

**NEXT GENERATION SCIENCE STANDARDS
TOPICS BY GRADE LEVEL
GRADE 3**

FORCES AND INTERACTIONS

- Of the effects of balanced and unbalanced forces on the motion of an object.
- Of an object's motion to provide evidence that a pattern can be used to predict future motion.
- Cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.
- Applying scientific ideas about magnets.

INHERITANCE AND VARIATION OF TRAITS: LIFE CYCLES AND TRAITS

- Organisms have unique and diverse life cycles but all have in common birth, growth, reproduction and death.
- Plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.
- Traits can be influenced by the environment.
- The variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates and reproducing.

INTERDEPENDENT RELATIONSHIPS IN ECOSYSTEMS:

ENVIRONMENTAL IMPACTS ON ORGANISMS

- Some animals form groups that help members survive.
- From fossils to provide evidence of the organisms and the environments in which they lived
- In a particular habitat some organisms can survive well, some less well and some not at all.
- when the environment changes and the types of plants and animals that live there may change.

WEATHER AND CLIMATE

- Typical weather conditions expected during a particular season.
- Climates in different regions of the world.
- That reduces the impacts of a weather-related hazard.

ENGINEERING DESIGN

- Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time or cost.
- Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

**Go to www.nextgenscience.org for Clarification Statements, Science and Engineering Practices, Disciplinary Core Ideas and Cross Cutting Concepts for each topic listed above. You will also find all of the connections to the Common Core for both ELA/Literacy and Mathematics.

