

Orienteering

Grade 4 – Health and Physical Education



Lesson Details

Grade Level:	4	Curriculum Links:	Health and Physical Education	Time Needed:	1 hour
Learning Goal	To gain a basic understanding of orienteering while meeting physical activity requirements and to learn about the basic needs of a turtle.				
Success Criteria	By the end of this activity, students will be able to demonstrate proper use of a compass to complete the activity.				
Specific Expectations	<p><i>Movement Competence</i></p> <ul style="list-style-type: none"> • Demonstrate an understanding of the components of physical activities; • Endurance activities; • Perform different combinations of locomotor movements with and without equipment, alone and with others, moving at different speeds and levels, using different pathways, and going in different directions; • Apply a variety of tactical solutions to increase their chances of success as they participate in physical activities. 				
Materials Needed	Compass Worksheet (attached), Objects or Symbols to Hide (see attached Symbol Sheet), Map (optional), Compass.				

Lesson Description

Overview	This activity will get students up and moving (using friendly competition as motivation) while teaching them basic orienteering skills.
Activity	<ol style="list-style-type: none"> 1. Prior to the activity beginning, hide the objects/symbols in an outdoor setting. 2. Begin by discussing the basic needs of a turtle (E.g. food, somewhere safe to hibernate, somewhere to nest, etc.). 3. You may also discuss the 8 different species of Ontario Turtles and their specific needs (E.g. the Common Snapping Turtle eats anything from aquatic vegetation to small animals; the Wood Turtle eats insects, plants, and fungi; etc.). 4. Next, introduce orienteering. What is it? Why is it important? How does it relate to turtles? 5. Discuss the four basic geographical directions while also introducing the compass, and how to use it (see attached worksheet). 6. Next explain the rules of the game: <ol style="list-style-type: none"> 1. Hidden in an open area are various symbols (or objects) that a turtle requires. 2. It is your job, with the aid of a compass, to track down these symbols (or objects). 7. Students can either be split into small groups or complete this activity individually. 8. Once the starting place has been determined, give the bearing to the student(s) that they will follow to reach the first hidden symbol (or object). 9. On the first symbol (or object) write the next bearing on it so the student(s) can continue their search. Repeat on the remaining symbols (or objects). 10. On the final symbol (or object) write the bearing that will lead them to the finish line. This activity can be timed so students can work to beat their own records, or the records of their peers.

