Criteria for Providing Feedback on Scientific Explanations

Explanation Criteria	N/A	Not at All	Partially	Yes
Claim (statement that answers the question)				
1. Is a claim in response to the question made?				
2. Is the claim state as a complete sentence so that it can stand alone without the need to see the question?				
3. Is the claim relevant to the question?				
4. Is the claim accurate?				
Evidence (data from investigations or information from valid sources)				
5. Is the type of evidence appropriate for supporting the claim (i.e., is it scientific evidence)?				
6. Is there sufficient scientific evidence?				
7. Are the data accurate? Is the information valid?				
Reasoning (linked the evidence to the claim, using a scientific principle or concept when appropriate)				
8. Is the reasoning or "rule" clear to the reader or listener?				
9. Does the reasoning link the evidence to the claim?				
10. Is a scientific principle, concept, or knowledge of scientific ideas used to describe why the evidence supports the claim?				
Overall Explanation				
11. Does the explanation include all three of the parts above (claim, evidence, and reasoning)?				
12. Is the explanation clear? Will the reader or listener be able to understand the explanation?				

Source: Adapted from Krajcik, J.S., Moje, E.B., Sutherland, L.M., Meriweather, A., Rucker, S., Sarratt, P., Hines-Hale, Y. (2006). More emphasis on scientific explanation: developing conceptual understanding and science literacy. In R. Douglas, M. Klentschy, K. Worth, & W. Binder (Eds), *Exemplary science in Grades 5-8: Standards-based success stories* (pp. 99-113). Arlington, VA:NSTA Press.