

Dam It! (the middle school students will like the play on words, gives me an opportunity to bring english into the classroom)

Overview: Students will research types of dams in Idaho. Then the students will build their own dam from objects provided. The students will test their dams for effectiveness.

Keywords: Types of dams (embankment dam, buttress dam, gravity dam, arch dam)

Subject: Science

Age/Grade: 6 - 8

Background: The students will need to know what a dam is and where dams are typically located. This would be done with the students during a previous lesson.

Standards: RST 6-8.9 and WHST 6-8.8; the science standards at this level are more to do with skills rather than topics. The two I have selected have to do with reading scientific material and also using technology in the classroom to present those ideas.

Goals: Students will identify all four types of dams by correctly labeling pictures of dams, using information obtained from the presentations. Students, as a group, will give a 2 minute presentation to the class. Included in the presentation will be a time lapse video of the dam building.

Objective: To have the students understand what are the types of dams, for the students to research scientific topics, to have the students read scientific material and learn to break it down into meaning and present that information in front of the class using technology as well.

Materials: Day 1: Art supplies for the visual presentations and Ipads or the computer lab. You can also print out the pages for the students to use.

Day 2: plastic bins to build the dams in, dirt, cotton balls, plastic bags, glue, tongue depressors, Students can bring there own supplies from home to add to their dams. The students will need to also have their ipads with them to shoot the time lapse video. A list of websites posted to the board(I would have the students find their own but also give these to the students as well: idahoptv.org (dams Nov. 19, 2002) and tvakids.com

Set-up: Day 1: Have the websites on the board. I like to pre-pick my groups so that you get a different group of students working together each time. Art supplies for the students to use for the visual presentations. Day 2: Have the supplies for the dams laid out on a table for the students to choose easily. The bins need to be filled with dirt. Cover the tables for easy clean up.

Time/Duration: 2-3 class periods. Our class periods are 90 minutes so this may take more time.

Introduction: Show pictures of famous dams the students might recognize. Have the students identify them. Remind the students of what a dam is. Then ask the students if they know of any dams that are in Idaho. List these on the board. Let the students know that we will be researching dams in Idaho, creating our own dams, and then making a presentation to class.

Activity: Day 1: Put the students into groups of four. The students will do what is called a jigsaw activity. Then I will split the groups up so that the ones, twos, threes and fours. Each new group will then be assigned a dam in Idaho to research. The students will then research the four types of dams using the following websites: idahoptv.org (Dams Nov. 19, 2002) and tvakids.com. The students will need to find the type of the dam, materials used, purpose to the dam, and an example of the dam in Idaho. I am not going to create a worksheet for this activity as I would like the students to come up with their own organization for the information. The students will then go back to their original groups. The students will then teach their groups about the dams they researched. The students will then create a way to present the information in a visual manner, there a ton of ideas out their. If the students struggle with this I would direct them to look up the information on an internet search.

Day 2: The original groups will then pick a dam to test. The students will recreate the dam with the given supplies. They will use their Ipads to tape the build and create a timelapse video to use in the presentation. When the students are done building they will test their dam. Thinking about what will do differently and what will they do the same.

Day 3: The students will give a 2 min presentation as a group. The groups will need to present to class.

Evaluation:

I will give a grade on each day of the activity.

Day 1 the students will be given a grade on their visual presentation. I will grade on information...is it all there, neatness, and creativity (this will be based on an individual basis rather than comparing student to student)

Day 2 the students will be given a participation grade.

Day 3 The students will be given a grade on the timelapse video...creativity and completeness, the students will also be graded on their presentation...did they participate, could they be heard.

I would create a rubric for this part based on what grade I was going to use this with and also when in the year I would use this activity.