Maureen M. Drees

Physics Lesson Plans

September 25-29, 2017

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. Board Problems
  2. Discuss how a motorcycle helmet protects head, relate to how Egg Drop Apparatus will need to protect egg
  3. Use rubric to walk through specifications for Egg Drop, papers will be handed in to me via Google Doc
  4. Use puzzle pieces to divide into groups for Egg Drop
  5. Groups plan how they will spread out force, cushion the egg, and slow down its descent; plan who will bring materials, will work part of Tuesday and Wednesday, will drop on Thursday, paper is due on Thursday

Tuesday—

* + 1. Practice A 1-6 pg 44, start first one together
    2. Work on Egg Drop second half of period

Wednesday—shortened schedule

* + - 1. Check PA 1-6 pg 44
      2. Work on Egg Drop second half of period

Thursday—

* + - * 1. 10 minutes to finalize Egg Drop contraptions and prove mass
        2. Groups walk class through how their contraptions will spread out force, cushion the egg, and slow downs its descent
        3. Hand in one rubric per class, paper is shared via Google Docs
        4. Go to gym to drop eggs
        5. Clean up, process results of Egg Drop Challenge

Friday—

Share Egg Drop rubric with teammates

Notes—Velocity vs. Speed, Instantaneous vs. Average Velocity (act out Figure 6 with students)

SR 1-6 (only do a on 4) pg 47