Science: 1st Grade Quarterly Pacing Guide

Quarter 1	Quarter 2
• **Review & Model Investigation Expectations, Senses, & Scientific Tools and Processes** • **1.5 From Molecules to Organisms: Structures and Processes**: Design a solution to a human problem by using materials to imitate how plants and/or animals use their external parts to help them survive, grow, and meet their needs (e.g., outerwear imitating animal furs for insulation, gear mimicking tree bark or shells for protection).* • **1.6 From Molecules to Organisms-Structures and Processes**: Obtain information to provide evidence that parents and their offspring engage in patterns of behavior that help the offspring survive (e.g., crying of offspring indicating need for feeding, quacking or barking by parents indicating protection of young). • **1.7 Heredity-Inheritance and Variation of Traits**: Make observations to identify the similarities and differences of offspring to their parents and to other members of the same species (e.g., flowers from the same kind of plant being the same shape, but differing in size; dog being same breed as parent, but differing in fur color or pattern).	• **1.6 From Molecules to Organisms-Structures and Processes**: Obtain information to provide evidence that parents and their offspring engage in patterns of behavior that help the offspring survive (e.g., crying of offspring indicating need for feeding, quacking or barking by parents indicating protection of young). **Continued from Quarter 1) • **1.7 Heredity-Inheritance and Variation of Traits**: Make observations to identify the similarities and differences of offspring to their parents and to other members of the same species (e.g., flowers from the same kind of plant being the same shape, but differing in size; dog being same breed as parent, but differing in fur color or pattern). **Continued from Quarter 1 ****Although the "Wild Organisms" AMSTI kit will be returned at the end of quarter 1, all teachers have online access to STEMscopes to remediate and/or extend learning.**

Quarter 3	Quarter 4
• **Waves and Their Applications in Technologies for Information Transfer 1.1:** Conduct experiments to provide evidence that vibrations of matter can create sound (e.g., striking a tuning fork, plucking a guitar string) and sound can make matter vibrate (e.g., holding a piece of paper near a sound system speaker, touching your throat while speaking). • **Waves and Their Applications in Technologies for Information Transfer 1.2:** Construct explanations from observations that objects can be seen only when light is available to illuminate them (e.g., moon being illuminated by the sun, colors and patterns in a kaleidoscope being illuminated when held toward a light). • **Waves and Their Applications in Technologies for Information Transfer 1.3**: Investigate materials to determine which types allow light to pass through (e.g., transparent materials such as clear plastic wrap), allow only partial light to pass through (e.g., translucent materials such as wax paper), block light (e.g., opaque materials such as construction paper), or reflect light (e.g., shiny materials such as aluminum foil). • **Waves and Their Applications in Technologies for Information Transfer 1.4**: Design and construct a device that uses light or sound to send a communication signal over a distance (e.g., using a flashlight and a piece of cardboard to simulate a signal lamp for sending a coded message to a classmate, using a paper cup and string to simulate a telephone for talking to a classmate).*	• **Waves and Their Applications in Technologies for Information Transfer 1.4**: Design and construct a device that uses light or sound to send a communication signal over a distance (e.g., using a flashlight and a piece of cardboard to simulate a signal lamp for sending a coded message to a classmate, using a paper cup and string to simulate a telephone for talking to a classmate).** Continued from Quarter 3 • **Earth's Place in the Universe 1.8**: Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky (e.g., sun and moon appearing to rise in one part of the sky, move across the sky, and set; stars other than our sun being visible at night, but not during the day). • **Earth's Place in the Universe 1.9**: Observe seasonal patterns of sunrise and sunset to describe the relationship between the number of hours of daylight and the time of year (e.g., more hours of daylight during summer as compared to winter).