



# CARONPORT HIGH SCHOOL

## Secondary Science Renewal FAQ

1. What changes are underway in secondary science?
  - Three new courses – Environmental Science 20, Health Science 20, and Physical Science 20 – are being introduced in 2014/15. These will replace Biology 20, Chemistry 20 and Physics 20 in 2015/16.
  - Earth Science 30 is being introduced as a new course in 2015/16.
  - Renewed Biology 30, Chemistry 30 and Physics 30 will be available in 2015/16.
  - Renewed Computer Science 20 and 30 will be available in 2016/17.
2. Will students still learn chemistry, physics and biology in the new Grade 11 science courses?
  - Students will still experience most of the core disciplinary ideas from each of the current Grade 11 chemistry, physics and biology courses. The major difference is that they will experience these ideas in interdisciplinary, rather than discipline-specific courses.
3. How do the new science courses align with other provinces and territories?
  - Given that education is a provincial and territorial responsibility, each jurisdiction determines which courses are suitable for their students. Most jurisdictions, including Saskatchewan, have used the Pan-Canadian *Common Framework of Science Learning Outcomes K to 12* to guide curriculum development. This framework does not outline specific courses at grades 11 and 12.
4. What is happening with Science 10?
  - Science 10 is being renewed during the 2013/14 school year. It will be available for schools in the spring of 2014. Implementation will be required in the fall of 2014.
5. What are the graduation requirements?
  - Graduation requirements have not changed as part of secondary science curriculum renewal. Students still require Science 10 and one science at Grade 11 or 12. Credit requirements are outlined in *Core Curriculum: Principles, Time Allocations, and Credit Policy* (2011), which is available at [www.education.gov.sk.ca/core-principles-time-credit](http://www.education.gov.sk.ca/core-principles-time-credit).
6. What is happening with accreditation?
  - There are no changes at this time. The process for teachers to become accredited in biology, chemistry or physics remains the same. See <http://www.education.gov.sk.ca/accreditation> for

further information. Accreditation will not be required for Earth Science 30 or Computer Science 30, nor will there be provincial exams for those courses.

7. What is the new prerequisite structure?

- The following prerequisites will be in place for all secondary science courses once renewal is complete. Secondary level prerequisites for the current year are available at <http://www.education.gov.sk.ca/registrarshandbook>.

Course	Prerequisite
Environmental Science 20	Science 10
Health Science 20	Science 10
Physical Science 20	Science 10
Computer Science 20	Science 10
Biology 30	Health Science 20 or Environmental Science 20
Chemistry 30	Physical Science 20
Physics 30	Physical Science 20
Earth Science 30	Physical Science 20 or Environmental Science 20
Computer Science 30	Computer Science 20

8. What prerequisites will students need if they are transitioning from the old science program to the new science program?

- Students may use Chemistry 20 or Physical Science 20 as prerequisites for Chemistry 30 during the transition period.
- Students may use Physics 20 or Physical Science 20 as prerequisites for Physics 30 during the transition period.
- Students only require Science 10 as a prerequisite for Biology 30 during the transition period.

9. Will there be a mathematics prerequisite for Physics 30?

- That has not been determined.

10. How will students know which courses to choose?

- As was the case before this curriculum renewal, students should choose science courses based on what they currently believe will best fit their needs and interests after high school.

11. Should students take Environmental Science 20 and Biology 30 or should they take Health Science 20 and Biology 30? Which courses are recommended to keep students options open for post-secondary?

- All choices of which courses to take should be based on student interest and their own career planning. For example, a student planning to become a medical laboratory technician may find it more valuable to take Health Science 20, whereas a student planning on becoming an environmental engineering technologist may prefer to take Environmental Science 20.

12. Which courses are required for different post-secondary institutions' programs? Will post-secondary institutions be sharing this information on their websites?

