

## Teacher:

LeRay Kious

## Grade:

5th Grade

## Curriculum Topic:

Space Systems (Science)

5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

## Tools:

### **Nikon Coolpix S31**

<https://www.nikonusa.com/en/nikon-products/product-archive/compact-digital-cameras/coolpix-s31.html>

### **PowerPoint**

<https://www.office.com/launch/powerpoint?ui=en-US&rs=US&auth=2>

### **Flash Drive**

[https://coolusbsticks.com/animals-usb-memory-stick-flash-drive-disk/?gclid=EAlalQobChMlyZXwgMD54QIVzMDICh3BXArOEaQYByABEglZqfD\\_BwE](https://coolusbsticks.com/animals-usb-memory-stick-flash-drive-disk/?gclid=EAlalQobChMlyZXwgMD54QIVzMDICh3BXArOEaQYByABEglZqfD_BwE)

## Synopsis:

\*This mini-lesson is the result of day long project that the students have been doing. Each half hour, the students will go out and take a picture of a stationary object and it's shadow (some form of measuring tool like a yard stick will be aligned with the shadow to show length). They do not know why, just that their group is responsible for taking two photos an hour. Groups of 4 can alternate in the responsibilities of lining up the measuring stick, taking the photo, uploading it into the computer, and storing the photo into a flash drive with the corresponding time. The task of group leader is making sure these tasks are completed and checking them off a checklist.\*

I will do a mini lesson on the patterns of daily changes in length and direction of shadows. This will be in a 5th Grade unit on Space Systems. Students (in their group of four) will be asked to take out their flash drives and create a PowerPoint with their pictures in chronological order. The group leader can be the questioner, two students will be in charge of creating the PowerPoint (in collaboration mode), and one student will be the group scribe. They will play their PowerPoint from beginning to end. They will write down the patterns that they notice in the shadows and relate that to what we

discovered in our brief talk about shadows before. Students will share their findings with the rest of the class and we'll compare and contrast the findings to see if we can find definite patterns in the shadows based on the data we collected.