The Compass Treasure Hunt: Navigating to Scientific Discovery!

Abstract

The Compass Treasure Hunt: Navigating to Scientific Discovery" is a fun and educational activity for children to learn about compasses and navigation while searching for a treasure in a field. Participants will learn the principles of magnetism and the Earth's magnetic field while using compasses to navigate to the treasure's location based on a map. The activity encourages teamwork and problem-solving skills while promoting an interest in science and exploration. Children will have an enjoyable experience while learning about the natural world around them.

Type of activity

Life and earth science - outdoor

Materials and Equipment

FizziQ Junior app on a smartphone or tablet

FizziQ Jr functionalities used

Compas - Orientation
Experiment notebook (photo and text)

Instructions:

- Introduce the concept of a compass and explain how it works. Show the children how to hold the compass flat and level, and how to read the directions on it (north, south, east, and west).
- Give each child or group a compass and a set of instructions for using it. The instructions should include how to find north using the compass, and how to use the compass to navigate in a certain direction.
- Explain that the children will be going on a treasure hunt in a field. Show them the treasure map (see below) and explain that it shows the location of the treasure using compass directions.
- Divide the children into teams or pairs and give each team or pair a treasure map. Have them work together to use their compasses to navigate to the treasure location on the map.

- Once the children have found the treasure, have them return to the starting point and discuss what they learned about using a compass and navigating. Ask them questions such as:
    - How did the compass help you find the treasure?
    - What challenges did you encounter while using the compass?
    - What did you learn about the Earth's magnetic field?

Pedagogical objective

- The objective of this activity is to introduce students to the usefulness of a compass for orienting themselves.
- To do so, we will carefully draw a map (as shown in the example below) that only features one notable point. The map will be adapted to suit their needs.
- At the end of the session, we will point out that if the map features two notable points, it becomes easier to locate the treasure.
- The Earth's magnetic field points towards magnetic north, which is close to geographic north. By using a compass, students can orient themselves in a direction that serves as a reference point for everyone. This allows them to find the treasure even in rainy or nighttime conditions.

Safety

Be careful when walking in nature with your tablet. Don't be distracted, don't let it fall on the ground or put water on it.

Author

Christophe Chazot

With the support of

Education Resilience in Europe

Supported by:
European Schoolnet
CISCO
Education Resilience in Europe is funded by the Grant Agreement signed on 21 September 2022 with Cisco Foundation and supported in promotional activities by Scientix 4 (Grant agreement N. 101000063). The content of the document is the sole responsibility of the organizer, and it does not represent the opinion of the European Commission (EC), and the EC is not responsible for any use that might be made of information contained.

Example of treasure's map