- Post-secondary institutions in Saskatchewan (and some outside of Saskatchewan) are aware of the new science courses and have been revising their admission requirements to reflect these

courses. Each institution will make final determinations on prerequisites once the new courses are finalized and will share that information on their respective websites.

13. What are the options for students who require a modified science course?

- Students who require a modified science program should continue with the current Science 11 and 21 courses. In the future, the ministry will support the development of courses that will meet the needs of students who require modified programming.

14. How much longer will schools be able to offer the old science courses?

- Biology 20, Chemistry 20 and Physics 20 will no longer be available beginning with the 2015/16 school year.
- The current Biology 30, Chemistry 30, and Physics 30 will no longer be available beginning with the 2016/17 school year.
- The current Computer Science 20 and 30 will no longer be available beginning with the 2017/18 school year.

15. What are the postsecondary institutions saying about Earth Science 30 as an ‘acceptable’ science course for entry?

- All of the postsecondary institutions in Saskatchewan are aware that Earth Science 30 is being introduced and are in the process of determining whether it will be added to their lists for early and regular admission. It is best to check directly with the institution to confirm when these decisions have been made.

16. What communication strategies will be created by the ministry for parents, counsellors and teachers?

- The ministry has provided information about secondary science renewal to all school divisions regularly throughout the development process. School divisions make their own choices about how to share this information with parents, counsellors and teachers.

17. What are the course codes for the new courses?

<b>Course</b>	<b>Code</b>	<b>Course</b>	<b>Code</b>
Health Science 20	6245	Sciences de la santé 20	6248
Environmental Science 20	6246	Sciences d’environnement 20	6249
Physical Science 20	6247	Sciences physiques 20	6250
Earth Science 30	8251	Sciences de la Terre 30	8252
Biology 30	8255	Biologie 30	8258
Chemistry 30	8256	Chimie 30	8259
Physics 30	8257	Physique 30	8260

18. Are course descriptions available for the new courses?

- The ministry sent course descriptions in English and French for the four new courses to all the directors in January 2013. Revised descriptions are included here.
- **Environmental Science 20**

- Students will learn how to examine local and global environmental issues from a systems perspective while considering the effects of human actions and a growing global population on the climate and environment, as well as the effects of the environment on human health. They will explore the mechanisms and importance of aquatic and terrestrial ecosystems and the sustainability of past and current practices and technologies humans have developed to live with and within the environment.
- Prerequisite: Science 10 or 11
- **Health Science 20**
  - This course will challenge students to look at the health science field from holistic and analytic perspectives to provide a basis for making sound personal health choices. Students will examine the range of philosophies that guide health care and consider ethical decision within those contexts. Understanding the basic anatomy and physiology of the human body will provide a context for studying the normal and abnormal functioning of various body systems, including the role of nutrition and metabolism. Lastly, students will examine diagnostic tools and procedures and how they are used to inform treatment. Students will also investigate the range of health science careers and post-secondary programs available in Saskatchewan.
  - Prerequisite: Science 10 or 11
- **Physical Science 20**
  - This course combines chemistry and physics in an integrated manner to investigate concepts related to heating and cooling, the foundations of chemistry, including the mole and quantitative analysis of molecules and chemical reactions, and the characteristics and properties of waves. An overarching theme is the study of the enterprise of public and private science as it occurs in agriculture, industry, and universities to help students better understand various physical science related career paths. Student inquiry will guide independent investigations of physical science phenomena.
  - Prerequisite: Science 10 or 11
- **Earth Science 30**
  - Students will examine our planet's geological origins and the geological timescale as a foundation to guide decision making with regard to the use of its mineral and energy resources, the maintenance and remediation of the environment, and response to geological hazards. Hands-on field experiences will enable students to develop visual-spatial reasoning skills and an understanding of the role of Geographic Information Systems. Students will also explore the historical and contemporary significance of Earth Science and related careers.
  - Prerequisite: Physical Science 20 or Environmental Science 20
  - (During 2014/15 any 20-level science will be acceptable as a prerequisite)