



# Taking Science at Centennial High School

Information for Students & Parents  
*January 2022*

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## Science Courses Required to Graduate with your Diploma

A total of **10 credits** in Science are required to meet the minimum graduation requirements to acquire a High School Diploma or Certificate of Completion

Students receive **5 credits** for each course they successfully complete

Successful completion means a mark of at least 50%

Students can not receive partial or prorated credits (credits are not received for completion of units, or marks of less than 50% in a course)

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# Grade 10 Science Courses

Students choose **one** of the following three courses upon entry to high school:

- **Science 10** – most depth & breadth of study
- **Science 14** – focus on basic skills and knowledge
- **Science 10-4(K&E)** – focus on basic skills and knowledge
- *All courses have units of study related to Biology (human and/or plant), Chemistry, Physics and the Environment*



# Science 10

- **Biology:** the focus will be on learning cellular structure and function in plants, the microscope and the transport of materials specifically through plants
- **Chemistry:** the focus will be on structures of atoms and ions, nomenclature of various types of chemical compounds and chemical reactions
- **Physics:** students are introduced to the topics of kinematics, potential energy, kinetic energy and the relationships between force, work and energy
- **Climate:** the interconnection of the biosphere and energy is studied; including global biomes, global energy transfer and a simple introduction to thermodynamics/energetics
- Strong math skills are essential to achieving success in Science 10 (isolating variables, formula manipulation and unit analysis)
- Skill development includes: graphing, lab techniques (making observations, identifying variables, interpreting data, etc), mathematical problem solving, analyzing and evaluating







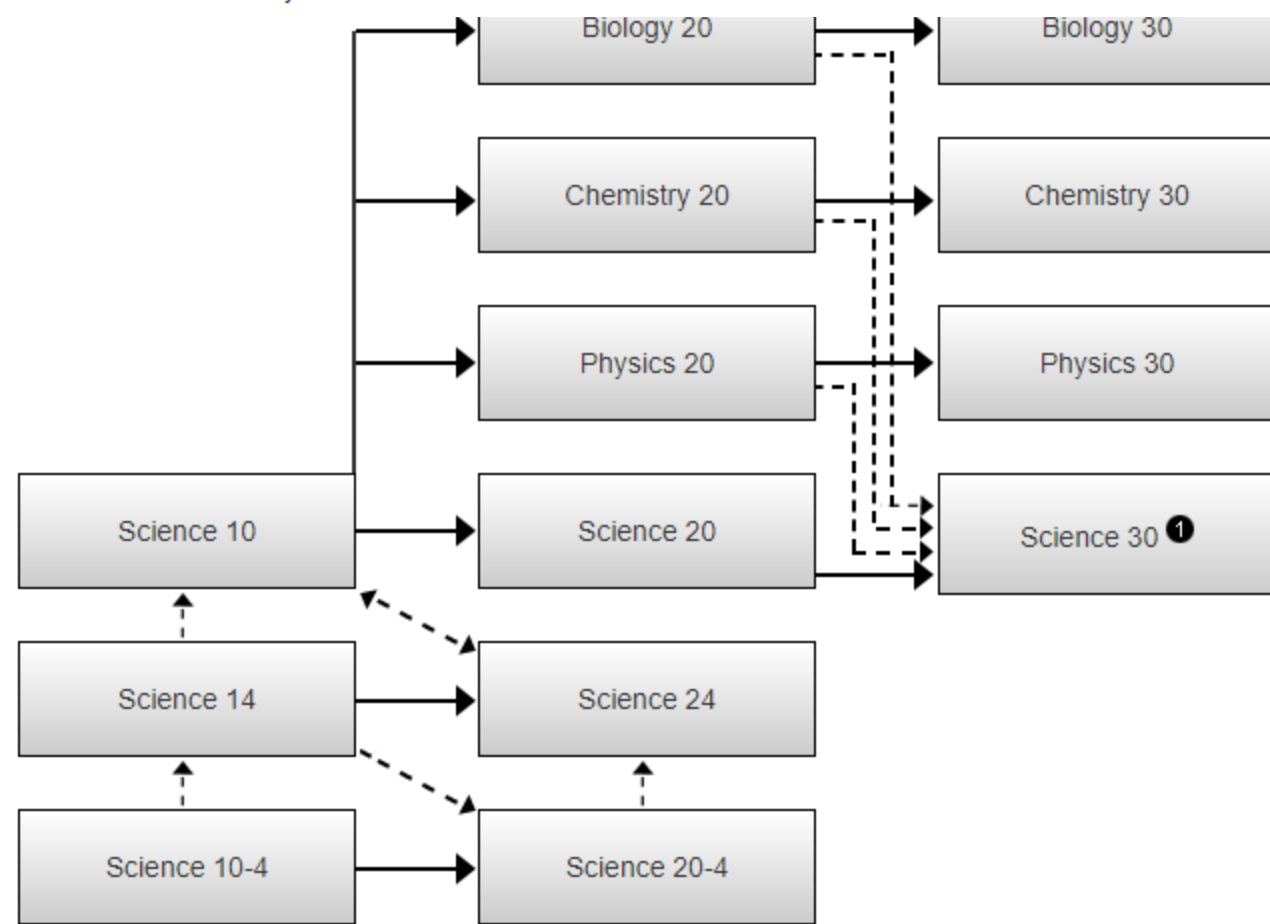
## Science 14 & Science 10-4(K&E)

- **Biology:** the main topics of study are cellular structure and function, using the microscope and human body systems
- **Chemistry:** the focus will be on chemical safety, the Periodic Table and common chemicals (relating to every day life)
- **Physics:** students will look at heat, force and energy in everyday machines along with energy transfer
- **Environment:** focus is on the interconnection of humans and the natural world, and how matter and energy flow in ecosystems
- Students taking Science 14 earn credits towards a High School Diploma
- Students taking Science 10-4 earn credits towards a High School Certificate of Completion

- 1 Students who have achieved a final mark of 50% or greater in any one of Biology 20, Chemistry 20, Physics 20 or Science 20 may enrol in Science 30.

# Sequencing:

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The courses in the sequence chart are worth 5 credits each.

→ Typical Progression

# Course Sequencing: cont'd...

- Students must achieve a mark of at least 50% to pass, earn 5 credits and progress to the next course within the designated sequence
- Science 10: a mark of at least 65% is highly recommended for students wishing to move into Biology 20, Chemistry 20 or Physics 20
- Students who earn a mark between 50-65% will be recommended to take Science 20 or Science 24





# AP Science

- Centennial High School offers AP (Advanced Placement) Science Courses in Biology, Chemistry and Physics
- Students wishing to take AP Science courses should register in Science 10 AP
- Progression into the three possible disciplines (Biology, Chemistry and Physics) will be considered at the end of the course, based on student marks, skills and interest



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