

2016-2017 Franklin Academy, Palm Beach Gardens 8<sup>th</sup> Grade Science  
**Comprehensive Science 3 Course Outline**

- Content focus areas in **bold** will be evaluated on the Florida Statewide Science Assessment, which is a standardized test administered to all 8<sup>th</sup> grade science students by the state of Florida.
- This outline serves as a guideline for learning, and should not be taken as a strict schedule.
- Don't be overwhelmed, it will all make sense in time.

*Semester 1 (Fall 2016)*

O. How to take notes

**I. The Nature of Science**

- What is science?
- Planning and carrying out scientific investigations
- Replication and repetition
- Scientific Method
- New Evidence and Scientific Knowledge
- Theories and Laws

**II. Physical Science**

- Physical properties of matter
- Elements and compounds
- Physical and chemical changes
- Components of solar energy
- Properties of waves
- Energy transformations
- Transfer of heat energy
- Types of forces
- Motion

*Semester 2 (Spring 2017)*

**III. Earth and Space Science**

- Astronomical bodies in the universe
- Properties of our solar system
- Relationships between objects in our solar system
- Rock cycle and surface events
- Scientific theories and evidence for changes in Earth's history
- Theory of plate tectonics
- Interactions among Earth's spheres
- Solar energy and global atmospheric patterns on Earth

#### **IV. Life Science**

- Hierarchical organization: atoms to organisms
- Cell Theory
- Cell structure – plants and animals
- Body systems and homeostasis
- Modern system of classification
- Natural Selection and the Theory of Evolution
- DNA, chromosomes and heredity
- Relationships among organisms in an ecosystem
- Natural systems and conservation of mass and energy

*May 1-5: Students will take Statewide Science Assessment*

#### **V. Local, National and Global Science Issues**

- Pollution; clean water shortages
- Loss of biodiversity
- Climate change; rising sea levels
- Science literacy
- Overpopulation