

Long Range Plan - Grade 8/9 Science 2009-2010

Grade 9 curriculum with Mr. Phelps

Course Overview:

The secondary science program is guided by the vision that all students have the opportunity to develop scientific literacy. The goal of scientific literacy is to develop the science-related knowledge, skills and attitudes that students need to solve problems and make decisions, and at the same time help them become lifelong learners— maintaining their sense of wonder about the world around them. Diverse learning experiences within the science program provide students with opportunities to explore, analyze and appreciate the interrelationships among science, technology, society and the environment, and develop understandings that will affect their personal lives, their careers and their futures. Topics of study specific to Science 9 include: Matter and Chemical Change, Environmental Chemistry, Electrical Principles and Technologies, Biological Diversity, and Space Exploration.

| | September | October | November | December | January |
|-------------------|---|---|--|--|---|
| Topic: | Introductory Unit and Unit 1: Matter and Chemical Change | Unit 1: Matter and Chemical Change | Unit 1: cont'd and Unit 2: Environmental Chemistry | Unit 2: Environmental Chemistry | Unit 2: cont'd and Unit 3: Electrical Principles and Technologies |
| Resources: | <ul style="list-style-type: none"> - Introductory Package - Textbook - Variety of Chemicals - Chemicool website - Variety of online media. | <ul style="list-style-type: none"> - Textbook - Variety of Chemicals - Chemicool website - Variety of online media. | <ul style="list-style-type: none"> - Textbook - Science in a Crate kit - Dissolved oxygen kits - ORC national geographic media | <ul style="list-style-type: none"> - Textbook - Science in a Crate kit - Dissolved oxygen kits - ORC national geographic media | <ul style="list-style-type: none"> - Textbook - Van de Graff generator - Inside education electricity package - Circuits, LED's and Switches. |

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| Instructional Approaches: | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Computer Research - Think, pair, share | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Computer Research - Think, pair, share | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Debate - Jig-Saw - Concept maps | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Debate - Jig-Saw - Concept maps | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Computer Research |
| Special Activities: | <ul style="list-style-type: none"> - Mendeleev's puzzle - Elephants Toothpaste - Exothermic and endothermic reactions demonstrations - Ju-Jube lab - Reaction Rate Cyber Lab. | <ul style="list-style-type: none"> - Mendeleev's puzzle - Elephants Toothpaste - Exothermic and endothermic reactions demonstrations - Ju-Jube lab - Reaction Rate Cyber Lab. | <ul style="list-style-type: none"> - Cabbage lab - Dissolved Oxygen lab - Alberta Science Foundation Science in a Crate Activity. - Jeopardy Review | <ul style="list-style-type: none"> - Cabbage lab - Dissolved Oxygen lab - Alberta Science Foundation Science in a Crate Activity. - Jeopardy Review | <ul style="list-style-type: none"> - Van de Graff generator lab - Inside Education electricity poster game. - Unit project circuits and lights. |
| Evaluation: | <p>Formative</p> <ul style="list-style-type: none"> - Lab reports - Assignments <p>Summative</p> <ul style="list-style-type: none"> - Introductory Unit Exam - Topic 1-3 quiz - Topic 4-5 quiz - Topic 6-7 quiz - Unit Final | <p>Formative</p> <ul style="list-style-type: none"> - Lab reports - Assignments <p>Summative</p> <ul style="list-style-type: none"> - Topic 1-3 quiz - Topic 4-5 quiz - Topic 6-7 quiz - Unit Final | <p>Formative</p> <ul style="list-style-type: none"> - Lab reports - Assignments <p>Summative</p> <ul style="list-style-type: none"> - Topic 1-3 Quiz - Topic 4-6 Quiz - Unit Final | <p>Formative</p> <ul style="list-style-type: none"> - Lab reports - Assignments <p>Summative</p> <ul style="list-style-type: none"> - Topic 1-3 Quiz - Topic 4-6 Quiz - Unit Final | <p>Formative</p> <ul style="list-style-type: none"> - Lab reports - Assignments <p>Summative</p> <ul style="list-style-type: none"> - Topic 1-3 Quiz - Topic 4-5 Quiz - Topic 6-7 Quiz - Performance assessment unit project. - Unit Final |

