



WAGIN DISTRICT HIGH SCHOOL SEMESTER 1 OUTLINE

Year 8 Science 2017

COURSE OUTLINE

During first semester the focus in Science will be on Chemical Science, Earth and Space Science and Physical Science.

Students will start Term 1 by looking at solids, liquids and gases, and the particle model. They will then move on to look at physical and chemical changes, and chemical reactions.

During Term 2 students will spend the first 5 weeks focussed on Earth and Space Sciences, specifically learning about rocks and the rock cycle.

For the remainder of Term 2 students will begin their study of Physical Sciences by looking at the different types of energy, and this will be continued into and assessed in Term 3.

In addition, students will spend time looking at the development of these scientific areas over time and how changes in technology have influenced our understandings.

Investigative skills will also be developed through the use of the scientific inquiry process.

COURSE OUTCOMES

The following concepts form the Science Understanding strand of the Australian Curriculum will be addressed:

Chemical Sciences

- The properties of the different states of matter can be explained in terms of the motion and arrangement of particles (ACSSU151)
- Differences between elements, compounds and mixtures can be described at a particle level (ACSSU152)
- Chemical change involves substances reacting to form new substances (ACSSU225)

Earth and Space Sciences

- Sedimentary, igneous and metamorphic rocks contain minerals and are formed by processes that occur within Earth over a variety of timescales (ACSSU153)

Physical Sciences

- Energy appears in different forms, including movement (kinetic energy), heat and potential energy, and energy transformations and transfers cause change within systems (ACSSU155)

Students will also look at the Science as a Human Endeavour strand of the Australian Curriculum by addressing the following:

Nature and Development of Science

- Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world (ACSHE134)
- Science knowledge can develop through collaboration and connecting ideas across the disciplines of science (ACSHE226)

Use and Influence of Science

- Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations (ACSHE135)
- Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management (ACSHE136)

- People use understanding and skills from across the disciplines of science in their occupations (ACSHE227)

The Science Inquiry Skills strand will also be covered through the use of investigation and experimentation.

TASKS

Students will complete a number of formal and informal assessment items over the semester, including investigations, assignments, and tests. Each investigation and assignment will come with a task sheet detailing exactly what is required of the student.

Tests will be conducted after a minimum of 1 class lesson of revision, though further revision is expected to be completed at home on a regular basis, and in preparation for tests.

ASSESSMENT BREAKDOWN

CONTENT AREA	TASK	WEIGHTING
Chemical Science	Investigation work	25%
	Assignments	25%
	Tests & Quizzes	50%
		Total = 100%
Earth & Space Science	Investigation work	25%
	Assignments	25%
	Tests & Quizzes	50%
		Total = 100%
Science Inquiry Skills	Investigation work	100%

TIME LINE

The following timeline can be used as a guide to the sequence and timing of activities over the semester, though changes may be made at the discretion of the teacher.

WEEK	ACTIVITY	TASK DUE/HOMEWORK
1	Matter – solids, liquids and gases	Assignment 1 TEST 1
2	The Particle Model	
3	Elements and the Periodic Table	
4	Compounds and mixtures	
5	Revision and test	
6	Physical and chemical change	Investigation 1 TEST 2
7	Physical and chemical change	
8	Investigating reactions	
9	Investigating reactions	
10	Revision and Test	
11	Igneous rocks	Investigation 2 Assignment 2 TEST 3
12	Sedimentary rocks	
13	Metamorphic rocks & rock cycle	
14	Rocks as resources	
15	Revision and Test	
16	Types of energy	TEST (included in second semester)
17	Kinetic and potential energy	
18	Energy transfer	
19	Energy transformation	
20	Revision and Test	