Seventh Grade Science Curriculum

Cells and Heredity

● Cells

○ characteristics of cells

○ chemistry of life

○ cells structure and function

○ levels of cellular organization

○ homeostasis and cell processes

● Reproduction and Heredity

○ mitosis

○ meiosis

○ sexual and asexual reproduction

○ heredity

○ punnett squares and pedigrees

○ DNA structure and function

○ biotechnology

Matter and Energy

● Matter

○ properties of matter

○ physical and chemical changes

○ pure substances and mixtures

○ states of matter

○ changes of state

● Energy

○ temperature

○ thermal energy and heat

○ effects of energy transfer

● Atoms and the Periodic Table

○ the atom

○ the periodic table

○ electrons and chemical bonding

○ ionic, covalent and metallic bonding

● Interactions of Matter

○ chemical reactions

● Solutions, Acids and Bases

○ solutions

○ acids, bases and salts

○ measuring pH

Earth’s Water and Atmosphere

● Earth’s Water

○ water and its properties

○ water cycle

○ surface water and groundwater

● Oceanography

○ Earth’s oceans and ocean floor

○ ocean waves

○ ocean currents

● Earth’s Atmosphere

○ the atmosphere

○ energy transfer

○ wind in the atmosphere

● Weather and Climate

○ elements of weather

○ clouds and cloud formation

○ influences of weather

○ severe weather and weather safety

○ weather maps and weather prediction

○ climate

○ climate change

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