RTR Elementary School -2016
Grade 5 Science Standards

The Nature of Science and Engineering

1. Students will be able to explain why evidence, clear communication, accurate record keeping, replication by others, and openness to scrutiny are essential parts of doing science.
2. Students will learn through experiments that different elements produce similar results but others differ. *For example: Measurement errors, equipment failures, or uncontrolled variables.*
3. Students will compare trials and resolve differences.
4. Students will recognize different models will represent different phenomena.
5. Students will generate a scientific question and plan an appropriate scientific investigation using a scientific method.
6. Students will collect relevant data, make systematic observations, and accurate measurements, and identify variables in a scientific investigation. in a scientific investigation.
7. Students will judge an experiment on validity.
8. Students will be able to describe how science and engineering influence and are influenced by local traditions and beliefs.
9. Students will be able to use appropriate tools and techniques in gathering, analyzing, and interpreting data.
10. Students will be able to create and analyze kinds of maps of the student's community and of Minnesota. *For example: Weather maps, city maps, aerial photos, regional maps, or online map resources.*

Physical Science

1. Students will be able to give examples of simple machines and demonstrate how they change the input and output of forces and motion.
2. Students will be able to identify the force that starts something moving or changes its speed or direction of motion.
3. Students will be able to demonstrate that a greater force on an object can produce a greater change in motion.

Earth Science

1. Students will be able to explain how, over time, rocks weather and combine with organic matter to form soil.
2. Students will be able to explain how Earth's surface is formed.
3. Students will be able to identify renewable and non-renewable energy and material resources.
4. Students will be able to give examples of how mineral and energy resources are obtained and processed and how that processing modifies their properties to make them useful.
5. Students will be able to compare the impact of individual decisions on natural systems.

Life Science

1. Students will be able to describe how plant and animal structures and their functions provide an advantage for survival in a given natural system.
2. Students will be able to describe the natural system in Minnesota and how it impacts living and non-living organisms.
3. Students will be able to explain what would happen to a system such as a wetland, prairie, or garden if one of its parts were changed.
4. Students will be able to give examples of beneficial and harmful human interaction with natural systems.