

Written Scenarios: How do we notice and leverage student resources?



OpenSciEd Scenario #1: The Sound Unit Scenario

During lesson 1 of the sound unit students are asked to create initial models for how a sound (truck speaker) could make something far away move (a window). The class then gathers in a Scientists Circle to share models and construct an initial class consensus model. The first student shares:

Sam: Well, I drew half circles coming from the truck and..because you know...because (4 second pause)...every time I hear someone talk about ...um ...sound... um, because um, a radio and if the circles are going up and then they...well they can't go through the table.

Teacher: Can you say more about that?

Sam: Um....Once the guy turned up the radio the music started coming out and that made these like... bands of sound come out - like lines and then when you get further away there are less of those lines coming to your ear.

Janelle: I was thinking something similar, but I was thinking the sound moved like this (She uses her hand to make a wave motion). Like I am the truck (puts her hand close to her body) and Sam is the window (makes a wave motion with her hand as she moves it from her body and closer to Sam).

Teacher: Janelle I like how you used your hand to show that idea to us. What do other people think about these ideas? That the sound is bands or moves like this (She moves her hand in a similar wave motion as Janelle)?

Jiang: I don't know. I think I might disagree. Why does the window move? It seems like something has to hit it. Like maybe the sound has to be more of a hit (He pushes his hand straight forward with an open palm). Does the way it moves change from the truck to the window (He moves his arm as a wave and then makes it push straight forward)?

Reflection Questions:

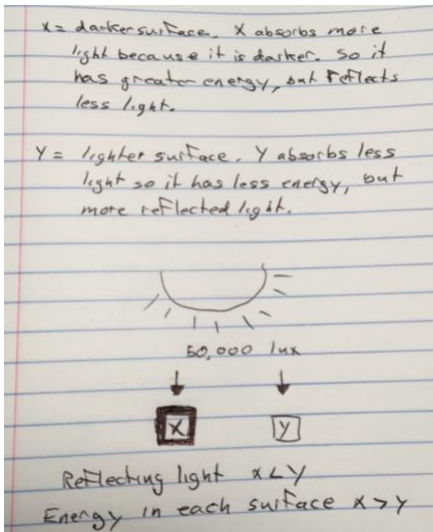
1. What resources do you see evidence of students using?
2. What types of questions or strategies did/could a teacher use to value student resources?
3. What are examples from previous OpenSciEd units in which you have tried (or had difficulty with) noticing and valuing student resources?



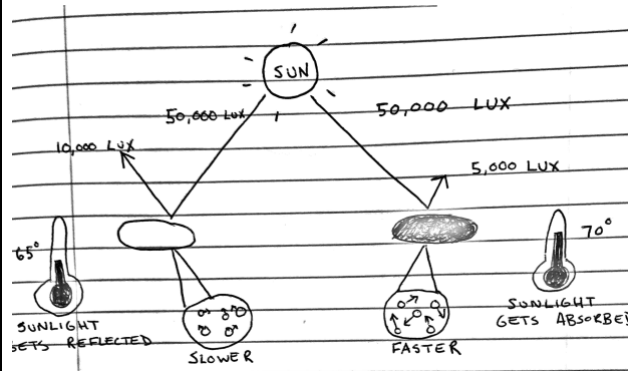
OpenSciEd Scenario #2: The Weather Unit Scenario

During lesson 4 of the weather unit, students collected temperature and light data above various outside surfaces. They were then asked to "draw and write" what they thought was happening in terms of reflection of light and temperature on both dark and light surfaces. Below are images of how three different students shared their current understandings.

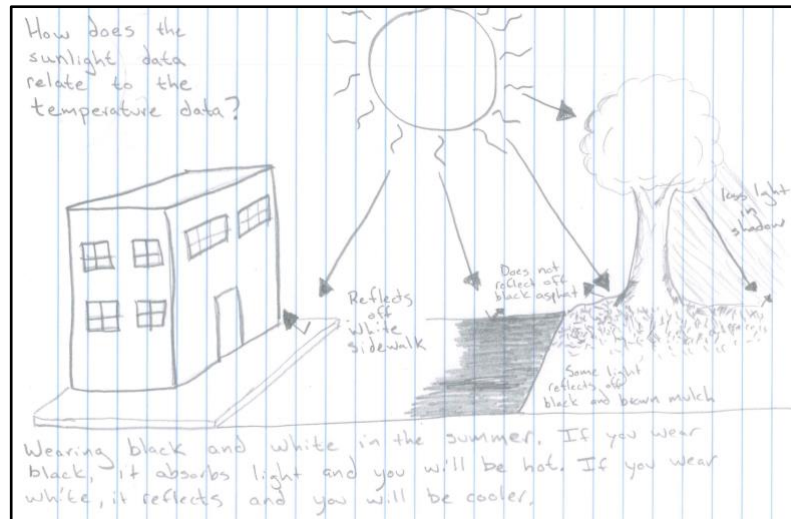
Tyler's Example



Brianna's Example



Alma's Example



Reflection Questions:

1. What resources do you see evidence of students using?
2. What types of questions or strategies did/could a teacher use to value student resources?
3. What are examples from previous OpenSciEd units in which you have tried (or had difficulty with) noticing and valuing student resources?