| | February | March | April | May | June |
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| Topic: | Unit 3: Electrical Principles and Technologies | Unit 4: Biological Diversity | Unit 4: Biological Diversity | Unit 5: Space Exploration | Unit 5: cont'd and Year End Review |
| Resources: | <ul style="list-style-type: none"> - Textbook - Van de Graff generator - Inside education electricity package - Circuits, LED's and Switches. | <ul style="list-style-type: none"> - Textbook - Microscopes - Learn Alberta website - Science in focus | <ul style="list-style-type: none"> - Textbook - Microscopes - Learn Alberta website - Science in focus | <ul style="list-style-type: none"> - Textbook - CSA website - ADLC materials. | <ul style="list-style-type: none"> - Textbook - Castle rock KEY and SNAPP workbooks. - Previous provincial exams |
| Instructional Approaches: | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Computer Research | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Concept Maps - Debate - Research | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Concept Maps - Debate - Research | <ul style="list-style-type: none"> - Lecture - Labs - Readings - Debate - Computer Research | <ul style="list-style-type: none"> - Lecture - Readings - Concept maps. - Student directed review. |
| Special Activities: | <ul style="list-style-type: none"> - Van de Graff generator lab - Inside Education electricity poster game. - Unit project circuits and lights. | <ul style="list-style-type: none"> - Diversity of animals poster project. - Variation in traits lab. - Cloning controversy debate. - Balloon DNA models. - To burn or not to burn debate. | <ul style="list-style-type: none"> - Diversity of animals poster project. - Variation in traits lab. - Cloning controversy debate. - Balloon DNA models. - To burn or not to | <ul style="list-style-type: none"> - Model Solar System. - CSA promotional DVD. - Alberta science foundation: Science in a crate activity. | <ul style="list-style-type: none"> - AQWA water sampling. (dependent on time availability) |

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| Evaluation: | Formative - Lab reports - Assignments | Formative - Lab reports - Assignments | Formative - Lab reports - Assignments | Formative - Labs - Assignments | Formative - Assignments Review package. |
| | Summative - Topic 1-3 Quiz - Topic 4-5 Quiz - Topic 6-7 Quiz - Performance assessment unit project - Unit Final | Summative - Topic 1-2 quiz - Topic 3-5 quiz - Topic 6-7 quiz - Unit Final | Summative - Topic 1-2 quiz - Topic 3-5 quiz - Topic 6-7 quiz - Unit Final | Summative - Topic 1-2 Quiz - Topic 3-5 Quiz - Unit Final | Summative - <u>Final Exam</u> = TBA - <u>Provincial Exam</u> TBA |

Evaluation:

All assignments, quizzes, labs and unit tests will be recorded and a cumulative mark will be calculated at the end of the unit. Assessments will vary from oral presentations, class participation, completion of work and general attentiveness. The final exam is worth 25%. Missing assignments will be recorded as a zero unless arrangements have been made with Mr. Phelps to complete the work.

| Category | <u>Unit 1</u> | <u>Unit 2</u> | <u>Unit 3</u> | <u>Unit 4</u> | <u>Unit 5</u> | Final |
|------------------------------|----------------------------|-------------------------|--------------------------------------|----------------------|---------------|-------|
| | Matter and Chemical Change | Environmental Chemistry | Electrical Principles and Technology | Biological Diversity | Planet Earth | |
| Assignments, Labs & Homework | 40% | 40% | 40% | 40% | 40% | - |
| Quizzes | 30% | 30% | 30% | 30% | 30% | - |
| Unit Tests | 30% | 30% | 30% | 30% | 30% | - |
| Unit Total Marks | 100% | 100% | 100% | 100% | 100% | - |
| Final Mark | 15% | 15% | 15% | 15% | 15% | 25% |