**Lesson Plan Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Subject: | ICT | | | | |
| Authors: | Teachers: Mgr. Soňa Patočková, Mgr. Benedikt Chybík  Students: Michaela Ježová, | | | | |
| Date: | | | | \_\_02\_/\_\_03\_/ \_2018\_ | |
| Estimated time: | | 15 minutes + 50 minutes outside classroom |  | |  |
|  | |  |  | |  |
| Summary: | This activity was prepared as an inspiration how to use ICT in Geography. | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Objectives**  (Specify skills information that will be taught) | **Activity/ Information**  **Teacher Guide/ Student guide** | **Materials Needed**  (Other resources - web, book...) | **Assessment Methods**  (steps to check for student understanding) | **Time**  **Where?** |
| \* an activity to learn how GPS works  \*  ***Know Concepts or Keywords :***  - geocaching  - GPS system  - compass | **Motivation Activities**  Can you find a treasure? Can you work with GPS in your smartphone?  **Teacher Guide:**  You have to prepare small boxes which are going to be hidden in the terrain. You should take with yourself a pen and write down coordinates of the place where you placed the cache. Write down some clue too. | Phone with WIFI connection  PC for preparing tests | **Quiz** | **In Classroom**  15 minutes preparation  50 minutes outside classroom  Teacher´s preparation  30 minut |

|  |  |
| --- | --- |
| **Description of the activity:** | |
| **Introduction** | Geocaching is a worldwide game using GPS devices to find hidden treasures. The players will find the treasure – the box (cache) - with the help of coordinates and GPS device. These caches are hidden all over the world. Mostly they are placed in interesting or significant places. They can be at a local park, in the finish of a long walk, under the water, or in the busy streets. For geocaching you need only two things: GPS device or a smartphone with GPS and a membership at Geocaching.com. Before the activity, it is good to explain how GPS device works. |
| **Main activity** | The activity we prepared for other partner countries is a variation of geocaching. We placed six caches in the surrounding of school, prepared their explanation, labelled their difficulty, and added a clue. Before the activity, it is good to explain the students how the GPS device works, and set the coordinates to find the place where the cache is hidden. |
| **Lesson Guide (Step by step)** | Teacher´s preparation  In the surrounding od school place several caches. You can mask them somehow. At each cache, please note the clue and the coordinates.  For students  The teacher will give you notes with coordinates, short descriptions of caches, and a clue. Please, download to you smartphones the application Polaris Navigation GPS. After the installation, choose “Create Waypoint” from the Menu. Choose “Use Keyboard” write down the coordinates the teacher gave you. Who will be first to find the cache? |
| **Exercises (2 or 3 levels of difficulty)** | The activity can be made more difficult by hiding the caches more carefully (on a tree, under the ground, etc.) |
| **Conclusion and Evaluation** |  |
| **Notes:** | What is geocaching: <https://youtu.be/vuFiLhhCNww>  How GPS system works: <https://www.youtube.com/watch?v=FU_pY2sTwTA> |

Bibliography

* <https://www.geocaching.com/play>
* <https://play.google.com/store/apps/details?id=com.discipleskies.android.polarisnavigation>