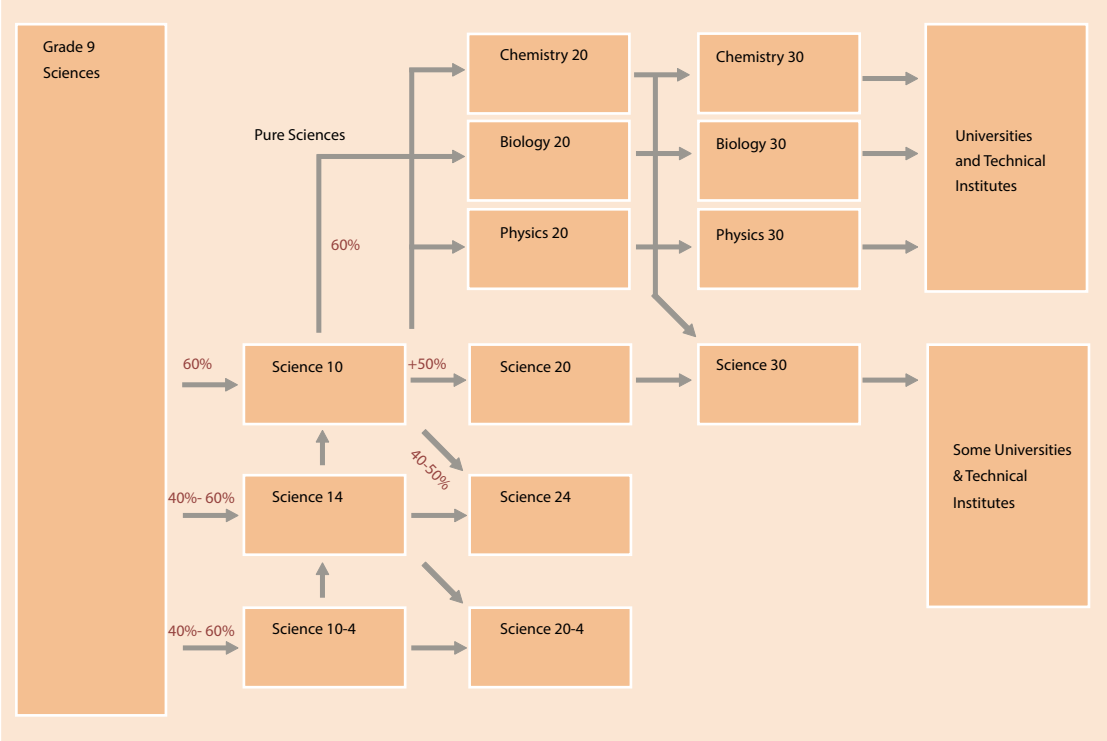
INVESTIGATE SCIENCES

COURSE SEQUENCE - SCIENCES



Science 10

5 credits

This is an introductory course to high school science that is designed for academic students. In Science 10 you will take an introductory look at biology, chemistry and physics to prepare you for whichever 20-level science course(s) you enroll in. There is a fourth unit that combines information gained in the first three to study social and environmental issues in science.

Science 20

5 credits

This is a general science course that investigates earth science, biology, chemistry and physics. You will study topics like – continental drift, earthquakes, food chains and webs, solution and organic chemistry, Newton's three laws and more.

Science 30

5 credits

This is an academic course which can be used by some programs for university entrance. Science 30 is a general science course with units in biology, chemistry, physics and energy and the environment. Some of the things you will be studying include: the circulatory system, genetics, acid and base chemistry, environmental chemistry, electricity, light, origin of the universe, global energy demand, power generation (traditional like coal and alternative like solar) and much more.

