

# Prioritized Curriculum Standards

Science

BIOLOGY	
Content/	Measurement Topic
Cell Theory	
x	CT1 - Compare the structure of the cell to its function (for example, the density of mitochondria found in cells of different tissues)
Homeostasis	
x	H1 - Explain feedback loops that maintain homeostasis in an organism
Origins of Life	
x	OL2 - Explain how taxonomy can be used to show similarity of structure and function while not necessarily

Matter and Energy in Ecosystems

- x MEE1- Explain the cycling of matter among organisms in an ecosystem
  
- x MEE2-

Entropy

- x EN1 - Explain why thermal energy uniformly distributes among components of a closed system when two components of different temperatures are combined

Fission, Fusion, and Radioactive Decay

- x FFRD1- Explain how changes in the composition of an atom's nucleus during radioactive decay release energy

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FFRD1-



**Chemical Reaction Factors**

- x CRF1- Explain factors that affect chemical reaction rate
- x CRF2- Explain factors that affect the equilibrium of a chemical system

**Earth Systems**

- x ES1- Explain how changes to one of Earth's spheres can affect its other spheres
- x ES2- Explain how human activity impacts Earth systems
- x ES3- Explain how water's unique properties play a critical role in Earth systems
- x ES4- Explain the cycling of carbon among the Earth's spheres

**Earth Changes**

- x EC1 - Explain how matter is cycled by thermal convection within the Earth
- x EC2 - Relate the relative ages of crustal rocks to the theory of plate tectonics
- x EC3 - Explain how Earth's geologic processes form continental and ocean -floor features

**Physics****Content/ Measurement Topic****Motion**

- x M1 - Use vector analysis to characterize change in position and motion
- x M2 - Use graphs to characterize change in position and motion
- x M3 - Use kinematics equations to characterize change in position and motion

**Force**

- x F1 - Use Newton's second law of motion to describe the mathematical relationships between net force, acceleration, and mass
  - x F2 - Explain why the total momentum of a system of objects is conserved when there is no net force on the system
  - x F3 - Explain how to minimize force on an object during a collision
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- x F4 - Explain how unbalanced forces applied to a system can cause a change in its rotational motion

## Electromagnetic Radiation

- x ER1- Explain differences between the particle model and the wave model for electromagnetic radiation
- x ER2- Explain the effects of different frequencies of electromagnetic radiation on matter when absorbed

## Electromagnetism

- x EM1 - Identify similarities and differences between electrical and magnetic fields
- x EM2 - Draw conclusions about the ability of electric currents to produce magnetic fields
- x EM3 - Draw conclusions about the ability of magnetic fields to produce electric currents

## Fission, Fusion, and Radioactive Decay

- x FFRD1- Explain how changes in the composition of an atom's nucleus during radioactive decay release energy
- x FFRD2- Explain how changes in the composition of an atom's nucleus during fission release energy
- x FFRD3- Explain how changes in the composition of an atom's nucleus during fusion release energy