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| **Big Ideas** | | | | | | | | | | | |
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| **Biology** | Plants and animals have observable features. | Living things have features and behaviours that help them survive in their environment. | Living things have life cycles adapted to their environment. | Living things are diverse, can be grouped, and interact in their ecosystems. | All living things sense and respond to their environment. | Multicellular organisms have organ systems that enable them to survive and interact within their environment. | Multicellular organisms rely on internal systems to survive, reproduce, and interact with their environment. | Evolution by natural selection provides an explanation for the diversity and survival of living things. | Life processes are performed at the cellular level. | Cells are derived from cells. | Genes are the foundation for the diversity of living things. |
| **Chemistry** | Humans interact with matter every day through familiar materials. | Matter is useful because of its properties. | Materials can be changes through physical and chemical processes. | All matter is made up of particles. | Matter has mass, takes up space, and can change phase. | Solutions are homogenous. | Everyday materials are often mixtures. | Elements consist of one type of atom, and compounds consist of atoms of different elements chemically combined. | The behaviour of matter can be explained by the kinetic molecular theory and atomic theory. | The electron arrangement of atoms impacts their chemical nature. | Chemical processes require energy change as atoms are rearranged. |
| **Physics** | The motion of objects depends on their properties. | Light and sound can be produced and their properties can be changed. | Forces influence the motion of an object. | Thermal energy can be produced and transferred. | Energy can be transformed. | Machines are devices that transfer force and energy. | Newton’s three laws of motion describe the relationship between force and motion. | The electromagnetic force produces both electricity and magnetism. | Energy can be transferred as both a particle and a wave. | Electricity is the flow of electrons. | Energy is conserved, and its transformation can affect living things and the environment. |
| **Earth & Space Science** | Daily and seasonal changes affect all living things. | Observable patterns and cycles occur in the local sky and landscape. | Water is essential to all living things, and it cycles through the environment. | Wind, water, and ice change the shape of the land. | The motions of Earth and the moon cause observable patterns that affect living and non-living systems. | Earth materials change as they move through the rock cycle and can be used as natural resources. | The solar system is part of the Milky Way, which is one of billions of galaxies. | Earth and its climate have changed over geological time. | The theory of plate tectonics is the unifying theory that explains Earth’s geological processes. | The biosphere, geosphere, hydrosphere, and atmosphere are interconnected, as matter cycles and energy flows through them. | The formation of the universe can be explained by the big bang theory. |