



Course Name: **Grade 10, Academic Science (SNC2DI)**

Teacher Name: **Mr. Arthur**

Course Description

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to the connections between cells and systems in animals and plants; chemical reactions, with a particular focus on acid-base reactions; forces that affect climate and climate change; and the interaction of light and matter. (Ministry of Education, 2008).

Units of Study

Intro and Safety	Feb. 3 – Feb. 5
1. Chemical Reactions (Chemistry)	Feb. 6 – Mar. 25
2. Tissues, Organs, and Systems of Living Things (Biology)	Mar. 26 – May 5
3. Light and Geometric Optics (Physics)	May 6 – June 8
4. Climate Change (Earth and Space)	June 9 – June 12
Exam Review	June 15 – June 17

Essential Learnings

Students will demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating), as well as identify, and describe a variety of careers and scientists related to the fields of science.

CHEMISTRY: Students will, using a variety of inquiry and lab techniques, demonstrate an understanding of the general principles and characteristics of chemical reactions, and various ways to represent them. They will also be able to analyse a variety of safety and environmental issues associated with chemical reactions, including the ways in which chemical reactions can be applied to address environmental challenges. **[labs, assignments, test]**

BIOLOGY: Students will, using a variety of inquiry and lab techniques, demonstrate an understanding of the hierarchical organization of cells, from tissues, to organs, to systems as well as the role of cell division, cell specialization, organs, and systems in animals and plants. They will also be able to evaluate the importance of medical and other technological developments related to biological systems, and analyse their societal and ethical implications. **[test, labs, project]**

PHYSICS: Students will, using a variety of inquiry and lab techniques, demonstrate an understanding of various characteristics and properties of light, particularly with respect to reflection in plane and curved mirrors and refraction in lenses. They will then be able to evaluate the effectiveness of technological devices and procedures designed to make use of light, and assess their social benefits. **[assignments, labs, test]**

EARTH AND SPACE: Students will investigate and demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth's climate and contribute to climate change. They will then be able to analyze some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change. **[test, lab]**

Course Evaluation

Student work will be evaluated using both formative and summative assessments, using a balance of the Ministry's four achievement chart categories: knowledge & understanding, thinking & inquiry, application, and communication.

FORMATIVE: designed to give multiple opportunities for students to make improvements to their work: Teacher-student conferences, peer conferencing, homework, exemplars, question and answer sessions, review games / worksheets, quizzes.

SUMMATIVE: designed to make judgments on final achievements of performance based on observations, conversations and student performance: Lab reports, assignments, tests, projects and exam. * Some summative tasks will not be returned to the student, but will be available to view at school.

Throughout the course, teachers will gather evidence of student learning of the **Essential Learnings** through observations, conversations, and student-produced work.

Seventy percent (70%) of the final mark will come from term work, and thirty percent (30%) will come from final evaluations.

Category	Summative Assessments	% Of Total Mark
Chemistry (k/u, t/l, a/c)	Assignment(s), Lab(s), Test	22%
Biology (k/u, t/l, a/c)	Assignment(s), Lab(s), Test	22%
Physics (k/u, t/l, a/c)	Assignment(s), Lab(s), Test	22%
Climate Change (k/u, t/l, a/c)	Assignment, Quest	4%
FINAL EXAM (will cover all units)	Exam	30

Successful completion of **all critical elements** is required to earn the course credit.

Late and Missed Assignments

Students at BCI will be responsible and complete all assigned work in a timely manner. This includes homework, process work, readings etc... so that you are prepared for class. Students will also be responsible to hand in assignments and write tests on their respective due dates. Students are expected to discuss alternative arrangements with their teachers if assignments and tests are not submitted due to unforeseen circumstances.

If you do not submit a major assignment on the due date any combination of the following may occur:

- Your teacher will meet with you to discuss the reason why the deadline was not met. As a result of this meeting: an extension or an alternative assessment may be given and your parent/guardian may be contacted to discuss next steps.
- You may be referred to PASS or to Student Success to complete the assignment. Your teacher and or Vice Principal will determine if this completion will take place during lunch or during class time.
- Your completed work will be evaluated. Students who do not submit work in a timely manner shall have this reflected in the Learning Skills and Work Habits section on the Provincial Report Card.
- If work is still not submitted on the established date or if you do not follow through with PASS/Student Success you will be referred to your Vice Principal and next steps may include but are not limited to: student referral to in-school intervention support (School Success Team, Special Education LAC, Guidance etc.); a negotiated extension that meets teacher mark reporting deadlines; and/or an alternative opportunity for the student to demonstrate the same critical elements, or an "incomplete" (I) will be entered for this evaluation.
- The use of "I" indicates that work has not been submitted. When determining a final grade the teacher's use of professional judgement based on interventions and data collected determine whether or not the student has demonstrated the required critical elements at another point in the course.
- **During the semester, unit tests will be marked and corrected in class. It is the student's responsibility to make the proper corrections at this time. To maintain academic integrity from semester to semester, tests will be collected back and held by your teacher. A final exam outline will be provided, along with practice questions. Students and parents will be able to view the tests with their teacher at any time by appointment.**

Cheating and Plagiarism

Consequences:

If your teacher suspects that you have plagiarised or cheated, your teacher will inform your Vice Principal and meet with you to determine the nature, intent and extent of the incident and your understanding of the situation.

