

# 657-5011 (78-556) Fieldmaster Basic Orienteering Kit

The large **Teacher**

**Demonstration Compass** is non-functional so that the needle and dial stay in place when it is held up for the group to see. It is clear so it can be used on an overhead projector.

The **Student Compasses** are for use in the Northern Hemisphere. They come with a lanyard and are graduated 0 to 360 degrees in 2 degree intervals. Each has a liquid-filled capsule, declination correction scale, luminous points, and an acrylic base. The base has a 4x magnifier. Additional compasses may be ordered (item #78-530).

## **The Four Directions:**

Here is an indoor game to review the four directions: North, South, East and West. It actually helps young children learn the eight basic compass directions, including Northwest, Northeast, Southwest and Southeast. They learn to orient themselves physically in a particular direction.

Before starting the game, place cards marked N,S,E and W on the four walls of the room. It is helpful to place them in the general direction of true North, etc.

Line up the participants in open lines, arms-length apart, both sideways and front to back so there is space around each child. You can then name a direction

such as “Northwest”, then quickly say “Freeze”.

The children should quickly turn to the direction they believe is Northwest and then stop moving when you say “Freeze”. Those who are facing the wrong way are out of the game. Continue until there is one child left, the “winner”.

Variations on the game include sending children out of the game who get the direction correct to give more training to the others. Also, placing only the North card on the wall will make the game more challenging.

## **Parts of the compass:**

Before trying to find directions with the compass, it is a good idea to go over the parts with the children first. The large Teacher Demonstration Compass is an excellent tool to show the compass parts to the students.

Every compass has the four directions, also known as the four cardinal points (North, South, East and West) and a magnetized needle that points North. Have the children study the parts of the compass they are holding. Have them try to turn the dial. Point out the degree scale around the dial. Let them try to hold the compass so the arrow “floats”.

**Base** – The rectangular part of the compass that has a dial on it, a magnifier and several “scales” that look like rulers.

**Bezel** (compass housing dial)

– The dial that you can turn.

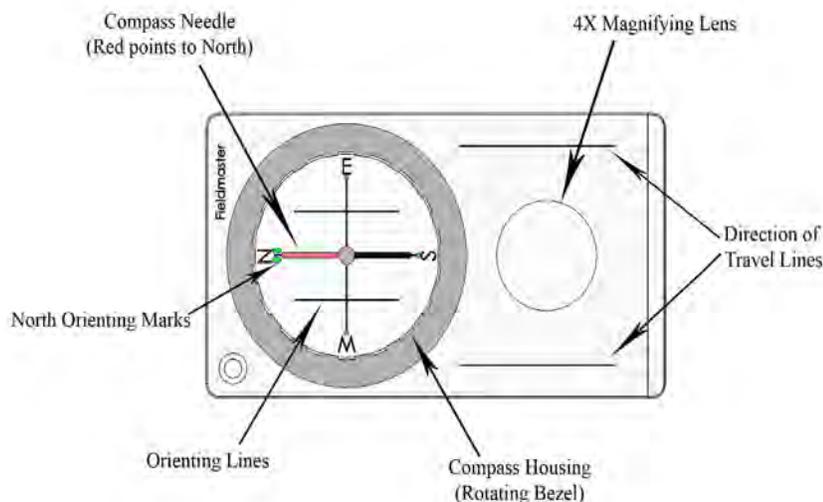
There are numbers on the edge of the dial. These numbers go from 0 to 360. These are the degrees of a circle. They also represent all the directions you can travel from any point. The letters N, S, E and W are also on the dial, representing the four cardinal points. The compass housing contains the free-moving magnetic compass needle.

**Compass Needle** – The red and black arrow that is “floating”. The red part points to North.

**Direction Dots** (not on all compasses) – The green glow-in-the-dark marks at North (two lines), South, East and West. There is also a glow-in-the-dark dot on the North arrow. If you line up the dot on the arrow between the two dots at North, it can help find your way in low light.

## **Warranty and Parts:**

We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.



**Direction of Travel** – The front of the compass has the magnifying lens and a small clear dot. This is the direction of travel. There are also two red lines on either side of the magnifier to point the way to go when the compass is set properly.

**Map Marking Hole** – You can insert a pencil here when using the compass with a map (advanced skill).

**Magnifying Lens** – A 4X magnifier is embedded in the base. This makes things look 4 times larger than they really are. This can be useful when using the compass with a map (advanced skill).

**Scales** – Along the edge of the base is a centimeter scale and two USGS map scales (called roamer scales) for use with topographic maps.

### Finding Your Direction:

#### How to Find North:

Hold the compass so the dial is near your body and the front of the compass (where the magnifier lens is located) points away from you. Make sure you are not using the compass near anything metal

such as a metal desk, a watch, a belt buckle, etc. Metal items will attract the magnetic needle and that will give you incorrect directions.

Hold the compass level (very flat) in your hand so the needle floats freely. It helps to hold it waist high, with the magnifying lens pointing straight ahead. When the needle stops moving, the red part of the arrow should be pointing to North. North is a very important direction for finding your way. The earth is like a giant Magnet. It has a north pole and a south pole. The red part of the compass needle always points to the magnetic north pole of the earth, which is in the general direction of what we call the North Pole.

