**Geocaching: a Geography Game**

**Essential Question:**

* What are the relationships between hemispheres, latitude and longitude, and location?

**Standards:**

* 9.02Analyze the use of geographic tools to locate and examine information about people, places and environments.

**Background:**

Geocaching is a real-world, outdoor treasure hunting game using GPS-enabled devices. Participants navigate to an absolute location using GPS coordinates and then attempt to find the cache (container) hidden at that location using its relative location provided by a short clue. There are millions of caches hidden throughout the world and many here in Ankeny.

**Task Description:**

For this assignment, you will show your knowledge of latitude and longitude as well as absolute and relative location by creating 2 caches for your classmates to find. Creating a cache includes the following steps:

1. Find a place to hide your cache. Good places are those that are not immediately visible but findable when looking carefully. They must be in Southview’s interior common areas, which means no classrooms, private spaces, or places everyone isn’t allow (i.e. bathrooms or locker rooms).
2. Using a GPS enabled device, record the absolute location of your hiding spot. Make it as accurate as possible!
3. Create a clue using relative location to help classmates find your cache. Your clue must be less than 50 characters. The purpose of the clue should NOT be to give away your spot, but to help once the person is at your coordinates. An example would a “Look up,” “Are you seeing red?” or “Behind the Door.” These clues give you a hint based on the surroundings, but are not so obvious they give away the exact location without the absolute location.
4. Creating a log for people to sign that is appropriate to your hiding place. Your log can be large or small. However, there needs to be enough space for 30 people to sign in on your log. Make sure your log has “CLASS PROJECT FOR WULFF! DO NOT TOUCH!” written somewhere on it in case a custodian or non-classmate accidentally finds it.
5. Hide your cache!

**Tools:**

To complete this assignment, you will need a GPS enabled device. This includes an actual GPS, a smart phone, an iTouch, or other device. For our class, the most common will be a smart phone or iTouch. If you have a device, the following FREE apps are suggested to use.

 Apple: Find Latitude and Longitude OR Position – Find my Position 1.2 OR My Location !!

 Andriod: GPS coordinates and location OR Gps – Simple OR Latitude & Longitude

If you do not have a GPS enabled device, we will have several available for you to check out.

**CACHES**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cache Name** | **Absolute Location** | **Relative Location Clue** | **Detailed Description of Location for the Teacher** |
|  |  |  |  |
|  |  |  |  |

**RUBRIC**

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| Concept | Expectation | Score | Comments |
| Latitude and Longitude | Students are able to use their conceptual knowledge of hemispheres to manipulate coordinates using a GPS to find one cache from a classmate. |  |  |
| Absolute Location | Student uses GPS enabled device to provide accurate latitude and longitude coordinates for all caches.  |  |  |
| Relative Location | Cache clues are all less than 50 characters. Student is innovative but not explicit with clues. All clues provide valuable information using other objects, features, or descriptors. |  |  |