

Data Integration

Susan Bartocci

Data Source:

One Geology Kid

<http://www.onegeology.org/extra/kids/home.html>

Lesson Enhancement: How does the data enhance your topic/lesson/unit?

The site provides maps and information of geological data such as minerals, volcano, earthquake, and Earth processes. Students can use information and observation to connect with previous knowledge.

What new objectives can you address?

I would address both Math and Language Arts objectives in my lesson.

- Draw a picture graph and a bar graph (with single unit scale) a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (CCSS.Math.CONTENT2.MD.D.10)
- Participate in shared research and writing projects (e.g. read a number of books on a single topic to produce a report; record science observation. (CCSS.ELA-Literacy.W2.7)

How does it change the teaching/learning?

Students use observation and data collect to make connect to previous knowledge and new concepts. It changes learning and teaching because it becomes an interactive learning format.

Teacher have traditional used textbooks and lecture to teach students about science. When teaching with an interactive model, students are connecting ideas and concepts across curriculum

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and subject areas. They are using an engineering process to problem solve real world problems, such as erosion and energy solutions.

Using Data: What is your opinion about using data in the classroom, either collected by student-observation or from another source?

I believe teaching with data allows students to observe, collect, form ideas, or interact to solve problems. Students need to interact with materials and their world. I think that the more hands-on or observable data that students are engaged with the more students connect and understand new concepts.

What is your rationale for the use of the data source? Clearly explain how the data can be used to integrate across STEM content areas. Interdisciplinary STEM: How can the use of this data help to integrate across STEM content and/or pedagogy?

The data source is age appropriate. It is easily navigated by students and engaging. In combination with hands-on investigation, students will connect their hands-on observation / investigation with the Earth's changes.

Students learn that the Earth has both slow and quick changes. They watch videos and read books on landforms and Earth's processes. The students explore making models of landforms. Students continue to investigate how the landform changes with hands-on experiments and collect data on their experiment. Next, the students use the engineer process to come up with solutions to solve problems such as erosion.

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Citations

1G Kids. (n.d.). Retrieved June 22, 2018, from <http://www.onegeology.org/extra/kids/home.html>

Second Grade Math Common Core State Standards. (n.d.). Retrieved June 22, 2018, from <https://www.education.com/common-core/second-grade/math/>

Second Grade English Language Arts Common Core State Standards. (n.d.). Retrieved June 22, 2018, from <https://www.education.com/common-core/second-grade/ela/>

2nd Grade Topic Model. (n.d.). Retrieved June 22, 2018, from <https://www.nextgenscience.org/2nd-grade-topic-model>