



1st QUARTER SYLLABUS

TITLE OF COURSE: <p style="text-align: center;">8th Grade Life Science</p>	GRADE LEVEL/DURATION OF COURSE: <p style="text-align: center;">8th Grade/ Full Year</p>	TEACHER NAME & E-MAIL: <p style="text-align: center;">Kristin Page-Botelho <u>kpage@asa.edu.py</u></p>				
STANDARDS:	ESSENTIAL QUESTIONS:	LEARNING OBJECTIVES:				
<p>Understand structure and properties of matter.</p> <p>Understand and describe chemical and physical changes.</p> <p>Understand the structure of atoms and how this affects chemical reactivity.</p>	<p>How do scientists organize our knowledge of the universe?</p> <p>How do scientists use evidence, models, and explanations to communicate about discoveries?</p> <p>How do scientists measure change?</p> <p>What forces cause change?</p> <p>What is the relationship between structure and function in objects, organisms, and systems?</p> <p>How do scientists explore, observe, ask questions, collect data, and find patterns?</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Vocabulary <ul style="list-style-type: none"> • Mass • Density • Meniscus • Weight • Inertia • Physical property • Chemical property • Physical change • Chemical change • Pressure • Boyle's law • Charles's law </td> <td style="width: 50%; padding: 5px;"> <ul style="list-style-type: none"> • Change of state • Vaporization • Condensation • Sublimation • Element • Energy level • Electron cloud • Atomic mass unit • Atomic number • Mass number • Atomic mass • Valence electrons • Ion </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> Skills <ul style="list-style-type: none"> • Describe the structure of the atom including energy levels and valence electrons. • Identify the states of matter (solid, liquid, gas) and the properties of each state. • Describe how matter goes through different changes of state and how this affects the molecules that make up the substance. • Use Boyle's and Charles's laws to predict how a change in temperature or pressure will affect the volume of a gas. • Distinguish between mass and weight systems. • Identify physical and chemical properties of matter. • Distinguish between examples of chemical and physical changes. • Describe events that accompany chemical changes but not physical changes, e.g., color changes, temperature changes, or formation of gas. • Calculate the density of substances (regular and irregular solids and liquids) from measurements of mass and volume. • Use the concepts of density and buoyant force to evaluate which objects will float or sink in water. </td> </tr> </table>	Vocabulary <ul style="list-style-type: none"> • Mass • Density • Meniscus • Weight • Inertia • Physical property • Chemical property • Physical change • Chemical change • Pressure • Boyle's law • Charles's law 	<ul style="list-style-type: none"> • Change of state • Vaporization • Condensation • Sublimation • Element • Energy level • Electron cloud • Atomic mass unit • Atomic number • Mass number • Atomic mass • Valence electrons • Ion 	Skills <ul style="list-style-type: none"> • Describe the structure of the atom including energy levels and valence electrons. • Identify the states of matter (solid, liquid, gas) and the properties of each state. • Describe how matter goes through different changes of state and how this affects the molecules that make up the substance. • Use Boyle's and Charles's laws to predict how a change in temperature or pressure will affect the volume of a gas. • Distinguish between mass and weight systems. • Identify physical and chemical properties of matter. • Distinguish between examples of chemical and physical changes. • Describe events that accompany chemical changes but not physical changes, e.g., color changes, temperature changes, or formation of gas. • Calculate the density of substances (regular and irregular solids and liquids) from measurements of mass and volume. • Use the concepts of density and buoyant force to evaluate which objects will float or sink in water. 	
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Student Grades will be determined by the following:

- 40% Tests/Quizzes
- 20% Labs/Hands-on Activities/Projects
- 20% Class work
- 10% Participation
- 10% Homework

Tests/Quizzes – Students can expect approximately 1 quiz every other week and a comprehensive test at the end of each chapter.

Labs/Hands-on Activities/Projects – Students can expect to participate in 1 hands-on activity or lab about every other week as well as several projects throughout the quarter. Students will be provided and instructed about grading rubrics for all projects prior to starting the project.

Class work – Students will complete daily warm-ups or science news responses, which will be collected weekly. Students will also complete a variety of in-class assignments on a regular basis.

Participation – Students can earn 2 participation points per day. If students are participating positively in class, contributing to class discussions, asking thoughtful questions about topics being taught, working cooperatively with classmates during labs and group-work, and not causing disruption to the learning environment they will earn their participation points.

Homework – Students will be given a variety of homework assignments throughout the quarter. It is expected that all assignments be completed individually. Instruction for all assignments has occurred before assignments are given and therefore assignments are a way of reinforcing concepts taught in class.

RESOURCES:

Science and Technology: Physical Science. Holt, Rinehart, and Winston, 2006.

<http://go.hrw.com>

www.mrspage.com

TEACHER AVAILABLITLY FOR EXTRA HELP AND MEETING WITH STUDENTS:

I will always be available **Mondays and Thursdays** from **3:30-4:15 p.m.** in room **H-11.**