

**NEXT GENERATION SCIENCE STANDARDS
TOPICS BY GRADE LEVEL
GRADE 1**

WAVES: LIGHT AND SOUND

- That vibrating materials can make sound and that sound can make materials vibrate
- That objects in darkness can be seen only when illuminated
- The effect of placing objects made with different materials in the path of a beam of light
- A device that uses light or sound to solve the problem of communicating over a distance

STRUCTURE, FUNCTION AND INFORMATION PROCESSING

- By mimicking how plants and/or animals use their external parts to help them survive, grow and meet their needs
- Patterns in behavior of parents and offspring that help offspring survive
- Young plants and animals are like, but not exactly like, their parents

SPACE SYSTEMS: PATTERNS AND CYCLES

- Of the sun, moon and stars to describe patterns that can be predicted
- At different times of year to relate the amount of daylight to the time of the year

ENGINEERING DESIGN

- Ask questions, make observations and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- Develop a simple sketch, drawing or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

**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.