



3rd QUARTER SYLLABUS

TITLE OF COURSE: 8th Grade Physical Science	GRADE LEVEL/ DURATION OF COURSE: 8th Grade/ Full Year	TEACHER NAME & E-MAIL: Kristin Page-Botelho <u>kpage@asa.edu.py</u>	
STANDARDS:	ESSENTIAL QUESTIONS:	LEARNING OBJECTIVES:	
<p>Explain and analyze the interaction of energy and matter.</p> <p>Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.</p> <p>Explain the physical processes involved in the transfer, change, and conservation of energy.</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>	Vocabulary <ul style="list-style-type: none"> • Static electricity • Electric discharge • Law of electric charges • Cell • Battery • Insulation • Induction • Voltage • Resistance • Electric power 	<ul style="list-style-type: none"> • Load • Series circuit • Parallel circuit • Magnetic poles • Magnetic force • Electromagnetism • Electric motor • Generator • Transformer • Solenoid
		Skills <ul style="list-style-type: none"> • Describe how charged objects interact by using the law of electric charges. • Compare conductors and insulators. • Give examples of static electricity and electric discharge. • Name the three essential parts of a circuit. • Compare series circuits with parallel circuits. • Design and diagram, using common pictures and symbols, an electrical circuit to demonstrate energy transfer. • Relate electricity to magnetism (e.g., electromagnets and simple electric motors) using descriptions and diagrams. • Analyze how an electric motor demonstrates energy transfer (e.g., chemical to electrical, to mechanical motion.) • Describe the properties of magnets. • Describe patterns of interaction of magnetic materials with other magnetic and non-magnetic materials. • Explain that there are many forms of energy transfer but that the total amount of energy is conserved (i.e., that energy is neither created nor destroyed). • Explain that kinetic energy is a measure of the energy of an object in motion and potential energy is a measure of an object's position. 	



ASSESSMENTS:

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 AVAILABILITY 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.**