**Middle School Scope and Sequence**

**Grades 6 – 8**

**Red – Inquiry**

**Purple – Unifying Themes**

**Blue – Physical Science**

**Green – Life Science**

**Orange – Earth and Space Science**

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| **Physical Science** | **Life Science** | **Earth and Space Science** |
| Cause and Effect  Energy and Matter  Patterns  Scale, proportion, and quantity  Stability and change  Structure and function  Systems and system models | Cause and Effect  Energy and Matter  Patterns  Scale, proportion, and quantity  Stability and change  Structure and function  Systems and system models | Cause and effect  Energy and matter  Patterns  Scale, proportion, and quantity  Stability and Change  Systems and system models |
| Analyze and interpret data  Ask questions and define problems  Construct explanations and design solutions  Develop and use models  Engage in argument from evidence  Obtain, evaluate, and communicate information  Plan and carry out investigations  Use mathematics and computational thinking | Analyze and interpret data  Ask questions and define problems  Construct explanations and design solutions  Develop and use models  Engage in Argument from evidence  Obtain, evaluate, and communicate information  Plan and carry out investigations  Use mathematics and computational thinking | Analyze and interpret data  Ask questions and define problems  Construct explanations and design solutions  Develop and use models  Engage in argument from evidence  Obtain, evaluate, and communicate information  Plan and carry out investigations  Use mathematics and computational thinking |
| Structure and properties of matter  Chemical reactions  Definitions of energy  Force and motion  Types of interactions  Definitions of energy  Conservation of energy and energy transfer  Relationship between energy and forces  Wave properties  Electromagnetic radiation  Information technologies and instrumentation | Structure and function  Growth and development of organisms  Organization for matter and energy flow in organisms  Information processing  Interdependent relationships in ecosystems  Cycle of matter and energy transfer in ecosystems  Ecosystem dynamics, functioning, and resilience  Biodiversity and humans  Growth and development of organisms  Inheritance of traits  Variation of traits  Evidence of common ancestry and diversity  Natural selection  Adaptation | The universe and its stars  Earth and the solar system  History of planet Earth  Earth’s materials and systems  Plate tectonics and large-scale system interactions  Roles of water in Earth’s surface processes  Weather and climate  Natural resources  Natural hazards  Human impacts on earth systems |