

Hands-On Science Workshops, Spring 2012

February: Matter and Motion

- Properties and states of matter
- Newton's Three laws
 - Force
 - Speed = distance per unit time
 - Direction
- Simple machines
 - Ramp
 - Pulley
 - Lever
- Energy and energy transformations
- Forces and Motion
- Projects:
 - Gravity cars
 - Levitating bubbles
 - Hot air balloons
 - Air cannon
 - Chemical investigations

March: Computers and Robotics

- Electricity and Electronics
- Basic circuits
- Computer hardware and software
- Projects:
 - Experiment with Lego NXT robots
- Build a beetlebot
- Experiment with electronic circuits
- Programming

April: Life Science

- Life cycles
- Plants and animals
- Diversity and variety of the living world
 - Survey of the living world
 - Virtual world tour of the living world
- Biomes and the animals they contain
- Alaska life
- Terrestrial
- Aquatic
- Projects:
 - Create an ecosystem
 - Explore microscopic worlds
 - Experiments with live organisms