ROCK EAGLE 4-H CENTER

ORIENTEERING

VOCABULARY
ROCK EAGLE'S ENVIRONMENTAL EDUCATION FIELD STUDY

Base plate: square plate that the dial sits on, also contains a ruler on the sides and the direction of travel arrow

Bearing: direction, measured from one position to another using geographical reference lines

Compass: instrument used to determine geographic direction of travel

Declination: angle between the direction the compass needle points and true north

Dial: part of the compass which rotates to align degrees with directional arrow; usually filled with water and marked with numbers representing the degrees

Direction-of-travel: arrow on base plate pointing to your destination

Arrow:

Needle: magnetized arrow inside compass dial, which always points to north and south

Orienteering: the act or sport of someone using a map and compass to find points in a landscape

Pacing: system of counting every other step to measure the distance traveled

Topographic maps: graphic representation of the surface features of a place or region on a map, indicating positions and elevations their relative

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PRE-POST TRIP ACTIVITIES
ROCK EAGLE'S ENVIRONMENTAL EDUCATION FIELD STUDY

Making a compass

Materials: sewing needle about 1 inch long, small bar magnet or a refrigerator magnet will work, a small piece of cork, small glass or dish of water to float the cork and needle in.

Procedure: Run the magnet over the needle about 20 times in the same direction. This will magnetize the needle for you. Take a small piece of cork and push the needle through the circle (not length wise but width wise). Float the cork and needle in your cup so that the needle lies roughly parallel to the surface of the water. Now place your compass on a still surface and see what happens. The needle will point to the nearest magnetic pole, north or south depending on where you do this activity. If you want to experiment further you can place a magnet near the compass and see what happens.

Making a topographic map

Have students make a topographic map of either their school or their neighborhood. Using a topographic map as an example and reference have, students draw their own map with a key. They must also know the distance, degrees and height of the different areas or sites on their maps.

How well do you know you compass?

Students label compass parts on the following compass worksheet.

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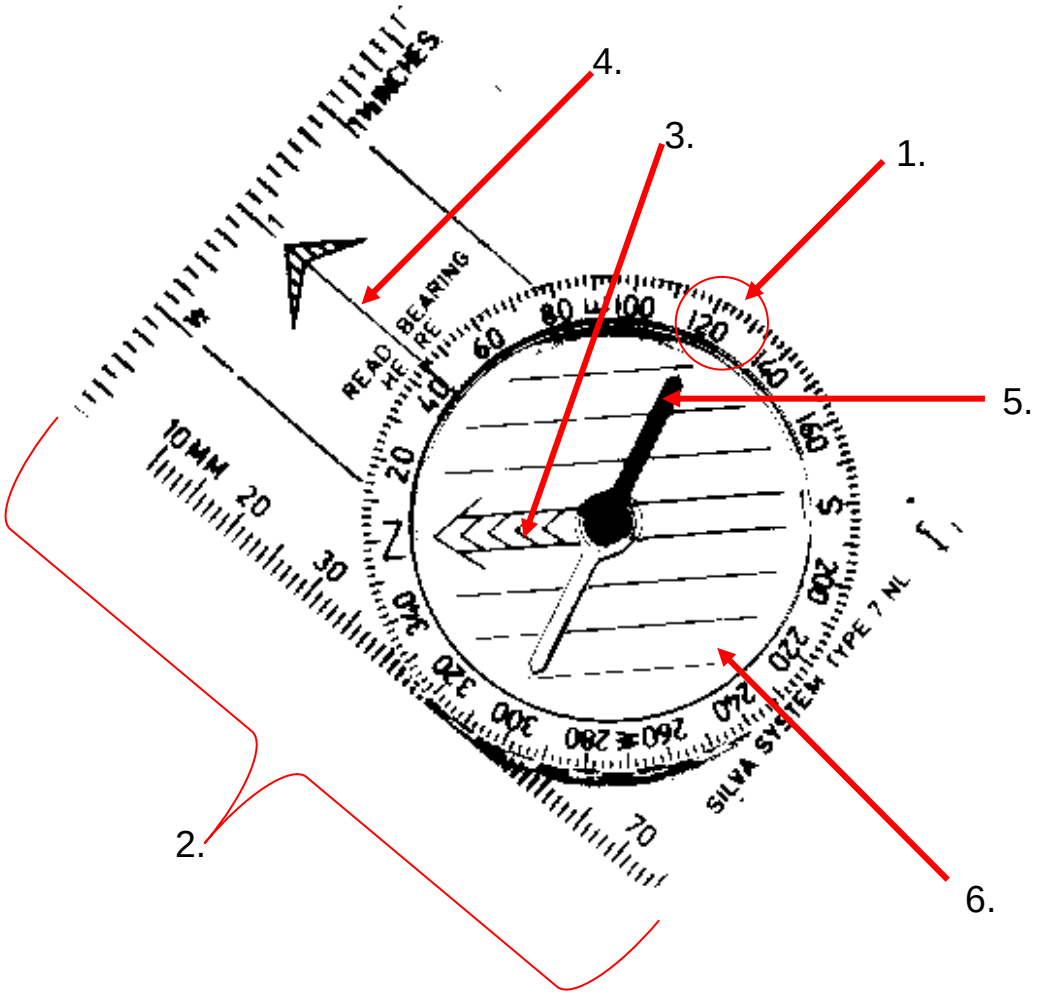
How Well do You Know Your Compass?

See how well you know your compass by labeling the parts of the compass. Use the given words. Be careful, not all the words are used!



Words: Base Plate, Bearing, Declination, Degrees, Dial, Direction-of-Travel Arrow (Fred), Needle (Red), Orienting Arrow (Shed),

1._____ 4._____

2._____ 5._____

3. Orienting Arrow (Shed) 6._____

Answers: 1. Degrees, 2. Base Plate, 3. Orienteering Arrow, 4. Direction-of-Travel Arrow, 5. Needle, 6. Dial

Making the best better!

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