SEMESTER 1

THERMAL ENERGY

* How can we manage thermal energy?
* How can we minimize or maximize thermal energy transfer?

HUMAN POPULATION AND ITS IMPACT ON THE ENVIRONMENT

* How does a growing population impact the environment?
* How are synthetic products derived from natural products?
* What solutions can I design to reduce my impact on the environment?

WEATHER AND CLIMATE SYSTEMS

* Why are temperatures changing and how does it impact Earth systems?
* How do increased temperatures impact our weather systems?

**Grading scale**

1. Student performance reflects insufficient progress towards skills and knowledge
2. Student demonstrates basic knowledge of the goal. There are no major errors/omissions regarding the complex ideas/processes
3. Student demonstrates they have the ability to meet the standard. There are no major errors/omissions regarding the information/processes that make up the goal
4. In addition to Level 3, student demonstrates in-depth inferences and applications that go beyond the goal.

**SEMESTER 2**

ENERGY IN WAVES

* How does energy move through a wave?
* How does matter affect wave movement?

FORCES, MOTION, AND ENERGY

* How do forces impact our lives?
* How are motion and forces related?

Unity of life

* How are we the same?
* Why are we different?
* How can humans influence genetic traits?

Diversity of life

* How are we the same?
* Why are we different?
* How can humans influence genetic traits?