



Orienteering I

This class was previously called Circle Compass Course.

Program Purpose:

The purpose of this course is to introduce compass work to students in a team setting.

Length of Program: 1 Hour

Ages: Grades 3rd-5th

Maximum Number of Participants: 20

Objectives:

After completion of this course students will be able to:

- Name the parts of a compass.
- Describe how the parts of a compass are used.
- Work together to complete an introductory level orienteering course.

Preparation:

Before the class arrives:

- Locate the Circle Compass Course Box.
- Make sure there are enough course sheets for all the students.
- Make sure there are enough working Vis-à-vis wet erase markers in the box.

Basic Outline:

- I. Compass Parts. (5 min)
- II. Walk a Straight Mile. (10 min)
- III. Square Course. (10 min)
- IV. Circle Compass Intro. (5 min)
- V. Circle Compass Course. (25 min)
- VI. Clean Up. (5 min)

Materials:

20 Compasses
Large Teaching Compass
10 Visors with bandannas attached
Course Slips
10 wet erase markers
Course Answer Key
10 Clip Boards

Compass:

Introduce yourself to the students and give them a general idea of what the class will contain. Have the students form a semi-circle and pass out the compasses.

- First, demonstrate the proper way to hold a compass. This should be done with the large demonstration compass. To properly hold a compass you should

have the compass level in your hand a few inches from your body. The that-a-way arrow should be facing the same direction as your nose and the smart cord should be attached to the side closest to your body. It is important to make sure all students are holding the compass level or the needle will not move properly.

- Second, explain the that-a-way arrow and its purpose. The that-a-way arrow is the painted on arrow that is located on the plastic plate in front of the dial. This is the arrow that you will follow every time you take a bearing. Make sure they know this is the arrow that will be pointing the correct direction when all of the following steps are done correctly.
- Third, Point out Red (the north arrow) and explain that is drawn magnetically to the north. It is a very common mistake to follow Red and get lost so make sure you emphasize that red is a liar. Ask the students which direction Red will take them. Is that is the direction they always want to walk? You cannot emphasize enough that Red is pointing the wrong direction 99% of the time.
- Fourth, show the students where the Shed is. Shed is located inside of the dial. Shed is painted on and only moves when the dial is turned. It can be located easily by looking at the dial and finding the N. Shed is always pointing at the N. Shed and Red are friends and always want to be together so you should turn you compass so Red and Shed are together. This means the north arrow should be directly on top of Shed.
- Fifth, show the students the dial. Ask the students how many degrees are in a circle. Explain that there are 360 degrees in a circle and 360 degrees on your compass. The students should know that each white dash line on their dial represents two degrees so the odd degrees are located in between the even degrees and do not have a white dashed line.
- Sixth, hold up your demonstration compass and point out the bearing notch. This is a small white line under the dial. It can be found by looking at the that-a-way arrow and following it back to the dial. The bearing notch never moves and is always directly lined up with the that-a-way arrow.

Now that the students know the parts of the compass you can show them how to use them to set a bearing.

To set a bearing:

1. Turn your compass until 200 degrees is directly on top of the bearing notch. Walk around to each student to check.
2. Make sure the students are all holding their compasses in the proper form.
3. All students should now turn their bodies until Red is on top of Shed. Make sure the students do not turn the compass, just their bodies. It may help to tell them their noses should always be pointing in the same direction as the that-a-way arrow and their necks cannot turn.
4. Red is now on top of Shed, so ask the students to point in the direction they should walk. Go around to all students that are pointing the wrong direction. The most common problem here will be that they are pointing north, so just reiterate that Red is a liar and show them the that-a-way arrow again so everyone is pointing the same direction.

You should do this until all of the students are confident in setting a bearing. This will probably take three to five tries.

Walk a Straight Mile

This activity is used to show students that they need to keep their heads up and not stare at their compasses.

Professional foresters use target trees. A target tree is an object (usually a tree) that is stationary, easily identified, and located exactly in the direction you are traveling. Without a target tree you are compelled to walk to the right and your compass is not made to compensate for this natural draw to the right.

To demonstrate this point, have the students get a partner. The students should be lined up facing each other with about fifty yards between them (the sandlot is the safest place to do this). Have one of the partners point their that-a-way arrow at their partner. Now have them turn the dial until Red is on top of Shed. Have them read the bearing and make sure all of the students have about the same bearing. The student who set the bearing should be given a visor with attached bandana and instructed to put it over their head and compass. They will now walk forward using only their compasses until they reach the other set of students and see how close they came to their partners. It probably won't be very close. For safety have all of the adults in the group go out and help to avoid collisions. Have each partner do this once.

Square Course

To do the square course: have the students mark a spot on the ground; they can put a hat on the ground or make an X with their foot. Have the students stand directly on their spot and instruct them to take five steps at any bearing you choose. Now add 90 degrees to that bearing

and have them take another five steps. Do this two more times and the students should be standing on their original spots again. Try the course three or four times making the square larger and larger each time to make it more challenging.

Examples

Bearings
100,190,280,10
50,140,230,320
90,180,270,360
250,340,70,160
25,115,205,295
160,250,340,70
310,40,130,220

Circle Compass Course Intro:

Show the students the course sheets and point out any of the posts you can see. For the course sheets, you should first make sure everyone is clear where the starting point is located on the course sheet. The starting letter is located in the upper right hand corner of the sheet.

When they are clear on where to start, it is important to make it clear exactly what they should do. From their starting points they need to set the first bearing and follow that bearing until they reach another post. When they reach that post they should write the letter on the post next to the first bearing. Now set the second bearing and their starting point is the second post. This is repeated for all of the bearings.

Circle Compass Course:

The circle compass course is a series of posts set up in a circle around a central point. Each post has a letter on it and the students will be going from post to post according to the bearing that is on their course sheets. After arriving at each post, the students should write down the letter they find on each post.

For the actual course you will start out by helping the groups find any posts they can't find. If you see a group having trouble it is easier to help them in the beginning than after they have completed the course. The answer key is in the circle compass course box (which should be brought out with you) and is used to see if the student did the course correctly. Have the groups do several courses until the time is up.

Wrap Up:

Ask for any questions or comments from the students. Talk about careers that will use a compass (such as surveying, cartography, forestry; most branches of the military (i.e. army, navy), and also recreational activities that involve the use of a compass (such as hunting, off trail backpacking or hiking, etc.).

Clean Up:

Make sure all the course sheets have been collected so they don't become litter. Make sure you have all the compasses, wet erase markers, and clipboards. Use the spray bottle and bandanas to wipe off the course sheets. The CCC box should be returned to the workroom.

References:

- Disley, John. (1979), Orienteering, Stackpole Books, Harrisburg, PA.
- Kjellstrom, Bjorn. (1955), Be an Expert With Map and Compass, American Orienteering Service, La Port, IN.
- Ratliff, Donald E. (1964), Map, Compass and Campfire, Binfords & Mort, Portland, OR.
- Van Burgh, Dana. Lyons, Elizabeth N. (1998), Teach With Topographic Maps, National Science Teachers Asso. Arlington, VA.
- Riley, Michale J. Cremer, Robert. (1979), Basic Orienteering, Contemporary Books, Inc, Chicago, IL