Maureen M. Drees

Physics Lesson Plans

August 28-September 1, 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. Share “Looking Where the Light Is” pages 3-7 from Fear of Physics—A Guide for the Perplexed (530 KRA), use spherical cow example to discuss meaning of physics
2. Students brainstorm and record ideas in small groups—what is physics, how could it be represented graphically
3. Double check physics numbers
4. Talk through requirements for physics book cover (front cover—name, physics number, three pictures to explain physics, back cover—equation list with room to add equations throughout the year)
5. Students begin to cover books, due on Wednesday, will work on in class on Tuesday

Tuesday—

1. Remind students of requirements for book covers
2. Students finish making and decorating covers
3. When finished, Geometry Puns WS with partner

Wednesday—shortened schedule

1. Draw physics numbers to partner students, partner shares out book cover
2. Share answers on Geometry Puns WS
3. Have students line up in order of height, put in small groups to discuss and record answer and reasoning to three questions: Can scientific law be changed by a vote? Can the speed of light be legislated? Can scientists from other countries change what physicists in the United States think?
4. Class discussion

Thursday—

1. Review significant digits
2. Textbook Scavenger Hunt due Friday
3. Read pages 4-9, pick one of three questions we discussed yesterday to elaborate on

Friday—

1. Check Textbook Scavenger Hunt
2. Substantive conversation—Three Questions
3. Review Factor Label Method, Operations with Significant Digits, Rounding 5 Rule