**ED 508 Lesson Plan-Geocaching Unit**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  | | --- | | Subject area/course/grade level:  Geocaching/Physical Education/8th Grade | | Standards (State and NETS-S):  State Standard: PE: 8: 5.) Demonstrate skills associated with adventure, outdoor, and recreational activities. NETS-S Standards: 1 and 3. | | Objectives:  The student will be able to properly use a handheld gps to find a given waypoint.  The student will be able to use technology for an outdoor activity.  The student will be able to work as a valuable team member. | | Differentiation Strategies:  The students will take a pre and post assessment test on using a handheld gps.  The students will be grouped into flexible groups. | |

|  |
| --- |
| **ENGAGEMENT:**  First thing I will do for this lesson is to show a video on geocaching. Then I will show and go over a PowerPoint presentation about geocaching. I will then have the students go to a website about geocaching and complete an online version of geocaching. [what is geocaching.wmv](file:///C:\Users\tmwells26\Documents\ED%20505\what%20is%20geocaching.wmv) [An Introduction to Geocaching.ppt](file:///C:\Users\tmwells26\Documents\ED%20505\An%20Introduction%20to%20Geocaching.ppt) [http://www.pbs.org/parents/dinosaurtrain/more-dinosaur-train-fun/geocaching-challenge/](http://www.pbs.org/parents/dinosaurtrain/more-dinosaur-train-fun/geocaching-challenge/%20%20) |
| **EXPLORATION:**  After covering all the basics of geocaching and how to use a handheld gps unit. I will then divide the class into flexible groups based on the pre-assessment test given. Each group will be given one gps unit to use as a team. Each member will get a chance to act as the leader and hold the gps unit. I will give each group a different set a waypoints that will lead each group to a different geocache. There will be 5 geocaches in total. After they find the first geocache it will have the waypoint for another geocache. Each geocache will contain an item representing each group that they will retrieve. Also, each geocache will contain a question the students will have to find the answer to. After a group has retrieved all there items and got all the questions they will go to the library and research on a computer to find the answers. The first group to get all of their items and have all the correct answers back to me wins. After each group is back, we will then a discussion on what they learned and I will give each group a chance to share how their group’s adventure went. Each group will discuss any strategies they used to find the geocaches or to find the answers. [Samples.docx](file:///E:\ED%20505\Samples.docx) |
| **EXPLANATION:**    Vocabulary Words:  Geocaching: is an outdoor recreational activity, in which participants use a GPS device to hide and seek geocaches.  GPS: Global Positioning System  Geocache: a waterproof container containing a logbook, and other times.  Waypoint: is a reference point in physical space used for purposes of navigation. |
| **ELABORATION:**  The students will create their own geocache page on geocaching.com. Then each group will go and find a spot where they could hide a geocache and then mark the waypoint for where they would hide it. Then each group will give the other groups there waypoints and each group will find each other’s geocaches by using the waypoints given by each group.  <http://www.geocaching.com/geocache/GC52A30_if-you-smell-what-the-rock-is-cookin?guid=4f075d66-a0ae-44b4-b7cb-8f35421b2d5d> |
| **EVALUATION:**  Rubric for Group Project 25 pts 15 pts 5 pts   |  |  |  |  | | --- | --- | --- | --- | | Location | A really good hidden location. | A hidden location. | Too easy to find of a location. | | Correct Waypoint | Exactly right. | Off by 1 number. | Off by more than 1 number. | | Correctly inserting the group’s waypoints | Exactly right. | Off by 1 number. | Off by more than 1 number. | | Finding the other group’s geocaches | Found with no hint. | Found after given hint. | Did not find. |   Checklist for individual project:   |  |  |  | | --- | --- | --- | | Category | Yes | No | | Accurate waypoints. |  |  | | Good description of geocache. |  |  | | Good and creative hint. |  |  |   Rubric for assessing each other:  25 pts 15pts 5pts   |  |  |  |  | | --- | --- | --- | --- | | Correct waypoints | Exactly right. | Off by one number. | Off by more than one number. | | Good Location | Really good hidden location. | Good location. | Bad location. | | How hard to find | Found with no hint. | Found after hint was given. | Did not find. |   [Pre.docx](file:///E:\ED%20505\Pre.docx) - Pre/Post test for geocaching unit. |

References:

Bybee, R.W. et al. (1989). *Science and technology education for the elementary years: Frameworks for curriculum and instruction.* Washington, D.C.: The National Center for Improving Instruction.

Bybee, R. W. (1997). *Achieving Scientific Literacy: From Purposes to Practices.* Oxford: Heinemann.

National Research Council. (1999). *Inquiry and the national science education standards: A guide for teaching and learning.* Washington, D.C.: National Academy Press.

Polman, J.L. (2000). *Designing project-based silence: Connecting learners through guided inquiry.* New York: Teachers College Press.