If it is determined that you have plagiarised/cheated you may face one or more of the following:

- Your parents will be notified.
- Within a given timeframe, given the opportunity to redo part or all of the assignment, or complete an alternative assignment.
- A record of your academic infraction will be logged and kept on file until you graduate.
- The incident will be reflected on your report card in the Learning Skills and Work Habits section of the Provincial Report Card.

In consultation with Administration additional consequences may be determined such as:

- Serve a detention or an in-school suspension, or a suspension.
- Limit your access to recognitions (e.g., school awards, scholarships).

All consequences will be progressive in nature and take into consideration the number and frequency of incidents and the grade level, maturity and individual circumstances of the student.

Learning Skills

The Learning Skills and Work Habits section of the provincial report card is an integral part of a student's learning. Students will be assessed in the following areas:

- Responsibility
- Initiative
- Independent Work
- Collaboration
- Organization
- Self-Regulation

The following scoring system is used for Learning Skills:

E=Excellent; G=Good; S=Satisfactory; N=Needs Improvement

SCIENCE BUDDY

Your Science Buddy is someone in class who will serve to when you are away: 1) copy notes from; 2) pick-up extra handouts; 3) tell you about due dates; and when you are here 4) help you peer conference with lab reports; 5) be a person to do group study with, etc, etc.

SCIENCE BUDDY 1: _____

SCIENCE BUDDY 2: _____

CELL #: _____

CELL #: _____

E-MAIL: _____

E-MAIL: _____

Course Specific Information

RECIPE FOR SUCCESS:

- **ATTEND:** everyday, on time and **STAY** the whole period.
- **PARTICIPATE:** **SHARE** your good ideas and **PRACTICE** your answers.
- **ORGANIZE:** Keep your notebook neat and up to date.
- **ATTEMPT:** Try your **BEST** and complete all assigned work.
- **ASK:** when you have questions or **NEED** extra help.

Growth mindset vs fixed mindset

SUCCESS ← → **FRUSTRATION**

GRIT ← → **Learned helplessness**

1. I can learn anything I want to. 1. I'm either good at it, or I'm not.

2. When I'm frustrated, I persevere. 2. When I'm frustrated, I give up.

3. I like to challenge myself. 3. I don't like to be challenged.

4. When I fail, I learn. 4. When I fail, I'm no good.

5. I like being told that I try hard. 5. I like being told that I'm smart.

6. If my classmates succeed, I'm inspired. 6. If my classmates succeed, I feel threatened.

7. My effort and attitude determine everything. 7. My abilities determine everything.

from Reid Wilson @wayfarepath

@sylviaadkeworth

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IT HAS BEEN MY OBSERVATIONS THAT ... :

Students who achieved their goal ...	Students that did not achieve their goal ...
- asked questions during lesson - studied in groups - attempted as much homework as possible and checked the answers - adhered to timelines - sought extra help when needed - transferred each lesson's key points onto their study sheet daily. - reviewed the study sheet for 10 min per night - attempted all practice tests a minimum of 3 days prior to the unit test in order to be able to clarify misconceptions or improve calculations	- did not ask questions - rarely came in for extra help - attempted some homework but did not complete it on a regular basis - did not attempt practice tests - tried to figure things out on their own

Classroom Procedures:

1. Be prepared! Come to class with all necessary equipment – notebook pen, pencil, ruler, calculator, etc...
2. Be courteous. **You are NOT talking when:**
 - The teacher is talking
 - Another student is speaking to the teacher/class
3. **Raise your hand** if you have a question, and wait until you are called upon to reply.
4. Ask for extra help whenever you need it.
5. **Be nice to each other!! (Please, Thank you and Excuse me)**
6. **All portable electronic** devices (cell phones, iPods etc.) are to be turned off upon entry into the science classroom and are to be put away out of sight during the class.
7. **All** lab safety rules must be followed.

For your benefit a website has been set up to help you stay on top of assignments and get caught up when you are absent. Please use this website as an organizational aid and a way to contact you teacher outside of class if needed. The address for the website is: **www.arthurscience.weebly.com**

Google Classroom code: _____

Textbook: ON Science 10 (McGraw-Hill)

Due to a limited number of textbooks, all books will remain in the classroom. If a student requires additional time to complete work from the textbook, they will need to come to class after school or during lunch hour.

Additional resources including quizzes, games, images and videos can be accessed at:

<https://www.execulink.com/~ekimmel/gr10.htm>

Notebook:

Each student is encouraged to carry a 3-ring loose-leaf binder to allow for handouts. Notebooks are expected to be kept up-to-date and in neat condition.

Extra-Help

- Options for you include: i) before school **7:45-8:15 a.m.** (I will most likely be in the science office or 3102)
ii) Science Help Room from **11:20 a.m. - 11:50 a.m. every day** in 3102
iii) after school by appointment

**** Remember to always bring a BUDDY or two! ****

Contact Information

- Teacher's email:** steven_arthur@wrdsb.ca
Phone extension: (519) 885-4620
Teacher website: www.arthurscience.weebly.com