

Light Up Felt Funsters

Shared by: MIT K-12 Maker Lab team

Specialized tools and materials used:	Experience level required:
Sewing supplies (felt, yarn, sturdy needle, decorations)	Beginner
Sewable electronics: LED sequins, conductive thread, coin cell battery holder	Beginner

Grade Level and Subject (of this example): SEL, 6-8th Grades

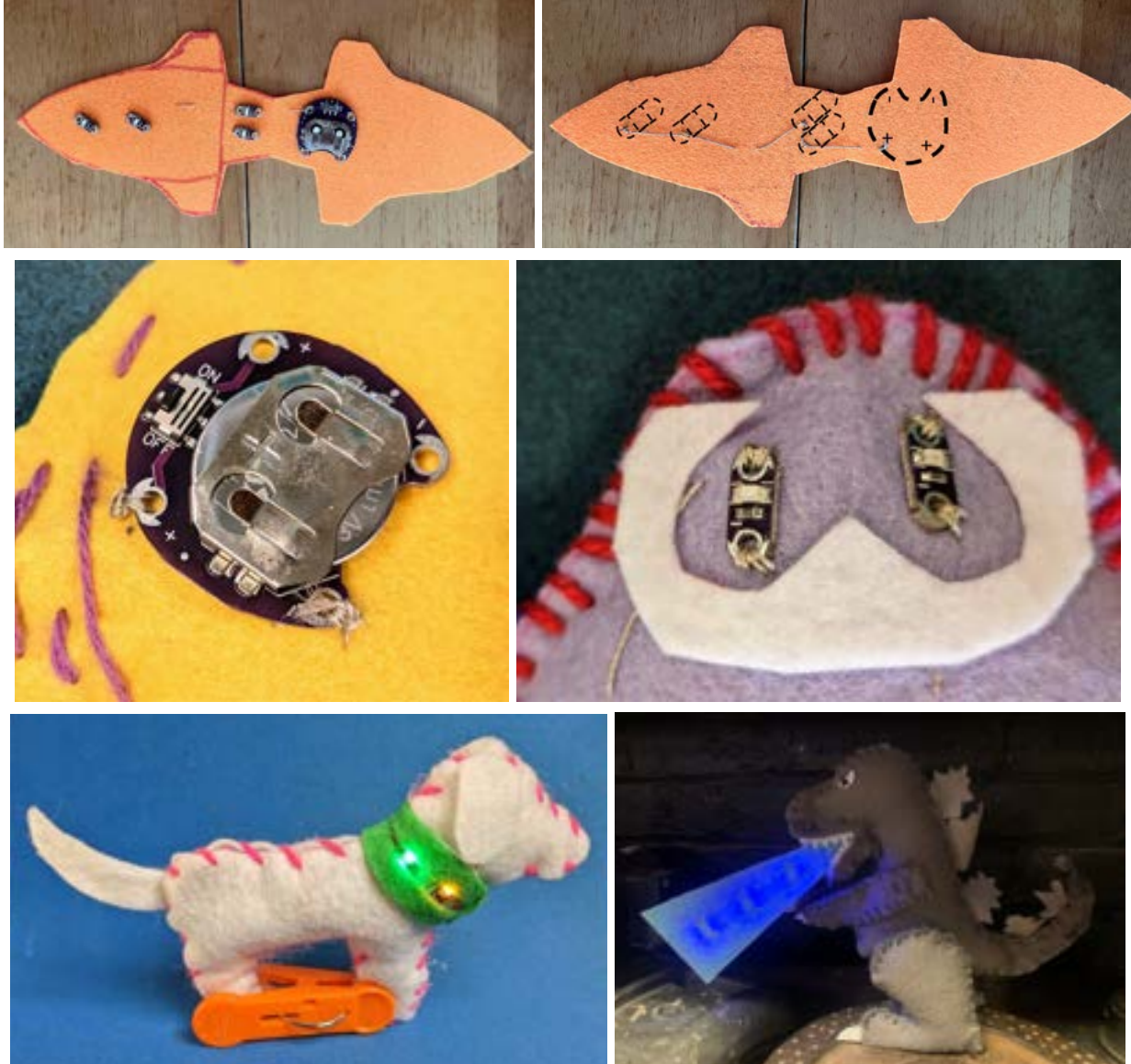
Topic/Content Standards (for this example): Seeking or offering support and help when needed [[Relationship Skills](#)]



Summary of Project:

Students design and create stuffed felt toys that can light up. In this project, the “stiffies” were to be used as signals that students would turn on to invite problem-solving help from their peers. The stiffies are made from felt, hand-sewn with yarn and sewable electronics, then stuffed with polyester fluff. There are opportunities for students to be creative with the electronics and/or the hand fabrication techniques.

Begin by brainstorming a form for the stifie. What kind of character or avatar represents the student? Designs can be creative or abstract, or resemble conventional shapes for toys. The design step is also when students plan their circuits. How will they work within the stifie? Will any wires cross when the object is taken from 2D to 3D? With brainstorming complete and circuits planned, students create a pattern, and firmly attach their sewable electronics before sewing up the perimeter of the stifie and adding polyfill. Finally, decorate and embellish the outside of the stifie, and illuminate the crafty creations! Find detailed instructions and step by step photos in this K-12 Maker [Felt Funsters project Tutorial](#).



Suggested resources

- [Felt Funsters project Tutorial](#) with step by step instructions and photos
- Adafruit LED Sequins [Overview](#)
- [Tips on sewing](#) with conductive thread

Possible Content explorations [example MA Content Standards]

- **ELA:** Explore how characters respond or change as the plot moves toward a resolution [[RL.6.3](#)] Create tools for storytelling; Represent themes, characters, settings, or objects from text
- **STEM:** Evaluate simple series and parallel circuits to predict changes to voltage, current, or resistance when simple changes are made to a circuit [[HS-PS2-9\(MA\)](#)]