



Millburn Elementary
Science Topics Overview
Kindergarten-2nd



Grade	Trimester 1	Trimester 2	Trimester 3
Kindergarten	<ul style="list-style-type: none"> • <u>Motion and Stability</u> • <u>Forces and Interactions</u> <ul style="list-style-type: none"> ○ Experiment with cars and ramps discussing push/pull concepts. ○ Explore friction using cars and a variety of surfaces. • <u>Engineering Design</u> <ul style="list-style-type: none"> ○ Design a marble maze with tunnels and ramps. 	<ul style="list-style-type: none"> • <u>Earth's Systems</u> <ul style="list-style-type: none"> ○ Construct a class winter weather graph, observe and describe patterns. • <u>Engineering Design</u> <ul style="list-style-type: none"> ○ Create 3D snowflakes using marshmallows and toothpicks. ○ Design a 3D President's home using Magna-Tiles and Lincoln Logs. 	<ul style="list-style-type: none"> • <u>Structures and Processes</u> <ul style="list-style-type: none"> ○ Explain and observe what living things need to survive. ○ Learn about the water cycle and plant life cycle. • <u>Earth and Human Activity</u> <ul style="list-style-type: none"> ○ Research extreme storms (blizzards, tornados, etc.) ○ Discuss the impact of conservation and recycling. • <u>Energy</u> <ul style="list-style-type: none"> ○ Construct shade structures, using recyclable materials, to show that the sun affects the temperature on Earth.
1st Grade	<p style="text-align: center;"><u>Spinning Sky</u></p> <ul style="list-style-type: none"> • Develop the idea that the sun, moon, and stars are in different positions in the sky. • Students explain changes in shadows by considering the patterns in the Sun's movement across the sky. • Explore the cause and effect relationship between the sun's brightness and the visibility of the stars. • Conduct investigations to collect data about the pattern of more hours of daylight during the summer than during the winter. 	<p style="text-align: center;"><u>Light and Sound</u></p> <ul style="list-style-type: none"> • Investigate vibrations as a source of sound by creating instruments. • Design a way to communicate with light using patterns. • Reason between the cause and effect relationship between the type of material (opaque, transparent, translucent) and the amount of light that can pass through it. 	<p style="text-align: center;"><u>Animal Adaptations</u></p> <ul style="list-style-type: none"> • Investigate why animals have certain body features to accomplish unique functions. • Consider the patterns in behavior of parents and offspring that help them survive. • Consider the relationship between an animal's structure and how this helps it survive in its habitat. • Observe the relationship between a tree's roots and leaves, and how they help it function. • Observe the relationship between a flower's structure and function in order to get sunlight throughout the day. • Design a stable shade structure by mimicking a tree's external parts. • Experiment with plants in light and dark.
2nd Grade	<p style="text-align: center;"><u>Plant Adventures</u></p> <ul style="list-style-type: none"> • Identify plant needs: water, soil and sunlight. • Reason how plants meet their needs through seed dispersing. 	<p style="text-align: center;"><u>Animal Adventures</u></p> <ul style="list-style-type: none"> • Organize and classify animals based upon characteristics, and define "species" and "habitats". <p style="text-align: center;"><u>Material Magic</u></p> <ul style="list-style-type: none"> • Identify properties of materials, and how basic needs are met (clothing, cooking). • Consider solid and liquid states of matter, and why plastic was invented. • Students will define a problem, design solutions, develop a model, and reflect upon the merits of their design. 	<p style="text-align: center;"><u>Water Works</u></p> <ul style="list-style-type: none"> • Explore water as a powerful force that reshapes the Earth's surface. • Observe beaches, canyons and valleys, and areas scraped flat by ice. • Learn about rivers, rocks, rain, and erosion.

