NAVIGATION Box

THINK OUTSIDE
Finding Your Way

Objectives

Students will learn the following:

- Cardinal directions
- Map basics
- Magnetic north vs. true north
- Compass basics and functions
- How to determine a bearing
- Map reading and using the sun to navigate
- Hands-on activities (DIY compass, 3-leg compass walk, DIY sundial, etc.)
- Global Feature & National Park Spotlight
- Empathy around Alzheimer's

Materials

These or similar materials are included in the box:

- Wayfinding resource cards
- Compass
- Watch
- Signal mirror
- Waist bag
- Practice map

Discussion

You may want to use the following as a discussion guide with your child:

- Why is it important to know how to read a map?
- What are some of the benefits of being able to use a compass?
- In the age of technology, why are physical maps still important?
- Why is it important to know the difference between true and magnetic north?
- Why is it important to always tell someone your intended route before heading out to explore?

Evaluation

Test your child's newfound knowledge with the following questions:

- What are the four cardinal directions?
- What is the difference between true north and magnetic north?
- Name at least three (3) parts of the compass and their function.
- How do you determine your bearing?
- What is a topographical map?
- In what direction should you always orient your map when determining your path?
- In what direction does the sun travel?

Vocabulary*

*provided by the Merriam-Webster Dictionary

Bearing – A determination of position. CONTEXT: Finding the correct bearing will keep you headed in the right direction.

Declination – Angular distance north or south from the celestial equator measured along a great circle passing through the celestial poles. CONTEXT: Knowing the declination of your current location will help you choose the right bearing.

Degree – A unit of measure for angles equal to an angle with its vertex at the center of a circle and its sides cutting off $^1/_{360}$ of the circumference. CONTEXT: The degree dial on your compass will help you get the proper bearing.

Topography – The art or practice of graphic delineation in detail usually on maps or charts of natural and man-made features of a place or region, especially in a way to show their relative positions and elevations. CONTEXT: Knowing the topography can help you choose a better, easier route.

Horizontal – Parallel to, in the plane of, or operating in a plane parallel to the horizon or to a baseline. CONTEXT: Holding the compass flat is important to getting a correct reading on the compass.

Landmark – A conspicuous object on land that marks a locality. CONTEXT: Move in the direction of your landmark; then take new compass readings to make sure you are still going the right way.

Legend – An explanatory list of the symbols on a map or chart. CONTEXT: Every map should have a legend that tells you what all the symbols on the map mean.

Magnetic – A body having the property of attracting iron and producing a magnetic field external to itself. CONTEXT: Your compass needle is attracted to the power of the magnetic north pole.

Map – A representation usually on a flat surface of the whole or a part of an area. CONTEXT: Bringing along a current, updated map of your travel area is vital to being able to navigate correctly.
