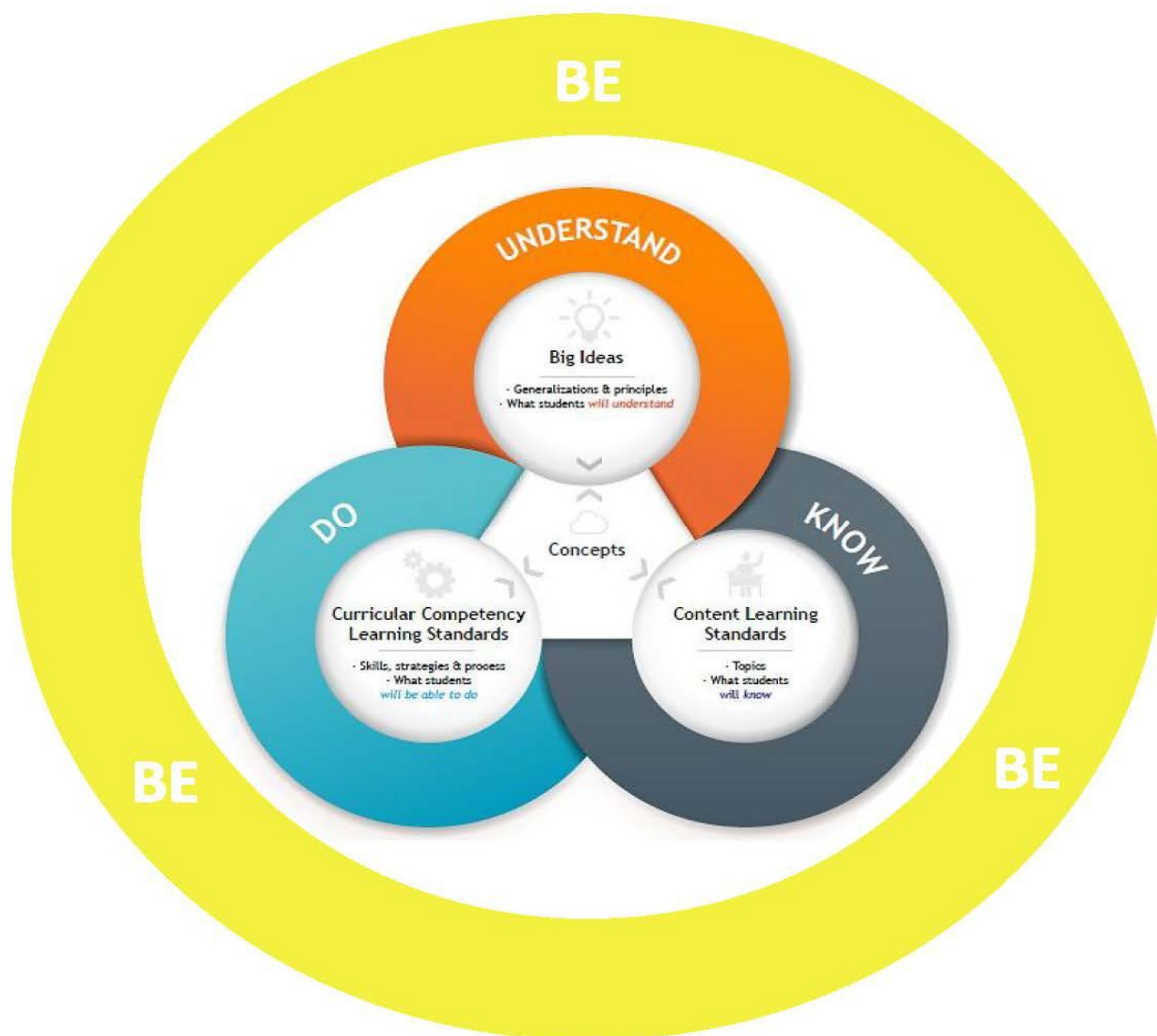


## Chemistry 11

### Course Outline

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*Chemistry 11 is comprised of the Big Ideas, Curricular Competencies, and Content. Overarching the subject specific curriculum are Core Competencies that are embedded into every subject and grade.*

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The curriculum has been redesigned to meet the needs of the 21st Century Learner. More information can be found on the Ministry of Education website. (<https://curriculum.gov.bc.ca/curriculum/overview>)

An overview of the new approach to Science can also be found on the ministry website. (<https://curriculum.gov.bc.ca/curriculum/science/core/introduction>)

## Core Competencies



- **Communication** -The communication competency encompasses the set of abilities that students use to impart and exchange information, experiences and ideas, to explore the world around them, and to understand and effectively engage in the use of digital media.



