CART 360: Etude 1

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Object 1: Red bow with giggle bells

The fabric of the bow is a velvet-plastic combination. It is malleable and doesn't tear apart when cut. The bells are composed of an impure material: a combination of plastic and metal. The bells can conduct electricity and have a resistance which can vary between 1 and 10 kilo ohms. The ball inside the bell is mobile when the whole object is moving. Thus, a current can be generated in the bells through the energy used to move the object. The red bow can be used as an aesthetical ornament to a clothing ensemble or as a house decoration. The object is affordable and can be easily replicated using a different type of textile.

Concept 1: using the red bow

The bells could be used as a switch to light up LEDs on the red bow. For example, the bow could act as an ornament on the door. As the door opens, the bells will jingle which in turn generates enough energy to induce a current in the wires attached to the bow. The current will turn on the LEDs.

Object 2: Silver Crown

The silver crown is made by me using a thermoplastic material: worbla. Worbla is a malleable material when it is heated using a heat gun. It can take any desired shape and has self-adhesive properties. Once the material has cooled off, it becomes very rigid and solid. A few coats of wood glue are painted over the created object to provide a smoother surface for painting. Worbla is a non-conductive material but it can be used to create various objects and wearables. The silver crown is attached to the hair using a pair of clips glued behind the object.

Concept 2: using the silver crown

The wind could act as a switch to light up the wings of the crown. A sensor could be placed in front of the crown which reacts to the pressure of air. The energy generated by the displacement of air could induce a current which would light up the LEDs placed on the wings.

Object 3: Long red wig

The red wig is composed out of silky synthetic filaments of hair. The material can resist heat up to 360 degrees F, thus making it safe to apply heat in order to style the hair of the wig. The hair is very thick and is close to 80 cm long. These long strands of synthetic fibers are non-conductive but can be used to hide wires of LED underneath. Braids can be an effective way of storing wires inside the wig. Gels and hairspray can be applied on the hair so to create complex shapes and designs.

Concept 3: Using the red wig

The displacement of the hair strands through the air could activate a current. LED strips would be hidden underneath many braids all over the wig. As the person wearing the wig moves his head, the braids will move as well which in turn will light up the LEDs placed inside.