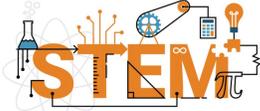# Ontario Science Curriculum

The new Ontario science and technology curriculum is organized into five strands. Strand A is an overarching strand that focuses on STEM skills and connections. Strands B to E are Life Systems, Matter and Energy, Structures and Mechanisms, Earth and Space Systems

Expectations	Key Concepts		
A. STEM Skills and Connections			
1. use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures 2. use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life and in STEM-related fields 3. demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences	scientific research experiment	engineering design innovation	coding data prototype
B. Life Systems – Interactions in the Environment			
1. assess the impact of human activities and technologies on the environment, and analyse ways to mitigate negative impacts and contribute to environmental sustainability 2. demonstrate an understanding of interactions between and among biotic and abiotic components in the environment	abiotic adaptations biodegradable biome biosphere biotic carnivore	community consumer decomposer ecosystem food chain food web habitat	herbivore micro-organism population producer species succession
C. Matter and Energy – Pure Substances and Mixtures			
1. evaluate the environmental and social impacts of the use and disposal of various pure substances and mixtures 2. demonstrate an understanding of the nature of matter, including the properties of pure substances and mixtures, and describe these properties using particle theory	concentrated dilute dissolve distillation filtration homogeneous heterogeneous insoluble	manufactured products mechanical mixture particle theory pollutant pure substance raw material	saturated soluble solute solution solvent unsaturated WHMIS symbols
D. Structure and Mechanisms – Form/Function/Design of Structures			
1. analyse personal, social, economic, and environmental factors that should be considered when designing and building structures 2. demonstrate an understanding of the relationship between structural forms and the forces acting on them	boiling point condensation contraction convection conduction evaporation	expansion heat heat capacity insulator particle theory radiation sublimation	solidification water cycle temperature thermometer thermostat vapourization
E. Earth and Space Systems – Heat in the Environment			
1. assess the benefits of technologies that reduce heat loss, and analyse various social and environmental impacts of the use of energy from renewable and non-renewable sources 2. demonstrate an understanding of heat as a form of energy that is associated with the movement of particles and is essential for many natural processes within Earth's systems	bedrock continental drift core crust deposit erosion horizons	humus igneous magma mantle metamorphic minerals	sediment sedimentary subduction tectonic plate topsoil volcano weathering