Turn the bezel (dial) so the letter N lines up with the arrow. The red arrow should be right between the two green marks by the N. Make sure you have the N lined up exactly with the arrow, because you could accidentally go in the wrong direction if it is incorrect. Turn your body until you are facing North. Notice that North is at the zero-degree mark.

#### How to find other directions:

If you are told to go West, look at the dial and find the W. Notice that West is at the 270-degree mark. Turn the dial until the W is in front of you, lined up with the direction of travel (the magnifying lens in front). Turn your body around slowly until the red arrow points to N again (line it up between the two green dots). You are now facing West.

You can practice facing East at 90-degrees and South at 180-degrees.

Now you can try to go somewhere between North and West. Look at the dial and find where Northwest is. It is actually halfway between North and West, located at 315-degrees. Move the dial until Northwest is facing the direction of travel. Hold the compass flat so the needle can turn and then turn your body around slowly until the red arrow points to north again. You are now facing Northwest.

You can practice facing Northeast, Southwest and Southeast.

#### Common Problems to Avoid:

A very common problem for beginners is to have the black part of the needle pointing north instead of the red part. This could make you walk off in the exact opposite direction of where you want to go.

Another common problem is to hold the compass crooked so the needle can't "float" easily.

Remember to stay away from metal objects. Even a staple has caused deviations in the direction of the compass needle.

### Orienteering Activities:

#### String Course:

To start young children on outdoor orienteering, you can set up a small course where the children follow a string and cannot get lost. This course can teach them about map reading, map symbols and very basic orienteering. Use a small area to make this simple course.

Set up several “stations” for the children to stop at and draw a simple map with a line that stops at each station. Your map should have a Start and a Finish. The stations can be permanent things such as a big tree, a building, a large rock, or things you leave out, such as stuffed animals. Use your imagination. At each station you can leave a marking device or a bag of stickers that the children can use to mark each site on their map as they go along.

From the Start, run a continuous length of yarn or string that follows the course from station to station, ending at the Finish. The children can then follow the string.

A variation would be to leave the stations off the map. The children then can mark their maps where the stations should be.

A very simple version of this game can be done right in the classroom.

#### Siting a Landmark:

Here is a simple method for teaching children how to tell the direction of an object. For instance, if the child wants to tell the group how to find a particular tree, they can use the compass to tell the group the direction they can face to find the tree:

Hold the compass waist high and level so the red and black arrow can “float”. Point the direction of travel toward the landmark. Turn the dial until the red arrow points to North. The direction of the object is now in line with the direction of travel. The group can use the degree reading (such as 250 degrees) or the direction (such as Southwest) to spot the tree.

### Map Activities:

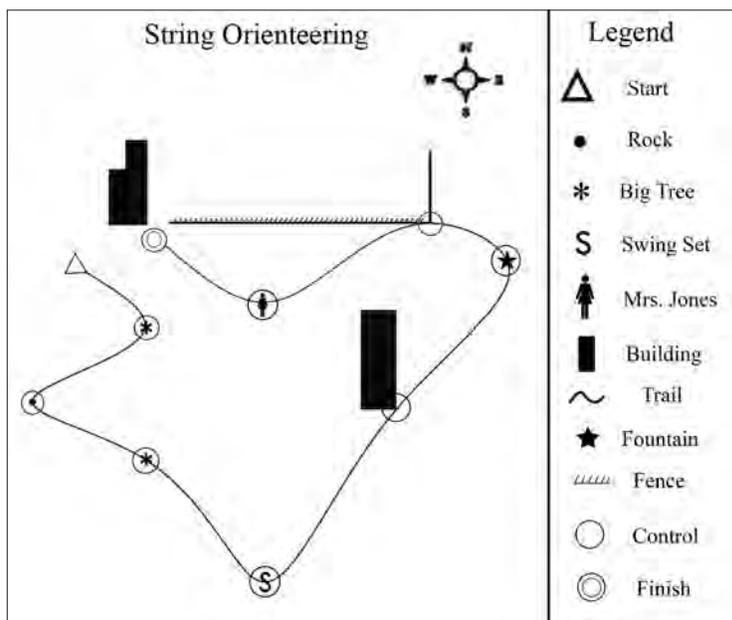
#### Hidden Treasure Maps:

This very simple mapping activity is a type of treasure hunt. Divide your group so you have an even number of smaller groups. Give each group an item to hide (hidden treasure). They can then make a map to get to the hidden treasure. Have the groups trade maps to follow to find the treasures.

#### Group Maps:

Using a table large enough for your group to sit around, cover it with white paper. The group can then help draw a map of the room. The variations are endless: the teacher can draw what the children suggest, each child can draw what is near them, try to draw from the perspective of looking down on the room from above, etc. This can be expanded to the outdoors where things are more distant. The four cardinal points can be marked on the map.

Another version is to sit four groups of children on the floor or on the ground at a center point facing out and asking them to map the area in front of them. The maps can then be put together to form one big map. The differences in drawings can be quite surprising, with some items smaller and some larger.



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