

Russ Brielman Teaching Enhancement Grant

Part 1

Teacher:

Email address: _____

Year Attended Workshop 2010

School: Amboy Central

Grade(s) Kindergarten through 4th grade

Class size(s) From 18-27

School Address: 30 East Provost St. Amboy, IL 61310

Part 2 Teaching Activity

I have used many of the activities from the IAAP Teachers' workshop since I attended in 2010. One of my favorites has always been the Birdseed Mining activity. Using this activity the students have learned that mining is a very complex process, can be expensive, takes a lot of time to do correctly, and sometimes you will not be successful in finding useful minerals. The Birdseed Mining activity is a way for the students to experience a simple, inexpensive way to see mining in action.

How can it be improved?

The Birdseed Mining activity works well with the older students, such as the fourth graders, but due to the math and small objects, the activity needs to be changed so that it can be used with younger students. I have found a similar activity that would be a great introduction to mining for younger students since it uses larger objects, does not include math, and models the steps used in mining.

Part 3 Proposed Activity Using Grant Money

Since I teach science to kindergarten through fourth graders, I am searching for an activity that would be simple and yet introduce mining to the younger students. Following is an activity from "Women in Mining Education Foundation":

Mining in a Nutshell.

Materials

peanuts in shells

enamel paints-yellow, blue, green, red, black, white

small paint brushes

map of the classroom

poster: "From the Mine to My Home"

Blender or Peanut Butter Maker

plastic knives

crackers, apples, or celery

Preparations: the teacher needs to paint spots on the unshelled peanuts to represent various minerals: yellow=gold, blue=silver, green=copper, red=iron, black=lead, white=gypsum. (There should be 25-30 of each color.)

A map of the classroom needs to be prepared ahead of time. The features such as doors, windows, tables, desks, etc. need to be on the map. Each group of miners are provided a map of the classroom.

Hide the peanuts around the classroom before the miners arrive-different colors can be grouped together. The teacher needs to keep track of how many peanuts of each color are hidden on the master map.

The miners are divided into groups of 4-6 students and given a color-to match the paint on the peanut shells. One miner looks around the room to locate his colored peanuts, counts them, and marks where they are found on the map. The class then has a discussion of how the rocks (peanuts) may or may not contain useful materials. This is the exploration phase. The poster is used to explain the exploration methods.

Next, the miners will have 3-5 minutes to find and remove only the peanuts of their assigned color. They count the number of peanuts found and compare this number to the recorded number on their map paper from the exploration phase. This is the mining phase. The groups share the mining successes and discuss various mining methods shown on the poster. The next step would be the processing phase. Here the miners will separate the peanuts and shells. The peanuts are then added to the peanut butter maker or blender to process the minerals and make them useful. After the peanut butter is finished, it is spread on the apples, crackers, or celery as the manufacturing phase. Then the miners are able to consume the product!

This activity explains the steps to the younger students in a fun way and will be a springboard for the Birdseed Mining for the older students. The activity meets the objectives for second grade in the Next Generation Science Standards.

Part 4 Budget

Roasted peanuts in shell-\$31.75 (10 lbs) per class x three classes = \$95.25 from Wal-Mart

Enamel paint in asst. colors \$15.00 from Wal-Mart

Small paint brushes \$1.00 from Dollar Store

Nostalgia Electrics Peanut Butter Maker \$79.99 from Shopko

Plastic knives \$1.00 per class x three classes = \$3.00 from Dollar Store

Celery, crackers, apples \$10.00 per class x three classes = \$30.00 from Wal-Mart

Total = approx. \$224.24

Thank you!