Maureen M. Drees

Physics Lesson Plans

February 26-March 2, 2018

Note: Wednesday is a 2:25 dismissal for professional development.

Essential concepts and skills emphasized in the week’s lessons will be highlighted.

Disciplinary Core Ideas

Life Science

1. From molecules to organisms: Structures and processes
2. Ecosystems: Interactions, energy, and dynamics
3. Heredity: Inheritance and variation of traits
4. Biological Evolution: Unity and diversity

Earth and Space Science

1. Earth’s place in the universe
2. Earth’s systems
3. Earth and human activity

Physical Science

1. **Matter and its interactions**
2. **Motion and stability: Forces and interactions**
3. **Energy**
4. Waves and their applications in technologies for information transfer

Science and Engineering Practices

1. **Asking questions and defining problems**
2. **Developing and using models**
3. **Planning and carrying out investigations**
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. **Constructing explanations and designing solutions**
7. **Engaging in argument from evidence**
8. **Obtaining, evaluating, and communicating information**

Cross-Cutting Concepts

1. Patterns
2. **Cause and effect**
3. Scale, proportion, and quantity
4. **Systems and system models**
5. **Energy and matter**
6. **Structure and function**
7. Stability and change

Monday—

* 1. Share out brainstorming in round robin format
  2. Put in groups by lining up students by middle names (3 or 4 per group)
  3. Walk through rubrics (physics and group work) for simple machine project, projects due Friday along with labeled diagram showing all six simple machines and path of chain reaction
  4. Groups sketch ideas for project, explore cupboards to claim materials, note who will bring what from home

Tuesday—

* + 1. Building Day—Simple Machine Project—uses all six simple machines in a chain reaction to pop a balloon

Wednesday—shortened periods

* + - 1. Building Day—Simple Machine Project—uses all six simple machines in a chain reaction to pop a balloon
      2. Have teacher mark on rubric when machine actually works

Thursday—

* + - * 1. Building Day—Simple Machine Project—uses all six simple machines in a chain reaction to pop a balloon
        2. Remind students that explained rubric and labeled diagram will also be due on Friday
        3. Have teacher mark on rubric when machine actually works

Friday—

Groups hand in explained rubrics, labeled diagram

Groups walk class through how chain reactions will work and identify simple machines

Groups show class Rube Goldberg device actually pops ballon

Process and clean up