**8th Grade Mid-Term Review SC.8.P.8.4– What’s the Matter**

***Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.***

1. Classify and compare substances on the basis of their physical properties such as; density, volume, solubility, magnetic properties, melting and boiling points.

**Key Vocabulary:** matter, density, physical property, solubility, thermal and electrical conductivity, malleability, luster, melting and boiling point

* *What are physical properties of matter?*
* *What are chemical properties of matter?*
* *What are the difference between physical and chemical properties?*
* *How can physical and chemical properties identify a substance?*

**References**

Textbook: Unit 6 Pg. 312 - 325

Benchmark Review: Pg. 391 - 396, Questions: 9, 13, 17, 18

**8th Grade Mid-Term Review SC.8.P.8.3– What’s the Matter**

***Explore and describe the densities of various materials through measurement of their masses and volumes.***

1. Demonstrate how to measure the density, volume and mass of an object.

**Key Vocabulary:** mass, weight, volume, density

* *How does mass differ from weight?*
* *How are mass and weight measured?*
* *How is the amount of space occupied by matter measured?*
* *How can volume be determined?*
* *How is density determined?*

**References**

Textbook: Unit 6 Pg. 296 - 309

Benchmark Review: Pg. 391 - 396, Questions: 7, 14,

**8th Grade Mid-Term Review SC.8.P.9.2 – Conservation is the Law**

***Differentiate between physical changes and chemical changes.***

1. Explain the difference between physical and chemical changes.

**Key Vocabulary:** physical and chemical changes

* *What are the physical changes of matter?*
* *What are the chemical changes of matter?*

**References**

Textbook: Unit 6 Pg. 328 - 339

Benchmark Review: Pg. 391 - 396, Questions: 10,

**8th Grade Mid-Term Review SC.8.P.9.1 – Conservation is the Law**

***Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.***

1. Explain the Law of Conservation of Mass.
2. Demonstrate and explain how mass is conserved when substances undergo physical and chemical changes, according to the Law of Conservation of Mass.

**Key Vocabulary:** Law of Conservation of Mass

* *What is the Law of Conservation of Mass?*
* *Law of Conservation of Mass in Physical Change?*
* *Law of Conservation of Mass in Chemical Change?*

**References**

Textbook: Unit 6 Pg. 336 - 339

Benchmark Review: Pg. 391 - 396, Questions: 17

**8th Grade Mid-Term Review SC.8.P.9.3 – Conservation is the Law**

***Investigate and describe how temperature influences chemical changes.***

1. Describe how temperature influences chemical changes.

**Key Vocabulary:** temperature, chemical change

* *How can you tell a chemical change has happened?*

**References**

Textbook: Unit 6 Pg. 334 - 335

Benchmark Review: Pg. 391 - 396 , Questions: ---

**8th Grade Mid-Term Review SC.8.P.8.8– What a Great Combination!**

***Identify basic examples of and compare and classify the properties of compounds, including acids, bases, and salts.***

1. Identify common examples of acids, bases and salts.
2. Classify the properties of compounds, including acids and bases.
3. Compare and contrast the properties of compounds, including acids and bases.

**Key Vocabulary:** atom, element, compound

* *Identify examples of acids, bases, and salts.*
* *How can matter be classified?*
* *How can compounds be classified?*
* *How can elements be classified?*

**References**

Textbook: Unit 6 Pg. 350 - 363

Benchmark Review: Pg. 391 - 396, Questions: 3

**8th Grade Mid-Term Review SC.8.P.8.9– What a Great Combination!**

***Distinguish among mixtures (including solutions) and pure substances.***

1. Distinguish between pure substances, mixtures and solutions.

**Key Vocabulary:** mixture, pure substance, solution, heterogeneous, homogeneous, suspensions, colloids

* *What are mixtures?*
* *How can mixtures be classified?*
* *What are pure substances?*

**References**

Textbook: Unit 6 Pg. 350 - 363

Benchmark Review: Pg. 391 - 396 , Questions: 1, 2

**8th Grade Mid-Term Review SC.8.E.5.9– Round and Round They Go!**

***Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction; 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.***

1. Create models demonstrating how the Earth’s position in relation to the sun affects the seasons on Earth.
2. Explain the gravitational attraction of the Earth and the sun & the Earth and the Moon.
3. Describe the phases of the moon and the impact the phases have on tides.
4. Explain how and why lunar and solar eclipse occur.

**Key Vocabulary:** Period of Rotation, Period of Revolution, Season, Solstice, Equinox, Lunar Phases, Satellite, Eclipse, Gravity, Tide, Tidal Range, Neap Tide, Spring Tide, Axis of Rotation, Orbit

* *What conditions are affected by the tilt of the Earth’s axis?*
* *What causes seasons?*
* *How are the Earth, the moon and the sun related in space?*
* *How does the appearance of the moon change?*
* *How do lunar and solar eclipses occur?*

**References**

Textbook: Unit 4 Pg. 198 - 229

Benchmark Review: Pg. 233 - 236, Questions: 1 - 12

**8th Grade Mid-Term Review SC.8.L.18.4– Matter & Energy in Living Systems**

***Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.***

1. Identify evidence that living systems follow the Laws of conservation of mass and energy.

**Key Vocabulary:** energy, matter, law of conservation of energy, law of conservation of mass, energy pyramid

* *How do organisms get energy and matter?*
* *What happens to the energy and matter in ecosystems?*
* *How does energy move through an ecosystem?*
* *How does matter move through an ecosystem?*

**References**

Textbook: Unit 7 Pg. 414 - 423

Benchmark Review: Pg. 427 - 430, Questions: 5, 6, 9, 10, 11, 12

**8th Grade Mid-Term Review SC.8.P.8.5 – Up and Atom**

***Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.***

1. Describe how elements combine in many ways to produce compounds that make up all living and nonliving things.

**Key Vocabulary:** Atom, Nucleus, Proton, Neutron, Electron, Electron Cloud

* *How can matter be classified?*
* *What is matter made of?*

**References**

Textbook: Unit 6 Pg. 350 – 353 & 366

Benchmark Review: Pg.391 - 396, Questions: ---

**8th Grade Mid-Term Review SC.8.N.1.1 – Nature of Science**

***Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.***

1. Making predictions p. 8 - 9
2. Analyzing and interpreting data p. 46
3. Planning an investigation p. 30
4. Using data to identify trends and patterns p. 42

**Key Vocabulary:** Prediction, data, qualitative, quantitative, observation, hypothesis, experiment, results, conclusion, trends, patterns

* *How do scientists discover things?*
* *What kind of patterns can be shown using graphs?*
* *How do scientists make sense of data?*
* *How does scientific knowledge lead to predictions?*

**References**

Textbook: Unit 1 Pg. ---

Benchmark Review: Pg. 65 - 68, Questions: 2, 8, 10,11, 12