

8th Grade Physical Science

General Information:

Hour:	3 rd Hour (9:56-10:51)
Room:	JH Science
Instructor:	Mrs. Van Laeys (689-7574(s) or 689-8070(c))
Required Text:	Physical Science: Concepts in Action

Course Description:

Eighth grade physical science is a required course for all Logan Junior High School students. The course will focus on two major themes: chemistry and physics.

Course Objectives:

1. The chemistry portion will prepare the student in the basic concepts of chemistry including properties of matter, states of matter, atomic structure, chemical bonds, reactions, acids/bases, and the use of the scientific method.
2. The physics portion will cover topics such as motion, forces, energy, waves, sound, magnetism, electricity, and optics.

Method of Instruction:

This class will be taught by using classroom lectures, cooperative learning activities, individual learning activities, chalkboard work, group projects, laboratory activities, and question and answer discussions. Students will investigate various topics using scientific method, inquiry learning, problem solving, and different forms of measurement.

Method of Evaluation:

The Grading Scale used in this class is as follows:

A+	98-100	A	94-97	A-	90-93
B+	87-89	B	83-86	B-	80-82
C+	77-79	C	73-76	C-	70-72
D+	67-69	D	63-66	D-	60-62
		F	59 and below		

A Student's grade is determined by the following.
40% of the grade is chapter tests, cumulative finals.
60% of the grade is from everything else.

Assignment Policy

Assignments must be handed in on time. With an excused absence, the student will have two days for each day missed to make up the work. If the student has an unexcused absence the work must still be done within the same time limits as the excused absence, but it will be for half credit. 50% will be deducted for ALL late work.

Test Policy:

A test missed with an unexcused absence will be made up the following day for no credit. Tests missed with an excused absence should be made up before hand whenever possible. If not possible, two days will be given for each day the student is gone and the test must be completed before that time period elapses.

Attendance Policy:

The attendance policy of Logan High School will be used. The student is encouraged to attend all classes. Two days will be allowed to make up each day of excused absences. Inform the instructor that you will be gone before your absence whenever possible. You **MUST** have an absentee slip when you return to class if you did not have one signed prior to the absence.

Chapters/Units**Chapter 1** Science Skills

- 1.1 What is Science
- 1.2 Using a Scientific Approach
- 1.3 Measurement
- 1.4 Presenting Scientific Data

Chapter 11 Motion

- 11.1 Distance and Displacement
- 11.2 Speed & Velocity
- 11.3 Acceleration

Chapter 12 Forces and Motion

- 12.1 Forces
- 12.2 Newton's First & Second Laws of Motion
- 12.3 Newton's Third Law of Motion & Momentum
- 12.4 Universal Forces

Chapter 13 Forces in Fluids

- 13.1 Fluid Pressure
- 13.2 Forces & Pressure in Fluids
- 13.3 Buoyancy

Chapter 14 Work, Power, & Machines

- 14.1 Work & Power
- 14.2 Work & Machines
- 14.3 Mechanical Advantage & Efficiency
- 14.4 Simple Machines

Chapter 15 Energy

- 15.1 Energy & Its Forms
- 15.2 Energy Conversion & Conservation
- 15.3 Energy Resources

Chapter 16 Thermal Energy & Heat

16.1 Thermal Energy and Matter

16.2 Heat and Thermodynamics

16.3 Using Heat

Chapter 17 Mechanical Waves and Sound

17.1 Mechanical Waves

17.2 Properties of Mechanical Waves

17.3 Behavior of Waves

17.4 Sound & Hearing

Chapter 18 The Electromagnetic Spectrum & Light

18.1 Electromagnetic Waves

18.2 The Electromagnetic Spectrum

18.3 Behavior of Light

18.4 Color

18.5 Sources of Light

Chapter 19 Optics

19.1 Mirrors

19.2 Lenses

19.3 Optical Instruments

19.4 The Eye & Vision

Chapter 20 Electricity

20.1 Electric Charge & Static Electricity

20.2 Electric Current & Ohm's Law

20.3 Electric Circuits

20.4 Electronic Devices

Chapter 21 Magnetism

21.1 Magnets & Magnetic Fields

21.2 Electromagnetism

21.3 Electrical Energy Generation & Transmission

Chapter 2 Properties of Matter

2.1 Classifying Matter

2.2 Physical Properties

2.3 Chemical Properties

Chapter 3 States of Matter

3.1 Solids, Liquids, & Gases

3.2 The Gas Laws

3.3 Phase Changes

Chapter 4 Atomic Structure

4.1 Studying Atoms

4.2 Structure of an Atom

4.3 Modern Atomic Theory

Chapter 5 The Periodic Table

5.1 Organizing the Elements

5.2 The Modern Periodic Table

5.3 Representative Groups

Chapter 6 Chemical Bonds

6.1 Ionic Bonding

6.2 Covalent Bonding