

LUMINOUS SCIENCE LESSON: A6

LANTERN REDESIGN

Instructional Objectives: Students iterate on their final project lantern designs. Students reflect on the class project.

- **Before this lesson** - Complete the following lessons:
S6: Using Lanterns to Discuss Modeling
C5A: Data Mapping to Lights
- **With this lesson** - The following lessons can be combined with or taught concurrently with these lessons:
S6: Using Lanterns to Discuss Modeling

TEACHER PREP

Before completing this activity teachers should:

Make sure the classroom installation is functioning and gather materials.

STUDENT PREP

Before completing this activity students should:

Finish making their class installation lanterns including the mapping of data to lights, have an idea for their own final project lanterns, have a final project investigation question and investigation plan that includes measurable variables.

MATERIALS LIST:

- Classroom installation poster paper

STANDARDS

Studio Arts
Envision
Express
Observe
Reflect

K-12 CS
Abstraction
Inference & Models
Human-Computer Interaction

NGSS
Practice 4
MS-LS1-1
MS-LS1-2
MS-LS1-4
MS-LS1-5
MS-LS1-6
MS-LS1-7
MS-LS2-4
MS-ETS1-2

MINUTES

ACTIVITY INSTRUCTIONS:

5

Discuss the class installation with students. Review the variables that the class selected and talk about why they were selected.

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Observe the class set of lanterns functioning or watch a video if the class decided to do a time lapse. Questions to ask students during their observation: What do you notice? What does it make you wonder about? What did you learn about the garden from this installation? Note: a similar reflection is done in lesson S5B, this reflection should focus more on the lantern process and choices.

5

Reflect with the class on the process of making the class installation lanterns and painting them. Questions to ask students during reflection: What did you learn about these materials? What worked well? What was challenging? What other experiments with materials do you want to do?

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Have students get their final project lantern plans and a new sheet of poster paper. Prompt students to think about how they might want to change the shape, color scheme, painting, etc of the lantern based on their observations and reflection. Have students sketch their final project lantern from four angles (front, back, left, right). Sketch a fifth view that has the location of the lights in the lantern (draw this sketch with no paper covering the lantern so the position of the lights are clear).

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Ask students to write out the mapping of the lights to the data and how that relates to their investigation question. Do this below the lantern view sketch.