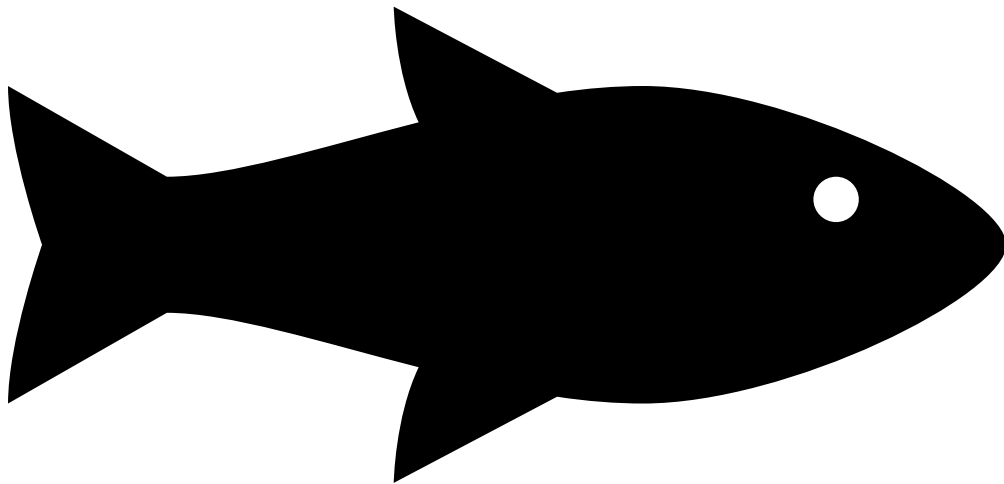
Lesson Description

<p>Background Information</p>	<p>Turtles are excellent navigators within the areas they are familiar with, i.e. their “home ranges.” These home ranges include their yearly nesting site (if female), their overwintering grounds, and the wetlands they frequent during their active season.</p> <p>In the early years of their life, turtles will create “mental maps” of their home areas, and it appears that as turtles age they lose this ability to create new mental maps. Adult turtles tend to rely on their internal compass to navigate through their home range that they know well and have previously “mapped”. There is scientific research that suggests a turtle’s internal compass could be one of two things, or possibly even a combination of both. Turtles could be using the position of the sun in the sky to navigate, or possibly they are able to sense the earth’s magnetic fields; both of these methods would help them know where north is.</p> <p>Because turtles are such good navigators, when you find them crossing a road, they are heading some where specific – so if you help one cross the road make sure to carry it the way it was heading. Ontario turtles are capable of long distance travel over land, and some individuals have very large home ranges with nesting sites far from the wetlands they use during the summer months, which can be separate and further still from the wetland they might use for their overwintering. An important implication of turtles making mental maps of their home ranges when they are young and using their internal compasses to navigate after this, is that if an adult turtle is relocated far outside their home range it can be very disorienting and stressful.</p>
<p>Blacklist Masters</p>	<ul style="list-style-type: none"> • Compass Worksheet (attached) • Symbol Sheet (attached) • Video Link(s): Turtle Orientation • For more information, please visit https://www.turtleguardians.com/why-saving-turtles-is-important/ • For more information on how to use a compass, please visit https://www.rei.com/learn/expert-advice/navigation-basics.html
<p>Place-Based Learning</p>	<p>Learning outdoors. Students should reflect on the wildlife in their community and how a turtle might navigate it.</p>
<p>Inquiry-Based Learning</p>	<p>Using Open Inquiry, students will complete the orienteering activity by using a compass to orient themselves to find different symbols (or objects) in an open area.</p> <p>Ask the students:</p> <ul style="list-style-type: none"> • What is orienteering? • What are the basic needs for humans? Turtles? • How is a turtle able to remember their ‘home range’?
<p>Turtle Stories</p>	<p>Have you seen a turtle moving around in their natural habitat? Go for a walk in a natural area and use a compass while exploring the area. Students are encouraged to share their experiences and pictures on the Turtle Stories website, found here: https://www.turtlestories.ca/</p>
<p>Turtle Guardian Program Links</p>	<p>In Level 1 (Ontario Turtle Identification) of the Turtle Guardian Program, students will learn how to identify all 8 species of Ontario’s turtles. For more information, please visit https://www.turtleguardians.com/what-is-a-turtle-guardian/</p>

