

Science Department

#1: LAWS & PRINCIPLES: Students will be able to **Use scientific laws and principles to design solutions to problems in the physical world.** (*Grad at Grad: Faith in the Presence of God, Excellence in Education*)

Students will:

- 1.1 Apply the principles of conservation of mass and energy
- 1.2 Utilize field specific laws and principles

#2: EXPERIMENTS: Students will be able to **Examine experimental results to determine factors affecting predicted cause and effect relationships.** (*Grad at Grad: Excellence in Education*)

Students will:

- 2.1 Isolate external factors affecting experimental results
- 2.2 Identify sources of experimental error.

#3: SYSTEMS: Students will be able to **Analyze system properties and interactions to design solutions to problems in the physical world.** (*Grad at Grad: Concern for the Poor and Social Justice, Excellence in Education, Respect for All Persons, Participation with Inclusive Community*)

Students will:

- 3.1 Determine how the properties of the parts of a system contribute to its function
- 3.2 Study interactions between systems
- 3.3 Design real-world applications based on system properties and interactions

#4: SKILLS: Students will be able to **Demonstrate scientific skills and techniques to design solutions to problems in the physical world.** (*Grad at Grad: Excellence in Education*)

Students will:

- 4.1 Conduct experiments using the scientific method
- 4.2 Analyze data
- 4.3 Use and convert scientific units
- 4.4 Use the mathematical forms of scientific principles to solve problems