

Science Principles of Technology (SPOT) 2011-2012 Course Information

Ms. Dominello
Science / Technology Education
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Phone:
Room: 171 (Class); 247 (Office)

- Full-year course in Applied Physics for 1.0 Science credit (may fulfill graduation requirement)
- Prerequisite: Algebra 1 or Algebra 1 Connections
- This course stresses a hands-on approach to learning the principles of mechanical, electrical, fluid, and thermal systems.

Course Outline:

Unit 1 Force

- Subunit 1 – Force in Mechanical Systems
- Subunit 2 – Pressure in Fluid Systems
- Subunit 3 – Voltage in Electrical Systems
- Subunit 4 – Temperature in Thermal Systems

Unit 2 Work

- Subunit 1 – Work in Mechanical Systems
- Subunit 2 – Work in Fluid Systems
- Subunit 3 – Work in Electrical Systems

Unit 3 Rate

- Subunit 1 – Rate in Mechanical Systems
- Subunit 2 – Rate in Fluid Systems
- Subunit 3 – Rate in Electrical Systems
- Subunit 4 – Rate in Thermal Systems

Unit 4 Resistance

- Subunit 1 – Resistance in Mechanical Systems
- Subunit 2 – Resistance in Fluid Systems
- Subunit 3 – Resistance in Electrical Systems
- Subunit 4 – Resistance in Thermal Systems

(Additional units will be added if time permits)

Materials Required:

Book – Principles of Technology, Second Edition. Students will receive copies of the text in class. **Each student will be required to bring the text to class every day.** The students may highlight, underscore or otherwise make notations in this text.

Notebook – Each student will be responsible for maintaining an orderly notebook.

Calculator – Students are required to have their own calculator for class and home use. **Cell phone calculator use is not permitted.**

Course Expectations:

Please...

1. Arrive to class on time.
2. Be prepared every day with all required materials, and your homework.
3. Be respectful in class of others, their ideas, and our classroom:
 - Use appropriate language.
 - Treat our classroom and materials with care.
4. Refrain from using cell phones or other electronic devices.

5. Follow the classroom safety rules.
6. Work well with others.
7. Be on task.
8. Always try your best.
9. Remember that academic integrity is essential.

Grading:

Quarterly grades will be calculated as follows:

- ___% Class Work (student exercises, math skills lab, math skills problems, etc.)
- ___% Projects (labs, etc.)
- ___% Tests (subunit tests & quizzes)
- ___% Homework

Subunit Outline:

The following is a general overview of the typical schedule for each subunit. The actual schedule may vary from this outline, with some assignments omitted and others added. (Additional quizzes, math problems and notebook checks may be given throughout the unit)

Day 1:

Classwork:

- Video with worksheet
- Classroom discussion and demonstration

Homework:

- *Read subunit Text*
- *Fill-in notes – completed in student journal*
- *Student Exercises – completed in student journal*

Day 2:

Classwork:

- Student Exercises Activity
- Math Labs
- Math Lab Objectives
- Math Problems

Homework:

- *Read Lab Text*
- *Complete Lab Preview*

Day 3:

Classwork:

- Lab 1

Homework:

- *Complete Lab Calculations & Questions*
- *Lab 2 Text*
- *Lab 2 Preview*

Day 4:

Classwork:

- Lab 2

Homework:

- *Complete Lab Calculations & Questions*
- *Review for Subunit Test*

Day 5 (Day 1 for next subunit):

Classwork:

- Subunit Test
- Begin Day 1 Classwork for Next Subunit

Homework:

- See Subunit Day 1

Attendance:

Attendance is essential in SPOT.

For Excused Absences:

- Please visit the class website at www.dominello-physics.weebly.com to find out what was missed in class, and the upcoming homework assignment that you are expected to complete.
- Upon returning to class, check the missed work folder.
- Ask a classmate for missed class notes.
- See Ms. Dominello.
- You will have 5 days to complete missed work (per MHS policy). Failure to complete assignments (or make up labs or tests) will result in a zero grade.
- Homework that is due on the day missed must be handed in on the day you return to school (whether we meet that day or not).

For Unexcused Absences: The student will not receive credit for the assignments done the day of the cut, and Ms. Dominello will contact parents.

Late Work

Work is due at the beginning of class. Late work will result in a 50% loss in grade. If an extension is needed due to special circumstances, please approach me before the due date so we can discuss the situation.

Tardiness

You are expected to arrive to class on time every day.

- First offense: Warning
- Next 3 offenses: 15 minute after school detention served within one week
- All other offenses: 1-hour school detention

Final Thoughts...

- Please use passing time between classes wisely to go to your locker and to use the bathroom facilities.
- Be an active learner – ask questions and be engaged in classroom activities and discussions.

I am very excited and honored to have you in my class. Please do not hesitate to contact me with questions or comments. By working together with open communication, I am optimistic that we will have a successful year!