**Any 20 level science course will give you the prerequisite for this course.

Biology 20

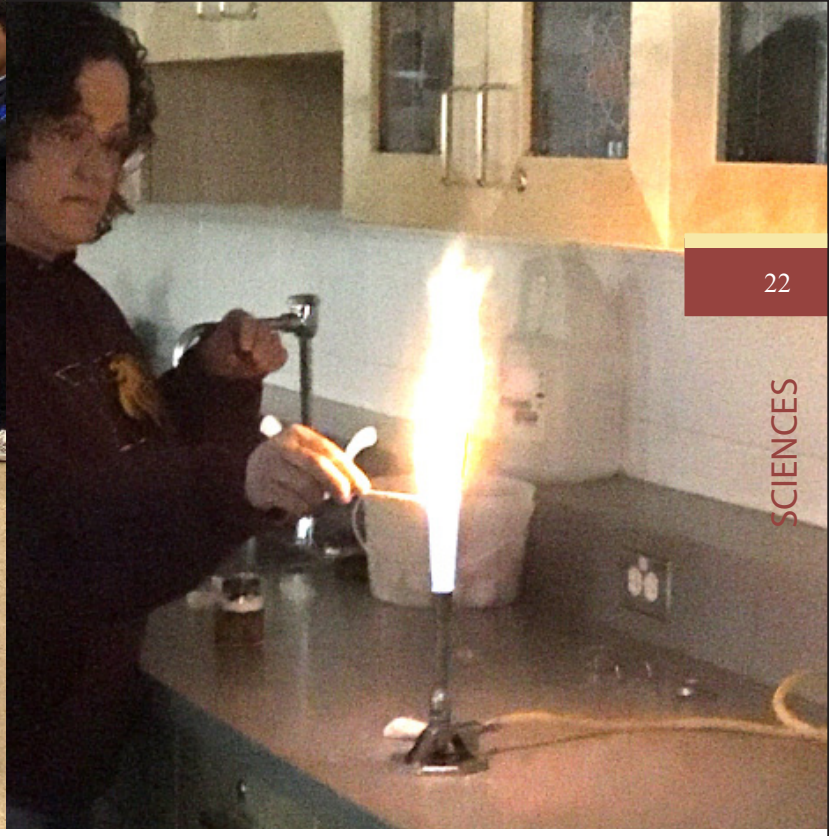
5 credits

In Biology 20 you will study how human systems; including the respiratory, circulatory, excretory, digestive and muscular systems, exchange matter and energy with the environment. You will also study photosynthesis and cellular respiration, biogeochemical cycles and biomes. In this course there is a fetal pig dissection and an off-site field study in Wetaskiwin.

Biology 30

5 credits

In this course you will study such topics as the nervous system and senses, the endocrine system, the reproductive system, cell division, genetics, DNA and protein synthesis and changes in



populations. Throughout the course connections will be made with relevant societal, technological and political issues. Examples of this may be discussing/researching genetic engineering and/or reproductive technologies.

Chemistry 20

5 credits

Areas of study in Chemistry 20 include: chemical bonding (ionic and molecular bonds), gases (behaviors and laws), solutions (dilution, concentration and acid/base calculations), and stoichiometry (calculating quantities of substances in reactions). You will have many opportunities to conduct experiments to test the theories that you are learning.

Chemistry 30

5 credits

You will study energy changes and how they are related to changes in matter Some of the topics studied in this course are: laws of conservation of energy, thermodynamics, oxidation-reduction reactions, organic chemistry, acids and bases, and dynamic equilibrium. As in Chemistry 20, there will be laboratory opportunities to test out the new material you learn.

Physics 20

5 credits

In this course you will study kinematics and dynamics, periodic motion and conservation of energy. A strong link between these areas of study and laboratory work is present throughout the course.

Physics 30

5 credits

If you take Physics 30 you will have the opportunity to study: the conservation of energy and momentum, electric and magnetic forces and fields, electromagnetic radiation and the photoelectric effect and atomic physics (including the structure of the atom and nuclear reactions).

Science 14

5 credits

Science 14 covers topics like the properties of matter, simple machines, plant and animal cells and ecosystems.

Science 24

5 credits

This course is the continuation of Science 14. Successful completion of Science 24 will provide you with the minimum 10 credits in science that are required to graduate. In this course you will study chemical reactions, electricity, fossil fuels, diseases, transportation safety and more.