

# APPLIED PHYSICAL SCIENCE

**Teacher: Tadd Reaney**

*Master of Science: Curriculum & Instruction, Portland State University*

*Bachelor of Science: Secondary Education—Integrated Science, Western Oregon University*

**RHS: (503) 667-3186 ext. 1021**

**treaney@rsd7.net**

The emphasis in this “applied physics” class is for students to investigate in a hands-on, laboratory environment. I truly believe that we learn best by doing—whether you build and measure the efficiency of a motorized quadruple pulley system or calculate the thrust of a rocket that you constructed, you’ll start to see value in the quantifiable, observable phenomenon we call physics.

A simple child’s mobile, a water pump, or bulbs lighting in a circuit—all things tangible have certain rules and properties that we will explore. The discoveries that we will pursue combine the fields of physics, technology, and math in five thematic units: **FORCE, WORK, RATE, & RESISTANCE**. *Each* unit explains how that concept applies to mechanical, fluid, electrical, *and* thermal systems.

## ***Course Expectations:***

This very rich experience will call on you to write, read, think on your own, create projects, complete a **lot of labs**, present to the class, work in lab groups, work alone, and collaborate in teams. Due to the extensive lab work involved, attendance is critical.

## ***Problem of the Day:***

Every day we complete a P.O.D. (Problem of the Day). You do this problem on your own as a warm up and review of the math concepts. Each day, one student will present the answer on the board. Each student will need to present a couple of times each term. The POD’s are turned in at the end of the term for a large amount of points. This presentation grade is a zero if you don’t ever present.

## ***Materials:***

1. **3-Ring Binder**
2. Writin’ Sticks
3. Calculator
4. Paper
5. RHS Laptop

## ***Helpful Tips:***

- 1.) Come to class daily. If attendance is a problem, you will not pass this class.
- 2.) Stay caught up on labs and assignments.
- 3.) Come prepared (Calculator, paper, 3-Ring Binder, Writin’ stick).
- 4.) Stay organized with a **3-Ring Binder** (or) **Folder (REQUIRED for graded binder checks)**.
- 5.) Study and understand the P.O.D.s all term long.
- 6.) Come get help before school or after.

## ***Rules:***

I respect teenagers so much and love working with you guys. I do have a few requests.

- 1.) Respect the room by helping to keep it clean—put trash in its place and help put labs away.
- 2.) Keep the language clean and positive.
- 3.) No cell phones. OFF/AWAY does NOT mean hold phone on lap or pocket text! I want you present.
- 4.) No detracting others from learning. You don’t get to steal their experience or education.
- 5.) No food. Be discrete with gum, candy, snacks. Bottled juice, soda, water (with a cap)—OK!
- 6.) You only get a couple of bathroom passes each term—use them wisely.
- 7.) No sheeping.

### ***Grading:***

Your grade will reflect your proficiency in the course and a traditional letter grade (A – F) will be assigned using the following weighted categories:

**50% of grade: Summative Assessments:** Tests, Quizzzee-poohs, Projects

**50% of grade: Formative Assessments:** Daily HW, Labs, Activities, Presentations

Assignments are always due the next time we meet, unless I specify otherwise, and I do **NOT** accept late work. When the bell rings, I stamp homework if it is 100% completed. If an assignment is not completed, when the bell rings, it is not *done*. You will get a few late coupons (each unit) to help you manage this policy. Once you run out of late coupons, then you just miss those points.

**COPYING:** Copying others' work is (1) a gross violation of our trust, (2) degrades your integrity through dishonest habits, and (3) discounts your ability to learn the material, practice the concepts, and ultimately prepare you for the assessments. Don't cheat.

If you miss a lab—you have a couple weeks to make it up, and then I put it away. State law requires you to attend school.

**PHONES:** Cell phones are major distraction, and the school policy states that they need to be off and away. If I have to confiscate your phone, you will not get it back until the end of the day.

### ***Covenant:***

It is my hope that this class will provide unique and valuable learning experiences for you; however, you must be willing to work hard, try new and creative ideas, and be positive for the class to be meaningful. Your sincere participation is essential if you wish to make the class the unique learning situation it is designed to be. Get involved to have fun learning.

You are expected to conduct yourself with integrity. If you cheat on any assignment or quiz, you violate a trust and ruin your own chance for truly being successful; please make wise decisions. I never expect or want you to “google” an answer—internet answers will garner a zero grade; I am much more interested in what you think, not what you find on the internet. Take pride in accomplishing academically rigorous problems on your own. **I will support you however you need!**

**We have read the above and acknowledge its content (please sign):**

**Student** Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Student** Name **Printed:** \_\_\_\_\_

**PARENT** Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**PARENT** Name **Printed:** \_\_\_\_\_