Importance of Engaging Students in Constructing Scientific Explanations

Group 1: Analyze a Student's Explanation

Turn to page 10 of the Zembal-Saul book *What's Your Evidence?* and examine a 3rd-grader's explanation written in response to the question, "How do inclined planes help us to do work?" Also read the sentence at the bottom of that page, starting with the words "She attempted to justify …."

1. Use what you've learned about STL strategy 5 to identify the strengths and weaknesses of Karen's explanations.

Strengths	Weaknesses

2. Read the first two paragraphs on page 11 of *What's Your Evidence?* (following the student's explanation). Did anything in this reading surprise you? Why or why not?
3. Be ready to share your findings with the group.

Group 2: Read and Summarize Benefits for Students

Read the Benefits for Students section in handout 4.3, Benefits of Engaging Students in Constructing Scientific Explanations.

1. On chart paper, make a list of benefits for students of learning to construct scientific explanations.
2. Be ready to explain your posters.

Group 3: Read and Summarize Benefits for Teachers

Read the Benefits for Teachers section in the same handout.

1. On chart paper, make a list of benefits for teachers of teaching students to construct scientific explanations.
2. Be ready to explain your posters.

References

Zembal-Saul, C., McNeill, K. L., & Hershberger, K. (2013). *What's your evidence? Engaging K–5 students in constructing explanations in science* (pp. 10–11). Upper Saddle River, NJ: Pearson Education.