Acton-Boxborough Regional School District
Grade 1 Science and Technology/Engineering Overview

Science in the primary grades is about students noticing the world around them, asking questions, and getting a sense of what scientists do. Grade 1 Science focuses on children experiencing, observing, and making sense of phenomena in the world around them through investigations in Life, Earth, and Physical sciences:

- Investigating Living Things
- Investigating Seasonal Patterns
- Investigating Force and Motion with Balls and Ramps

Investigation Title	Rationale	MA STE Standards Addressed
Investigating Living Things	This investigation creates the foundation of several core ideas of Life Science: 1. Plants' and animals' parts (structures) help them survive. 2. Individuals of the same kind (species) of plant or animal share many similarities (which are inherited) but can also have differences (variation). 3. The goal of all organisms is survival and reproduction; animal parents and offspring demonstrate behavior to meet their needs and help the offspring survive. These core ideas are further developed in grades 2, 3, and 5.	1-LS1-1 1-LS1-2 1-LS3-1
Investigating Seasonal Patterns	Observing the apparent motion of objects in the sky (sun, moon, stars) and noticing patterns of seasonal changes, both in the sky and on the Earth, creates curiosity and provides the foundation for understanding the core idea of Earth's Place in the Universe. It also helps children begin to understand the passage of time. This Earth Science core idea is further developed in grades 5 and 7.	1-ESS1-1 1-ESS1-2

Investigating Force and Motion with Balls and Ramps	Noticing that forces, such as pushes, pulls and friction, cause changes in the motion of an object is the foundation to understanding the Physical Science core idea of Motion and Stability. This core idea is further developed in grades 2, 3, 4, and 5. The focus in Grade 1 is on how a single force can move an object. Grade 2 expands on the understanding of multiple forces changing the motion of an object. Grade 3 builds to the understanding of non-contact forces such as magnetism. Grade 4 investigates the energy transfers that occur with collisions, and Grade 5 builds to apply these ideas on a particle level. The core idea of solving problems through the Engineering Design process is continued in every grade.	K-PS2-1 2-PS3-1(MA) 1.K-2-ETS1-1 1.K-2-ETS1-2