

# Orienteering



Audubon Center  
of the North Woods

**Purpose:** Prior to the introduction of the compass, navigation was based on location of landmarks and local knowledge of the land. This course is designed to teach students how to properly use a compass for navigation, and the history of orienteering. Techniques, such as pacing, leapfrogging, and land marking will be introduced and practiced in the field.

## Concepts:

- Humans do not have an innate sense of direction.
- A compass is a tool that utilizes the earth's magnetic fields to tell direction.
- Orienteering is a method that is helpful in gaining a sense of place.
- Orienteering is a wilderness sport that utilizes a compass when combining navigation with racing.

## Learning Outcomes: Students will be able to

- Identify the various parts of a compass.
- Take and follow a bearing using a compass
- Demonstrate leapfrogging and land marking.
- Estimate distance using their walking pace (pacing).
- Complete one of the ACNW's orienteering courses.
- Utilize problem solving skills in order to navigate through the woods.

## Minnesota Academic Standards:

### Science:

- 6.2.2.2.3 Recognize that some forces between objects act when the objects are in direct contact and others, such as magnetic, electrical and gravitational forces can act from a distance.
- 8.3.2.1.1 Explain how the combination of the Earth's tilted axis and revolution around the sun causes the progression of seasons.
- 8.3.3.1.2 Describe how gravity and inertia keep most objects in the solar system in regular and predictable motion.

### NASPE (National Association for Sports & Physical Education)

- Standard 1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.
- Standard 2: Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.
- Standard 3: Participates regularly in physical activity.
- Standard 4: Achieves and maintains a health-enhancing level of physical fitness.
- Standard 5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.
- Standard 6: Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.

**CLASS LENGTH:** 3 HR

**AGES:** GRADE 5+

**SEASON:** SP, S, F

**GROUP SIZE:** 20 MAX

**SAFETY:** Students will meet in a classroom and spend about an hour learning compass skills. Students will spend the rest of class in the woods on an orienteering course. They will be walking off trail over uneven surfaces and may be climbing over logs and under tree branches.

**MATERIALS:** Compasses, Compass making kit (3 bowls, 3 leaves, 3 sewing needles, 3 magnets), Writing board with pencils, Course packages, Blank paper, Safety whistle, First aid kit, Radio

**PRE-CLASS PREP:** (Describe the setup that needs to be done prior to the lesson)

## CLASS OUTLINE:

Introductions – 10 min

### I. Orienteering vs. Navigation

- A. What is orienteering? – 5 min
- B. What is Navigation? – 5 min

### II. The Compass

- A. The History of the compass – 5 min
- B. How a compass works – 15 min
- C. Parts of a compass – 5 min
- D. Holding your compass – 5min
- E. Taking a bearing - 10 min
- F. Sighting an object – 5 min
- G. Find a bearing – 5 min

### III. Orienteering Techniques

- A. Land marking – 5 min
- B. Leapfrogging – 10 min
- C. Pacing – 10 min

### IV. Courses

#### A. Courses designed to practice bearings:

Stumps or Comics - 15 min

- B. Courses designed to Practice land marking, leapfrogging, and pacing:  
Quotes or North Pole –  
60 min

Wetlands

#### V. The sending – Ask thought provoking questions, that will keep the students thinking after class has concluded – 10min