7E Science Lesson Planning Template

Lesson Author:	Topic: Science	Grade Level:2
Rachel Murray-Hearn		
NGSS Standards Common Core State Standards	Deconstruct Standards into student friendly language (2Ess1, Earths place in the universe Cross Cutting Concepts, Stability and change, Things may change slowly or rapidly. and EALr 4, ES1 The suns daily motion. Students will see how things change over time. Students will estimate that time of day and length of shadow are connected	
Guiding Question	What does the sun have to do with my shadow?	
Learning Target(s)	SWBT measure and chart difference in shadows at different time SWBT explain how shadows might help us tell time or at least the time of day.	
	7E Model of Inquiry (Attend to each component of the instructional model)	
i. Elicit ii. Engage iii. Explore	Questions: what do we know about shadows? (Have students work in partners and contribute ideas, Write some suggestions down (teacher). Why do you think we have a shadow? Is there something that can cause our shadows to change? Formative Assessment: Assessments will be made on suggestions that are contributed and participation. (5 minutes) Explain that we will go outside and draw an outline of our shadow. When we get there I want everybody to face me so when we do this later it is scientific. Keep your clipboard close to your heart while we walk so we can be safe and responsible. Dos everybody have a pencil? You will need it. One person will outline their partners shadow then give the chalk to your partner so they can do the same. Write down the answers to the questions on your science paper. Am. Students will work in partners and chalk the outline of each other's shadow. They will write down time of day, where the sun is (high medium or low in the sky) and how big is the shadow. Formative Assessment: teacher can assess students written work	
iv. Explain	Students will be presented with an animated video that will provide more information on the nature of shadows and their relation to the sun. Peep and the big wide world: Shadow Play (https://www.youtube.com/watch?v=Ty0C8mH4Jy8), or What causes a Shadow(https://www.youtube.com/watch?v=Ty0C8mH4Jy8), or What causes a Shadow(https://www.youtube.com/watch?v=bl6k7rLFVfs). Teacher will ask students to discuss with their partners what thingsthey have notice. Observations can be shared and charted.Formative Assessment: will be done by participation and contributions and by considering what information they wrote down. (15 minutes)	

v. vi. vii.	Elaborate Evaluate Extend	Pm. Students will return to their original shadow outlines. They will have to stand in the same spot, facing the same direction and re -draw their outlines. Students will also write down observations about, what time of day is it, Where is the sun in the sky (high medium or low), how big is the shadow?What have we learned about our shadows and the sun? Students discuss with partners then share to whole class.What does the sun have to do with our shadow? What do we think now? Draw a picture about what we learned about out shadow.
		Formative Assessment: Students will be assessed by their participation and contribution.

Students will be told we are investigating the connection between our shadows and the sun. Students will be informed that they will me chalking the outline of their partners shadow and writing down information on their science paper. Students need to know that they will do this twice and they must stand in the same place, facing the same direction each time in order to be scientific. Each student will need the work sheet, clipboard and a pencil. Each pair pf students will be given a piece of chalk when it is time to draw the outlines.

Some summative assessment can be determined from their work sheets. Have students draw a picture about what they learned about their shadow.