

### Using the Reasoning Rubric: Sample Student Arguments

**Directions:** Rate these student arguments using the reasoning rubric. Consider the reasoning with respect to the connections between the evidence and the claim and the science ideas used to make the connection. Provide your ratings in the space provided. Based upon your ratings, what feedback would you provide to the student to improve their argument?

- A. Claim: The Dox Sandstone is a sedimentary rock. Evidence: My first piece of evidence is that the Dox sandstone had many lines in it. The excerpt from “Geologic History of the Grand Canyon” said that the Grand Canyon was covered by sea. The sea must have taken sediment from other places and deposited it in layers. After it hardened, the different layers would be visible. The sample of the rock we saw had many visible lines. My second piece of evidence is that it has many different colors and rock sizes. The sea can’t choose what type of rock it will deposit, so many different types could have been used to make one rock. Many different colors and textures is a characteristic of sedimentary rock. I also don’t think it is Metamorphic, because then the stripes would probably be wavier. Our sample had straight lines.

*Connections:*

*Science Ideas:*

*Feedback:*

- B. My claim is the Zoroaster Granite is an igneous rock. And my evidence is that it has luster and it’s shiny and it looks a lot like the rocks were melted into one. My reasoning is that it was deep in a canyon so it could have been heated by some lava just below the surface, but it may no longer be there because there’s water there now, so it could have taken out the water. Or the water could have taken out the lava.

*Connections:*

*Science Ideas:*

*Feedback:*

- C. The Zoroaster Granite is an igneous rock. It is pink and brown. It has large white and black mineral crystals that I could see with my eye. It was also found deep underground in the area by the Grand Canyon. The Grand Canyon is in Arizona. There are many different types of rocks found all over the world. One of the types is igneous, which is why I think the Zoroaster Granite is an igneous rock.

*Connections:*

*Science Ideas:*

*Feedback:*