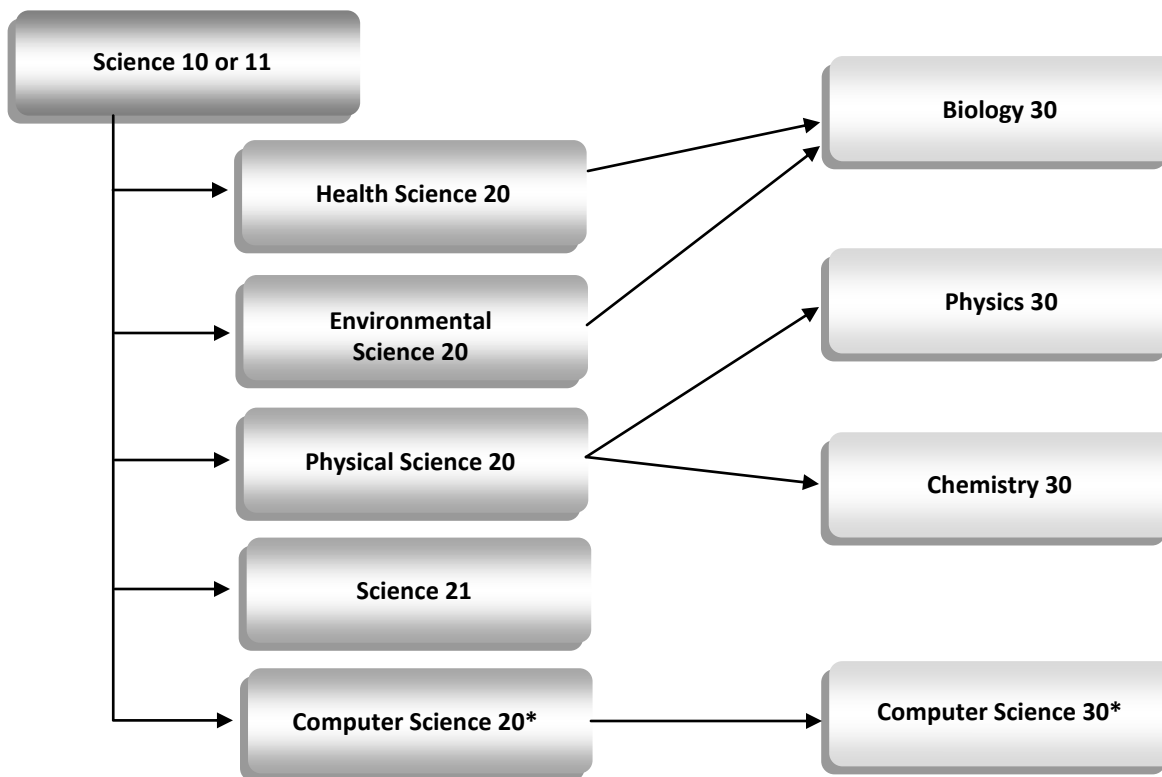


Grades 10 to 12: Science Courses & Pre-requisites



Saskatchewan High School Education Requirements

Science: one (1) credit at the 10-level on one (1) credit at the 20 or 30 level

Level 10 Science Options

SCIENCE 10

The class is a general science course which consists of three (3) units: Climate & Ecosystem Dynamics, Chemical Reactions, Force Motion in our World. Students develop skills in mathematical reasoning, scientific investigations, forming hypotheses, drawing good conclusions, graphing and analyzing data. There is an emphasis on developing scientific literacy, which involves science-related attitudes, skills and knowledge students need to improve their inquiry and problem-solving abilities

SCIENCE 11

This class is a modified course designed for students who struggle with science. Students should receive a recommendation from their science teacher or the guidance office in order to register for Science 11. This course will include many of the same topics as Science 10 but in less depth. Students who successfully complete Science 11 may proceed to Science 21 or Science 10.

Level 11 Science Options

HEALTH SCIENCE 20

Prerequisite: Science 10

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.

ENVIRONMENTAL SCIENCE 20

Prerequisite: Science 10

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. Students will also investigate the range of health science careers and post-secondary programs available in Saskatchewan.

Level 11 Science Options (con't)

PHYSICAL SCIENCE 20

Prerequisite: Science 10

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.

SCIENCE 21

Prerequisite: Science 10 or Science 11

This course is a modified course designed for students who struggle with science. Students who have successfully completed Science 11 or have received a recommendation from their science teacher or the guidance office could register for Science 21. This course will include topics from Environmental Science 20, Health Science 20, and Physical Science 20. Students who successfully complete Science 21 have completed the science requirement for graduation. This course may not fulfill entrance requirements for post secondary institutions.

COMPUTER SCIENCE 20

Please speak with your JAG teacher, Guidance Counsellor or the Vice Principal regarding this course.

Level 12 Science Options

BIOLOGY 30

This course serves as an overview of internal living systems with an emphasis on humans. Study includes molecular biology, cells, heredity, human anatomy and physiology, and evolution. Skills are developed in investigation, drawing conclusions, distinguishing among observation, inference and conclusion, and research. Students develop an appreciation of the complexity and inter-relations of all living things. Students are required to do an independent research project.

CHEMISTRY 30

Prerequisite: Physical Science 20/Chemistry 20

Students develop laboratory skills, problem-solving techniques and the ability to synthesize laboratory data. This is a very demanding course as it requires strong problem solving skills, mathematical knowledge and a hard work ethic. Course content includes studies on solutions, thermochemistry, chemical kinetics, equilibrium, acid-base theory, oxidation and reduction, and some organic chemistry.

PHYSICS 30

Prerequisite: Physical Science 20/Physics 20

This course covers aspects of motion, forces, energy momentum, electricity and magnetism. Students develop skills such as measurement, graphical analysis and problem solving as well as experimental methods.

COMPUTER SCIENCE 30

Prerequisite: Computer Science 20

Please speak with your JAG teacher, Guidance Counsellor or the Vice Principal regarding this course.