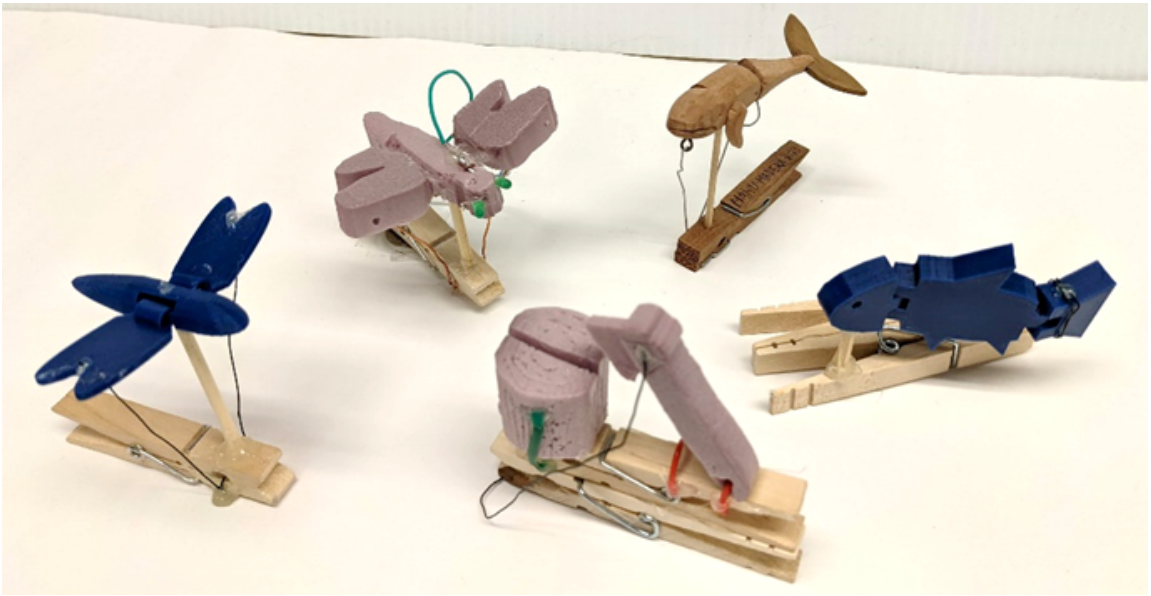
Clothespin Characters - with motion and lights

Shared by: Edgerton K12Maker team

Specialized tools and materials used:	**Experience level required:**
Hot Wire Foam Cutter, 3D printer, hand tools, basic wiring tools	Beginner

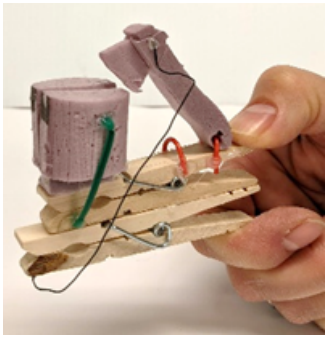
Grade Level and Subject (of this example): 6, 7, 8

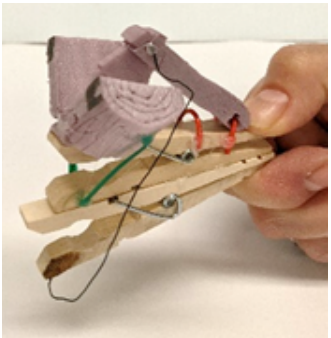
Topic/Content Standards (for this example): ELA narrative writing – story starters



Students build a character/object with motion and/or an electrical circuit. They use these characters (individually or combined) in a story where the actions are a key part of the story. Use a wooden clothespin in the mechanism, as an electrical switch, or a feature you invent. Clothespins can be combined together for bigger or additional motions.

One fabrication option is to make a model out of rigid foam sheet using a hot wire foam cutter, glue and pieces of wire. These models are similar to the sample model which is carved out of wood and has wire hinges. Metal paper clips can be unfolded and used for the supports and hinges.





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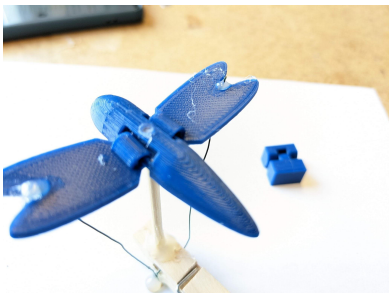
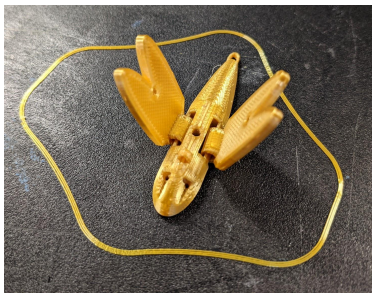
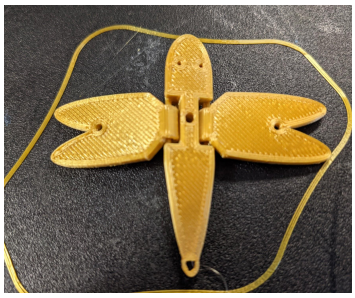
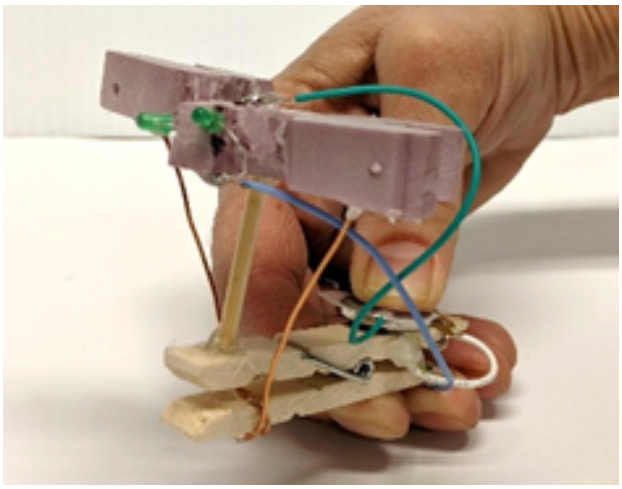
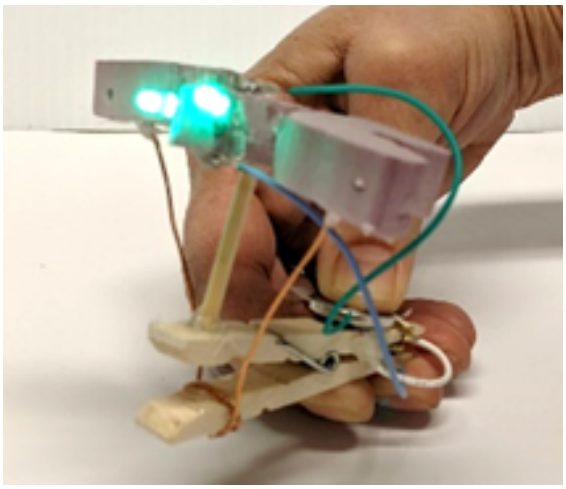
Another fabrication option is to create an articulated 3D printed model – a 3D model with parts that will move freely without coming apart, and prints all at once. To create the hinges, students reverse-engineered several articulated 3D models from Thingiverse and experimented with designs.

Simple circuits can be added with the clothespin acting as an electrical switch. Brass fasteners are convenient for electrical connections. Thin flexible wire is very useful because it doesn't hinder the motion.

Suggested Resources:

K-12 Maker Project Tutorial Webinar - http://k12maker.mit.edu/clothespin-characters.html

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