- **Thinking** - The thinking competency encompasses the knowledge, skills and processes we associate with intellectual development. It is through their competency as thinkers that students take subject-specific concepts and content and transform them into a new understanding. Thinking competence includes specific thinking skills as well as habits of mind, and metacognitive awareness.
  - **Creative Thinking**
  - **Critical Thinking**



- **Personal and Social** - Personal and social competency is the set of abilities that relate to students' identity in the world, both as individuals and as members of their community and society. Personal and social competency encompasses the abilities students need to thrive as individuals, to understand and care about themselves and others, and to find and achieve their purposes in the world.
  - **Positive Personal & Cultural Identity**
  - **Personal Awareness & Responsibility**
  - **Social Responsibility**

## Big Ideas:

- Atoms and molecules are building blocks of matter.
- Organic chemistry and its applications have significant implications for human health, society, and the environment.
- The mole is a quantity used to make atoms and molecules measurable.
- Matter and energy are conserved in chemical reactions.
- Solubility within a solution is determined by the nature of the solute and the solvent.

## Curricular Competencies:

- Questioning and predicting
- Planning and conducting
- Processing and analyzing data and information
- Evaluating
- Applying and innovating
- Communicating

(A more detailed list can be found at <https://curriculum.gov.bc.ca/curriculum/science/11/courses>)

Mr. Wilkison

**Content:**

- quantum mechanical model and electron configuration
- valence electrons and Lewis structures
- chemical bonding based on electronegativity
- bonds/forces
- reactions
- the mole
- dimensional analysis
- stoichiometric calculations using significant figures
- green chemistry
- solubility of molecular and ionic compounds
- stoichiometric calculations in aqueous solutions
- analysis techniques
- local and other chemical processes
- organic compounds
- applications of organic chemistry

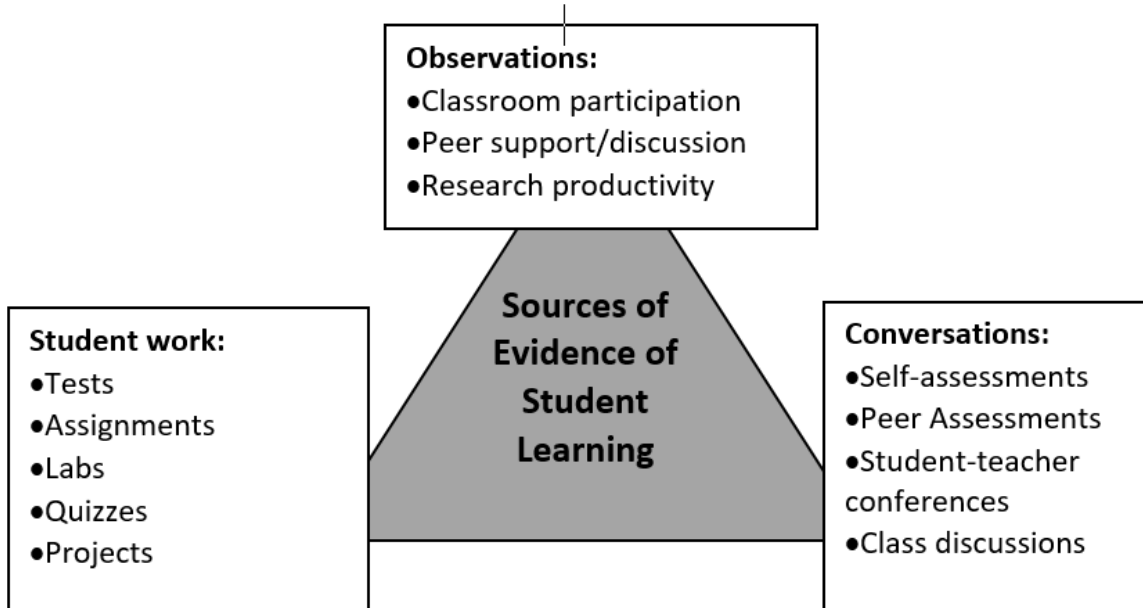
**First Peoples knowledge and perspectives:**

The Science curriculum is designed to acknowledge, recognize, and respect the First Peoples Principles of Learning. It is important for teachers to use these principles to guide the integration of First Peoples knowledge and perspectives into the Science curriculum in meaningful ways. As well, the Science curriculum aims to address the Calls to Action of the Truth and Reconciliation Commission, particularly the call to "integrate Indigenous knowledge and teaching methods into classrooms" (clause 62) and "build student capacity for intercultural understanding, empathy and mutual respect" (clause 63).

Mr. Wilkison

**Assessment**

Along with new curriculum, traditional assessment practices are also being reformed. Evidence of student learning regarding the Big Ideas, Curricular Competencies, and Content will be collected in a number of ways:



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