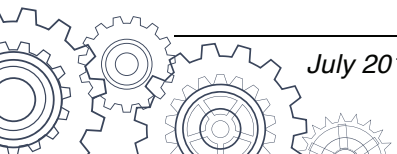
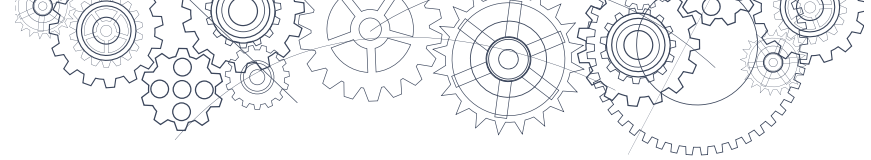


Science K-10 – Big Ideas

Grade	Biology	Chemistry	Physics	Earth/space
K	<ul style="list-style-type: none">Plants and animals have observable features.	<ul style="list-style-type: none">Humans interact with matter every day through familiar materials.	<ul style="list-style-type: none">The motion of objects depends on their properties.	<ul style="list-style-type: none">Daily and seasonal changes affect all living things.
1	<ul style="list-style-type: none">Living things have features and behaviours that help them survive in their environment.	<ul style="list-style-type: none">Matter is useful because of its properties.	<ul style="list-style-type: none">Light and sound can be produced and their properties can be changed.	<ul style="list-style-type: none">Observable patterns and cycles occur in the local sky and landscape.
2	<ul style="list-style-type: none">Living things have life cycles adapted to their environment.	<ul style="list-style-type: none">Materials can be changed through physical and chemical processes.	<ul style="list-style-type: none">Forces influence the motion of an object.	<ul style="list-style-type: none">Water is essential to all living things, and it cycles through the environment.
3	<ul style="list-style-type: none">Living things are diverse, can be grouped, and interact in their ecosystems.	<ul style="list-style-type: none">All matter is made of particles.	<ul style="list-style-type: none">Thermal energy can be produced and transferred.	<ul style="list-style-type: none">Wind, water, and ice change the shape of the land.
4	<ul style="list-style-type: none">All living things sense and respond to their environment.	<ul style="list-style-type: none">Matter has mass, takes up space, and can change phase.	<ul style="list-style-type: none">Energy can be transformed.	<ul style="list-style-type: none">The motions of Earth and the moon cause observable patterns that affect living and non-living systems.
5	<ul style="list-style-type: none">Multicellular organisms have organ systems that enable them to survive and interact within their environment.	<ul style="list-style-type: none">Solutions are homogeneous.	<ul style="list-style-type: none">Machines are devices that transfer force and energy.	<ul style="list-style-type: none">Earth materials change as they move through the rock cycle and can be used as natural resources.
6	<ul style="list-style-type: none">Multicellular organisms rely on internal systems to survive, reproduce, and interact with their environment.	<ul style="list-style-type: none">Everyday materials are often mixtures.	<ul style="list-style-type: none">Newton's three laws of motion describe the relationship between force and motion.	<ul style="list-style-type: none">The solar system is part of the Milky Way, which is one of billions of galaxies.





Science K-10 – Big Ideas – *continued*

Grade	Biology	Chemistry	Physics	Earth/space
7	<ul style="list-style-type: none">• Evolution by natural selection provides an explanation for the diversity and survival of living things.	<ul style="list-style-type: none">• Elements consist of one type of atom, and compounds consist of atoms of different elements chemically combined.	<ul style="list-style-type: none">• The electromagnetic force produces both electricity and magnetism.	<ul style="list-style-type: none">• Earth and its climate have changed over geological time.
8	<ul style="list-style-type: none">• Life processes are performed at the cellular level.	<ul style="list-style-type: none">• The behaviour of matter can be explained by the kinetic molecular theory and atomic theory.	<ul style="list-style-type: none">• Energy can be transferred as both a particle and a wave.	<ul style="list-style-type: none">• The theory of plate tectonics is the unifying theory that explains Earth's geological processes.
9	<ul style="list-style-type: none">• Cells are derived from cells.	<ul style="list-style-type: none">• The electron arrangement of atoms impacts their chemical nature.	<ul style="list-style-type: none">• Electric current is the flow of electric charge.	<ul style="list-style-type: none">• The biosphere, geosphere, hydrosphere, and atmosphere are interconnected, as matter cycles and energy flows through them.
10	<ul style="list-style-type: none">• DNA is the basis for the diversity of living things.	<ul style="list-style-type: none">• Energy change is required as atoms rearrange in chemical processes.	<ul style="list-style-type: none">• Energy is conserved, and its transformation can affect living things and the environment.	<ul style="list-style-type: none">• The formation of the universe can be explained by the big bang theory.

