**Acadia Junior High Grade 9 Science Outline 2013 – 2014**

**Teacher:** Ms Maxwell **Phone Number:** 204 269 6210

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**Class website:**Acadia homepage, click Staff, scroll to M. Maxwell, click homework-on-line

**Scientific Literacy**

The Manitoba Grade 9 Science course is a Pan-Canadian course aiming to develop scientific literacy. Scientific literacy is an evolving combination of the science related attitudes/skills/knowledge students need to develop inquiry, problem-solving, and decision-making abilities; to become lifelong learners; to maintain a sense of curiosity about the world around them; move successfully to Grade 9; apply and synthesize knowledge; operate scientific tools; and develop design skills.

**Topics of Study**

Chapter references below for each topic are from the SciencePower 9 text. Though I do not rely heavily on the textbook, it is useful for learning vocabulary, for pre-reading, has excellent visuals, and has many study questions.

Area of Science Topic Chapters Model/Theory/Theme

BIOLOGY Reproduction - Cell Theory

CHEMISTRY Elements - Atomic Theory

PHYSICS Electricity - Law of Electrostatics/Ohm’s Law

EARTH SCIENCE Astronomy - Interdependence

**Objectives for Students**

* To develop an understanding of the fundamental models/theories of science
* To develop critical thinking and problem solving abilities.
* To develop skills with scientific tools, measurement, recording/organizing/analyzing data
* To experience and practice the process of scientific inquiry
* To make informed decisions about further studies/careers in science.
* Explore science-technology-society-environment (STSE) connections

**Required Materials for every class**

* Pens (blue and red, additional colors for drawing models), pencil, eraser, ruler
* Scientific calculator (cell phones or iPod apps cannot be used instead)
* SciencePower 9 Textbook
* Binder with loose-leaf
* Graph paper
* Highlighters
* Sticky notes (useful for bookmarking important pages in the text)

**Activities in the “Real” World**

Much of science is learned by studying the world around us. I will be attempting to bring groups outdoors/community walks when applicable. Please fill in the volunteer information attached if you are open to volunteering so that these experiences can be provided more often.

**Expectations of Students**

Before class

\*Come early or on time to class, prepared physically (sitting, with supplies

 ready) and mentally (prepared to work). Complete all assigned work on time

 and to the best of your ability.

During class

\*Be an active participant during class. Listen to others, raise your hand when

 you wish to speak, ask appropriate questions, discuss concepts, etc…

\*Display appropriate classroom behaviour. We all learn best in a friendly,

 cooperative, and respectful environment. This includes EAs, classmates,

 guest speakers, etc.

\*Verify that you know what is expected before you leave class. If you feel you

 are not grasping the topics, arrange to get help.

After class

\*Complete assigned work to the best of your ability. Bring it with you to the next class.

Absences/Missed Classes

\*It’s your responsibility to learn concepts missed while absent and complete the assigned work. The **red folder** contains the missed worksheets waiting for you. Please catch up before class when possible.

**Extra Assistance**

Day \_\_\_\_\_ from \_\_\_\_\_\_\_\_ will generally be a good time for students to come for extra help, reinforcement or just to have space to study/discuss. (They tend to especially want to study/discuss with me in the winter months!!). I am available other lunch hours or after school as well, upon arrangement. If individualized attention is required for a topic of difficulty, students can set up an appointment with me that works for both of us.

**Laboratory Safety and Expectations**

* Following all directions carefully is especially important at this time. Lab safety equipment wear **MUST BE WORN** as per teacher’s instructions.
* Students must never drink or taste anything, nor misuse lab equipment.
* Demonstration of student disregard for their own or others safety will result in the student(s) removal from the laboratory.

**Evaluation**

* + Students will be assessed on their scientific proficiencies in the following three categories:
	+ Knowledge & Understanding of Science Concepts
	+ Inquiry
	+ Design and Problem Solving
	+ Term 1 and 2 marks are only an indication of the progress evident at the end of each of those terms – a “snapshot” of student progress at those moments in time. Both are cumulative from September.
	+ Term 3 is also cumulative from September, therefore the Term 3 mark is worth 80% of the final mark. The final exam in June is worth 20% of the final mark.
	+ Term marks are calculated by the following grading scheme:

70% = Knowledge & Understanding of Science Concepts (Tests, Quizzes,

 Assignments, Projects)

30% = Inquiry (Tests\*, Projects, Experiments), Design &Problem Solving (Tests\*,

 Design Challenges)

**\*\*Please note that on tests, there will be a section of the test reserved for inquiry/design/problem-solving questions**

**To Parents**

I am looking forward to getting to know you and your family and to discussing ways to enhance your students’ science experiences. Please contact me sooner rather than later if there are any questions at all or concerns you may have. Please complete, and return the form to confirm that you have read this course outline. Including the e-mail address(es) where you would like to receive any communications makes communication very easy!

**Note:** Your child’s first piece of homework is to **locate** the homework-on-line (details above) and **read** the Welcome Letter! You are welcome to read it as well of course. It outlines my personal perspectives of science learning and teaching as well as a course outline. A main idea of this exercise is so that your student knows where to find applicable information for the course. Homework will not likely be posted here every day (though I will try). Major projects (including rubrics), major assessment dates and other vital information will always be posted. It is a useful communication tool.

It may also be useful for you to check how engaged your student was today in class by verifying that they took note of the information they were asked to write under the heading **“Extra Assistance”** above and the text chapters for each topic under “Topics of Study”.

**Parents-PLEASE read, sign & RETURN by Thurs Sept 12, 2013**

You can be an active participant in your child’s learning by:

1) Providing quiet time and space for them to work in.

2) Checking the class website (see details above) or contact me if your student

 repeatedly says they have no homework in Science.

3) Contacting me if you feel that your student is not communicating honestly and/or

 frequently with you about their progress. I have told students that it is their

 responsibility to communicate with you honestly and frequently about their

 progress. If you feel they are not, please contact me.

4) Offering your expertise/experiences in the areas of study. I have found that

 parents are often an invaluable source of expertise. For example, in Grade 9

 Science, we study the reproductive system. This can take many forms

 such as conference calls, SKYPE interviews, classroom visits, etc.

I have read Ms Maxwell’s Grade 9 Science course outline. I have discussed these ideas with my student. Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Student (print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Parent/Guardian (print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Parent/Guardian:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Preferred email address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_phone number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Can I **contact you** to volunteer for field trips, special activities such as outdoor activities if required? Depending on your availability at the time, of course, you may or may not be able to volunteer for specific dates. This is no problem. I am only assessing your interest in/ability to help in this capacity.

◊ Yes ◊ No

**Issues**

Particularly in the area of Universe (origins of the universe) and in the area of Reproduction (reproductive technologies), there are issues that arise that demand sensitivity, open-mindedness and respect. There are of course, scientific principles and historical perspectives that are presented as part of the learning requirements. We will discuss in class about respecting others views and we will continue to do so as we approach these topics.