My Notes

You Made It To

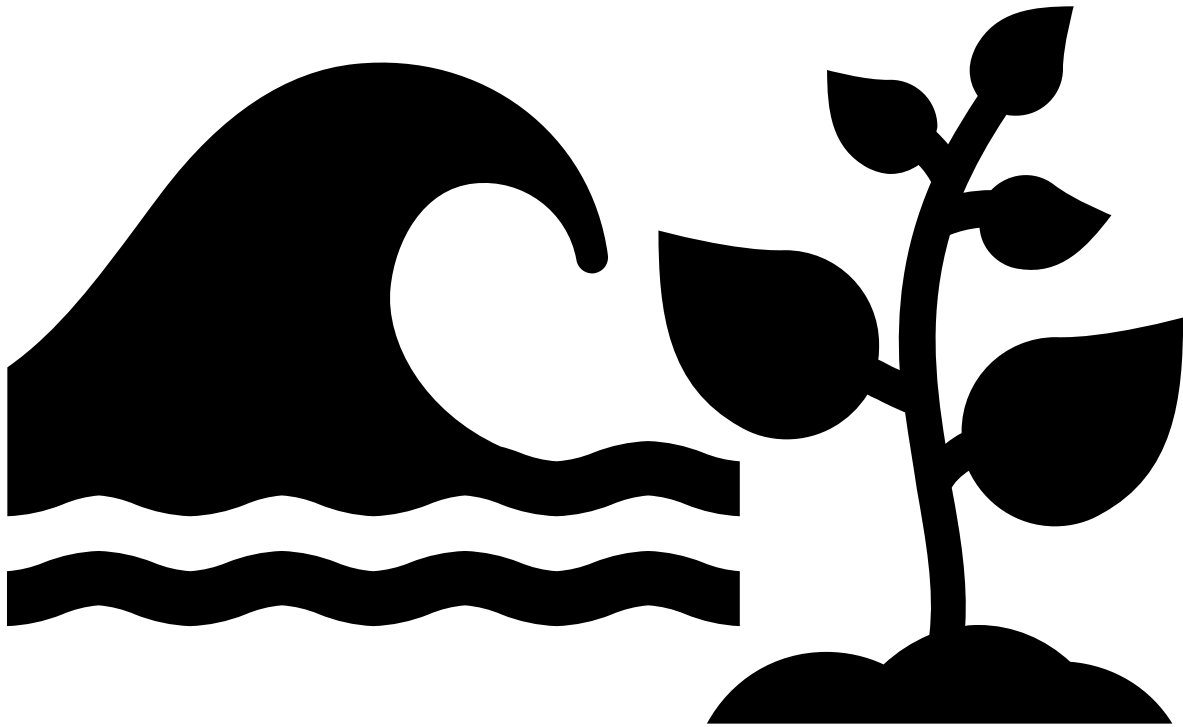
Food



Now head _____

You Made It To

Habitat

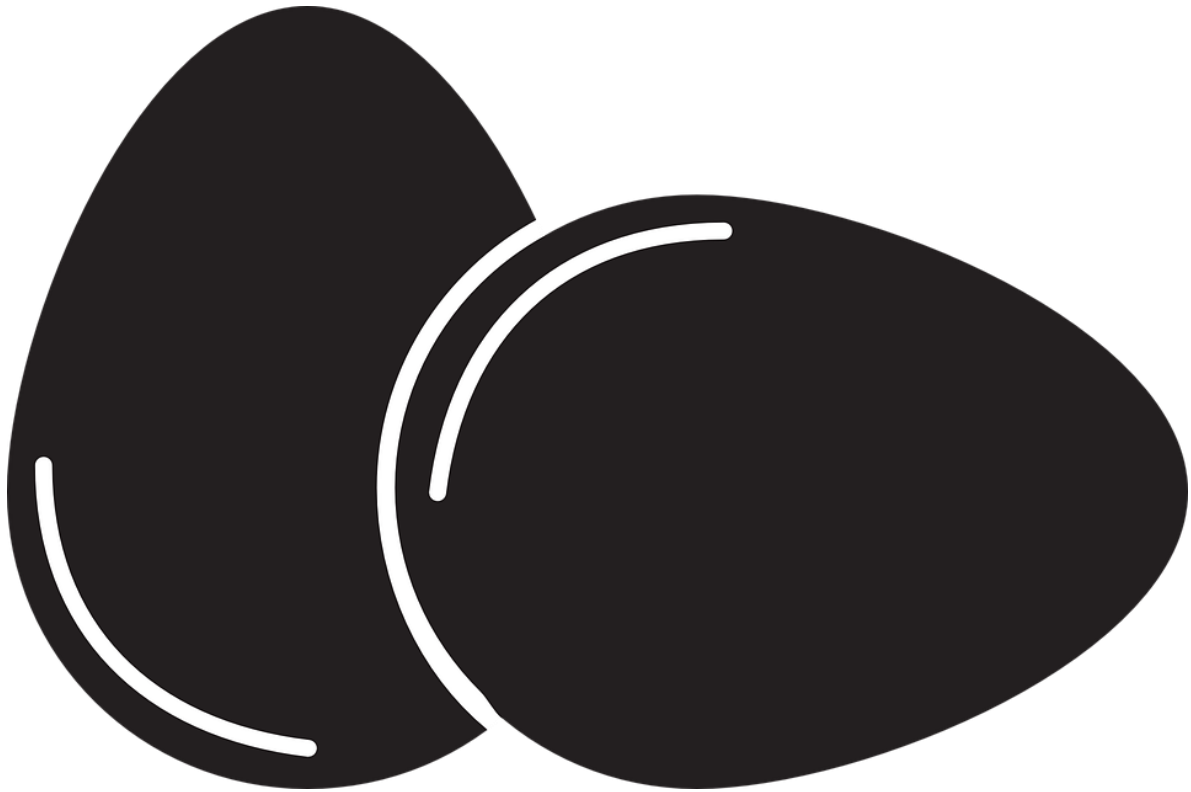


Now head _____



You Made It To

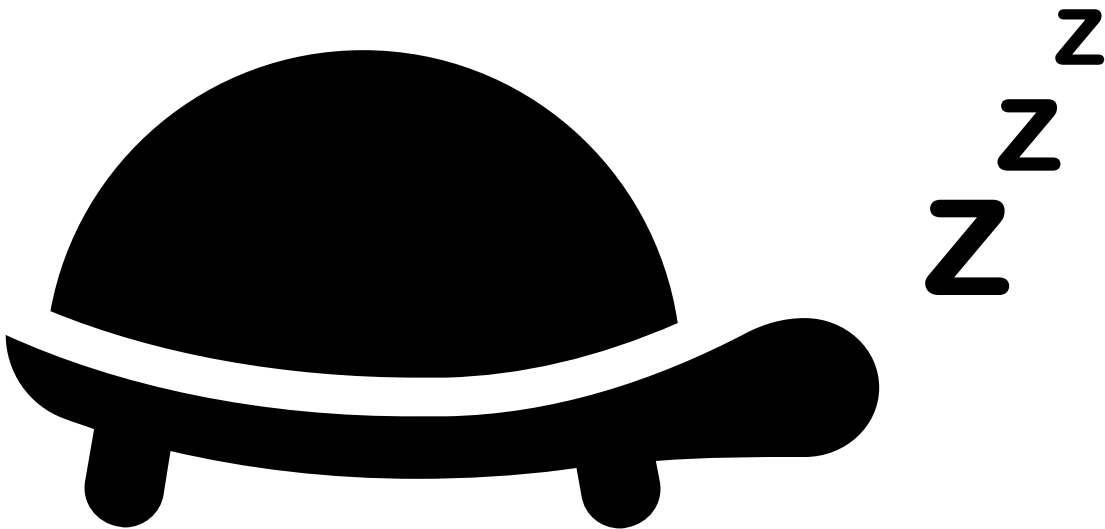
Nesting



Now head _____

You Made It To

Hibernating



Now head _____



How To Use A Compass

The Four Basic Geographical Directions

There are four basic directions: North, South, East, and West. To remember where they are on a compass you can memorize the mnemonic → “Never East Shredded Wheat”.



What is a Compass?

A compass is an instrument that helps people navigate. It indicates a horizontal angle from North to an intended line of travel.

How to Use a Compass

Basic Steps:

1. Look up the declination for your area.
2. Find your bearing on a map and put it into the compass using the bezel.
3. Put red in the shed (otherwise known as the orienting arrow).
4. Hold the compass flat in your hand and choose an object in the distance to reach.
5. Repeat.



Example: If you want to travel at a bearing of 140°...

1. Turn the azimuth ring until the 140° mark is lined up with the direction-of-travel arrow.
2. Keep the compass level as you point the direction-of-travel arrow directly away from your waist.
3. Keeping the compass in the same position with your body, turn your body until the red needle lines up inside the orienting arrow. You now are facing a bearing of 140°.
4. