Investigation 7
Practical Applications

As you have learned in previous investigations, Nitinol can be retrained in different shapes and can be made to transition between phases at different temperatures depending on its composition. Because of these unique qualities, it has a wide range of uses in industry, health, art, and home use. It can be made into sheets of Nitinol, Nitinol tubes, or very thin wires. Since Nitinol has the capability of remembering its shape, this "smart" material can sense changes in its environment. It can respond to temperature changes in a pre-programmed way. This new high-tech solid can consequently be used in a variety of artistic, medical, and engineering applications.

As assigned by your teacher, brainstorm and identify real life problems that could be solved using memory metal or toys that could incorporate memory metals. When brainstorming is complete, choose one problem to solve or an idea for a memory metal toy. On posterboard, draft a diagram of the design for your solution to this problem or draft a design for a toy that uses this material. Clearly label the parts of the diagram. On the poster, write a paragraph describing how the device or toy might work. Be prepared to share your idea with other students.

Possible Problems to Be Solved

Possible Memory Metal Toys

Toy or problem I have chosen:

Design Draft: