Brandon Valley School District
Science
Scope and Sequence
Grade: 5

Quarter 1

Timeline (month/days)	Standard(s)
4 Weeks	**Plants Unit** 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.
2 Weeks	**Biomes, Ecosystems, and Energy Unit** 5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.
2 Weeks	**Biomes, Ecosystems, and Energy Unit** 5-LS2-1 Develop a model to describe the movement of matter and energy among producers, consumers, decomposers, and the environment.
1 week	**Plants Unit** 5-PS3-1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from their parents and that variations of these traits exist in a group of similar organisms

Quarter 2

Timeline (month/days)	Standard(s)
2 Weeks	**Biomes, Ecosystems, and Energy Unit** **5-LS2-1** Develop a model to describe the movement of matter and energy among producers, consumers, decomposers, and the environment.
3 weeks	**Spheres Unit** **5-ESS2-1** Develop a model to describe the interactions of geosphere, biosphere, hydrosphere, and/or atmosphere.
1 week	**Spheres Unit** **5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
2 weeks	**Engineering and STEM Unit** **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost **3-5-ETS 1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **5-PS2-1** Support an argument that the gravitational force exerted by Earth on objects is directed down.

Quarter 3

Timeline (month/days)	Standard(s)

4 Weeks	**Space Unit I** **5-ESS1-2** Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
1 Week	**Space Unit II** **5-ESS1-1** Support an argument that differences in the apparent brightness of the sun compared to other stars is due to distances from the Earth.
2 Weeks	**Water/Conservation Unit** **5-ESS2-2** Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. **5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
2 Weeks	**Matter Unit** **5-PS1-3** Make observations and measurements to identify materials based on their properties.

Quarter 4

Timeline (month/days)	Standard(s)
2 Weeks	**Matter Unit** 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.
1 Week	**Matter Unit** 5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
2 Weeks	**Matter Unit** 5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.
1 Week	REVIEW FOR TESTING!
1 Week	STATE TESTING!
2 Weeks	**Engineering and STEM Unit - End-of-year STEM projects** **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. **3-5-ETS1-3** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

*Pink-priority, Yellow-supporting, Green-supplementary.

*60 minute class periods (every day)

Notes Q1 (common curriculum materials - vendor/pg number, common assessments, common intervention/enrichment activities, other)

- Plants Unit
    - Mystery Science: Mystery 2: What do plants eat? Mystery 3: Where do leaves fall?
    - Gizmos: Photosynthesis, Parts of the Flower, Germination
    - Photosynthesis stations/Webquests
- Biomes, Ecosystems, and Energy Unit
    - Mystery Science: Mystery Science 1: Why would a hawk move to NY? Mystery Science 4: Do worms really eat dirt? Mystery Science 5: Why do you have to clean a fish tank? Mystery Science 6: Why did the dinosaurs go extinct?
    - Gizmos: Food Chains, Forest Ecosystem, Prairie Ecosystem
    - Biome Box/Google Slide presentations
    - Human Impact on Ecosystems STEM
    - Disney Nature "Earth"/ Handout and follow along

Notes Q2

- Continue Biomes, Ecosystem, and Energy Unit
- Spheres Unit
    - *Gizmos: Earthquakes, Volcanoes, Pangea, Plate Tectonics
    - *Spheres Interaction project
- Engineering and Stem Unit
    - Simple Machine Elf Trap Projects

Notes Q3

- Space Unit
    - Mystery Science: Mystery Science 1: Why does the sun rise and set? Mystery Science 2: Who set the first clock? Mystery Science 3: How can the sun tell you the season? Mystery Science 4: Why do the stars change with the seasons? Mystery Science 5: Why does the moon change shape? Mystery Science 6: What are the wandering stars? Mystery Science 7: Why is gravity different on other planets? Mystery Science 8: Could there be life on other planets?
    - Gizmos: Phases of the Moon, Eclipse, Seasons Why do we have them?
    - Planet Google Slide project
- Water and Conservation Unit
    - Mystery Science: How much water is in the world? When you turn on the faucet, where does the water come from? Can we make it rain? How can you save a town from a hurricane?
    - Gizmos: Water cycle, Pond Ecosystem
    - Water Pollution STEM activity, Water Test
- Matter
    - Intro to matter, see Q4

Notes Q4

- Matter Unit
    - Mystery Science: Are magic potions real? Could you transform something worthless into gold? What would happen if you drank a glass of acid? What do fireworks, rubber, and silly putty have in common? Why do some things explode?
    - Gizmos: Chemical Changes, Density
    - Properties of Matter Stations
- Engineering and Stem Unit
    - Gizmos: (coding) Programmable Rover
    - Flooding STEM unit
      Solar Cars
    - STEM Olympics