



Science 9 Physical Science Course Syllabus

- I.** Course Title: Science 9 Physical Science Instructors: J. West
Department: Science Conference Hour: 5th
Designated Grade Level: 9 jwest@waynesville.k12.mo.us
Course Duration: 2 semesters Phone extension 3141 or
Credits: 1 science credit
- II.** Required books and class material: Textbook: Prentice Hall Physical Science: Concepts in Action, 2006.
All students will be assigned a classroom textbook for use inside the classroom. A textbook may be checked out per evening as needed. Students will also have access to an online version of the textbook that they can access at anytime.
- III.** Student Supply requirements: **composition notebook**, a poster board, paper, pencils or pens, personal colored pencils, and/ or markers (as needed).
- IV.** Course Rationale: Science 9 Physical Science is a laboratory- and project-based course used to provide students with a basic understanding of science, teacher-led problem-solving strategies, proper laboratory techniques and safety, group cooperative work, and organization and communications skills that will prepare students for more advanced science courses and future career training.
- V.** Course Description: Science 9 Physical Science is an instructional program that explores basic chemistry, physics, and energy. Students will examine science through research, class discussion, lab activities, computer projects, small group activities, case studies, and/or semester-long projects.
- VI.** Course Objectives:
Students will be able to:
1. Understand science skills that develop through the use of science processes, knowledge, investigation, and data collection.
 2. Demonstrate lab safety awareness by use of proper techniques and equipment.
 3. Analyze the inter-relationship between science, technology, and society.
 4. Collect and analyze data during laboratory experiments.
 5. Identify and classify materials based on physical and chemical properties.
 6. Describe effects of temperature, volume, and particle number on behavior of matter.
 7. Use Kinetic Theory and Law of Conservation of Matter and Energy to describe the changes in states of matter and how energy is transferred.
 8. Use the Periodic Table of Elements to identify physical and chemical characteristics of elements.
 9. Describe the chemical and physical properties of pure substances and mixtures.

10. Use chemical formulas to differentiate and interpret simple and covalent compounds.
11. Identify parts of a chemical reaction and then classify the type of reaction.
12. Distinguish between fusion and fission and how decay is a part of the reaction.
13. Identify different types of energy and how they are transferred.
14. Apply Newton's Laws of Motion using the principles of inertia, speed, velocity, momentum, and acceleration.
15. Analyze and describe the relationship among work, power, and efficiency with the use of simple machines.
16. Examine the electromagnetic spectrum and its application to modern technology.
17. Define how energy is transferred in the form of waves.
18. Evaluate renewable and nonrenewable resources and the effects they have on future generations' ability to generate energy.

VII. Grading: (See student handbook)

Letter grades will be determined using the standard grading scale according to the student handbook.

Science 9 Physical Science grades will be weighted in Powerschool according to the following scale:

Classwork = 65%	Assessments = 20%
Active Communication = 5%	Finals = 10%

- Classwork includes labs, activities, notes and any other work completed in class. Assessments include tests, quizzes, common PLC assessments, and formative and classroom assessments. Powerschool will be updated weekly.
- A composition notebook will be required for each student. In order to be successful in Science 9 Physical Science, students must responsibly maintain and complete assignments in their composition notebook(s) throughout the school year.
- Cheating and/or plagiarism on any assignment will result in a "0" for that assignment.
- Grading Periods: Progress reports will be sent according to the grading periods outlined in the Waynesville High School Student Handbook.
- Homework Policy: All science courses will follow the Waynesville High School grading and late work policies.
- Make-Up Work: It is the student's responsibility to obtain class work and assessments missed due to any absence. It is the student's responsibility to turn the work in on the due date according to the student handbook. All work will be available for the student upon request.
- Students will be given the opportunity to improve his/her grade by retaking tests (below a 70%) for ½ points back up to a 70%. It is the student's responsibility to retake tests on his/her own time (before or after school or Tiger Time).

- Use of Technology: Students will be using technology to conduct research, to submit writing assignments, to present information, and to analyze data. Reading and signing a Waynesville R-VI School District Technology Agreement is required for success in this course.

VIII. Classroom behavioral expectations: In addition to all policies in the student handbook:

- No electronic devices are allowed in the classroom unless specifically instructed, as the school is not responsible for loss, damage or theft of electronic devices.
- All laboratory safety rules and guidelines will be followed at all times.
- NO food or drink is allowed in the classroom at any time.