

## **Investigation 8**

### **Motorless Motion**

For engineers, one of the most exciting aspects of memory metal is that it is capable of providing motion without the use of a motor. Memory metal can easily be caused to contract by running an electric current through it. As the current passes through the wire, the wire heats up and moves from the martensite to austenite phases. When the current is removed, the metal cools and returns to its original phase. Use of a current to heat the wire can provide a simple way to regulate the movement of the wire.

You will be provided plans for building a catapult and a paper airplane launcher using a lynch pin that is pulled by a memory metal attached to a simple circuit. With the materials provided, build one of the two devices.

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