

Time Allotment: 9 weeks

Unit Sequence: 4

Major Concepts to be learned:

1. Astronomy

Expected Skills to be demonstrated:

1. Explore the different methods of learning about a planet
2. Describe the surface features of the Moon
3. Explain what astronomers study and their scientific method
4. Compare and contrast the outer planets
5. Explore how shadows on Earth change with the Sun's position
6. Describe the evolution of the universe and its contents
7. Describe the Earth's revolution and the cause of the seasons
8. Compare and contrast the inner planets

PA Standards/Anchors:

Eligible Content:

3.2 3.3
3.4
3.5
3.8

3.4.7 3.5.7
3.2.7 3.8.7
3.3.7

Instructional Strategies:

Assessments:

Group work
Discussion
Lecture
Experiments/Projects

- Worksheets
- Tests
- Quizzes
- Projects

Grade Level: 6

Course Title: Science

Topic/Concept: Restless Earth

Time Allotment: 6 weeks

Unit Sequence: 5

Major Concepts to be learned:

1. Tectonic Plates
2. Soil Production

Expected Skills to be demonstrated:

1. Compare plate tectonics with other theories of crustal motion
2. Evaluate continental drift and sea-floor spreading
3. Identify examples of rocks that form from sediment and from other rocks
4. Describe how to prepare for and predict earthquakes
5. Relate volcanoes and plate tectonics
6. Identify the forces that make and shape landforms

PA Standards/Anchors:

Eligible Content:

3.5
3.7
3.8

3.5.7
3.7.7
3.8.7

Instructional Strategies:

Assessments:

Group work
Discussion
Lecture
Experiments/Projects

- Worksheets
- Tests
- Quizzes
- Projects