2.6 Compass Course

For their introduction to the Cadet Program's activities element, cadets will participate in a compass course. This activity is intended as a fun exercise that challenges cadets to apply the teamwork and leadership skills they have been learning throughout Great Start. A nice secondary benefit is that cadets will learn how to use a magnetic compass, which will give them a head start in their emergency services training. It is also a good opportunity for the squadron to describe any special local programs that the unit conducts relative to land navigation (e.g.: hikes, bivouacs, orienteering, ground team training, etc.).

Suggested Instructors
A cadet officer, highly proficient with the compass, should oversee the compass course
A number of cadet NCOs who are proficient with a compass should serve as instructors and coaches

Duration
70 min

Objectives

1. Demonstrate how to make a pace count
2. Demonstrate how to take bearings using a magnetic compass
3. Apply basic teamwork skills to include listening actively, cooperating, and working together to solve problems

Special Equipment
Measuring tape (the longer the better)
Index cards or something similar
Magnetic compasses (enough for each cadet, or at least one per group)

Course Preparation

Pace Line. Use a measuring tape to mark a 100-foot line for cadets to use in figuring their pace count.

Site Selection. For an introductory compass course like this, a large parking lot or a field makes a good site. If the unit wishes to take the course into the woods, consider what uniform / clothing the cadets will be wearing, and also consider safety.

Waypoints. Include 5 to 10 waypoints in the course. Design the course so that the first 2 or 3 waypoints have simple bearings (ie: 90 degrees) and short pace counts (ie: 30 feet). Gradually lengthen the distance between waypoints. Likewise, do not include any obstructions in the course, except on the final 1 or 2 waypoints.

Markers. At each waypoint, leave a marker (ie: an index card) that gives cadets the bearing and distance to the next waypoint. Always give the distance in either feet or meters, not paces.

Multiple Courses. Cadets might watch the other teams to see where the waypoints are located. To avoid this, teams could be sequestered and sent onto the course in intervals, or the staff could design a few different courses co-located on the same field.

LESSON OUTLINE

Divide the cadets into groups of 2 to 4 cadets each.

1. Magnetic Compass. *10 min*

Brief the cadets on how to take bearings using a magnetic compass. For their first exercise, have the cadets perform a simple 3-leg compass walk (also known as a compass triangle). Pick a bearing to begin at (say 360 deg, north), have the cadets walk 10 paces, then add 120 degrees to the bearing, walk another 10 paces, and then add another 120 degrees to the bearing and walk another 10 paces. The cadets should return to the place where they started.

Brief the cadets on how to handle long pace counts and obstructions. For example, if they are assigned to walk 500 paces instead of a manageable 10 paces, they would need to focus on a marker as they made their bearing – a tree, a telephone pole, etc. – or better yet, they could send a fellow cadet a good distance out into the field, then direct that cadet to an exact spot such that their body serves as a marker. And if their bearing crosses an obstruction, they will need to stop short of the obstruction, deliberately change course to get around the obstacle, then return to course. For more on obstacles, see the slides mentioned above.

2. Pace Count *5 min*

Have the cadets figure their pace count. To do this, have the cadets walk a set distance, say 100 feet, at a normal stride, while counting their paces. Have the cadets return to the starting point, and again count their paces. Add the two pace counts

together, and divide that sum by 2 to obtain the average. Now the cadets know how many paces, on average, it takes them to walk a certain distance. Finally, briefly explain how ratios work. For example, if a cadet can walk 100 feet using 40 paces, he or she can walk 50 feet using 20 paces, 200 feet using 80 paces, etc.

3. Compass Course *50 min*

Now that the cadets know how to take bearings using a magnetic compass and have figured their pace count, they are ready to begin the compass course. Save a few minutes to allow for debriefing.