Maureen M. Drees

Physical Science Lesson Plans

January 29-February 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. Prepare for substantive conversation, choose one of three statements to complete on half sheet form, giving rationale
  2. Hand in Foil Boat lab sheet
  3. Read pages 162-167 7.1 Fluids and Pressure and take book notes

Tuesday—

* + 1. Check 7.1 book notes
    2. Substantive Conversation (record)—Draw numbers for one student to share from half sheet form. The next student drawn will link to first student’s discussion before sharing his/her note card.
    3. Quick Lab—Blown Away

Wednesday—shortened periods

* + - 1. Discuss Quick Lab and use to establish principle that fluids flow from high pressure to low pressure, record
      2. Revisit high heel vs. tennis shoe, then think about helmet, use to establish relationship between pressure, force, and area
      3. Model using P=F/A equation
      4. P=F/A worksheet

Thursday—

* + - * 1. Check P=F/A WS
        2. Demo—Oil, water, corn syrup, students make predictions before, discuss afterwards
        3. Density discussion notes
        4. Read pages 168-172 Buoyant Forces and take book notes

Friday—

Check book notes over pages 168-172 Buoyant Forces

Use folded pieces of paper for students to try out Bernoulli’s Principle

Ping Pong Ball and Hair Dryer Demo

Read and take book notes over 7.3 Bernoulli’s Principle pages 173-177