



Dear Parents,

Welcome to 2<sup>nd</sup> grade science! We are starting our year learning about matter, changing matter through heating and cooling, and physical changes to matter.

**Student Expectation:**

The student is expected to classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is solid or liquid. The student is expected to compare changes in materials caused by heating and cooling. The student is expected to demonstrate that things can be done to materials to change their physical properties such as cutting, folding, sanding, and melting; AND combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.

**Key Concepts:**

- Matter has physical properties such as shape, mass, temperature, texture, and flexibility.
- We can observe the physical properties of matter to classify or group it.
- Matter can be identified as a solid or a liquid based on physical properties like shape and temperature.
- Heating or adding heat to materials can cause melting, evaporation, or changes in size, color, shape, or texture.
- Cooling (taking away heat) materials can cause freezing or changes in size, color, shape, or texture.
- We can predict and describe how materials change by heating and cooling.
- We can observe and demonstrate how materials change when they are cut, folded, sanded, or melted.
- We can select materials for a specific use based on their physical properties.
- Specific materials can be combined to perform actions that the parts alone will not be able to do.

**Fundamental Questions:**

- What are some physical properties of matter?
- How can we use physical properties to classify objects?
- What physical properties of matter identify objects as being solid or liquid?
- How do materials change when they are heated?
- How do materials change when they are cooled?
- What predictions can we make about how materials change by heating and cooling?

If you have any questions, please contact your second grade team and happy investigating!

The Second Grade Team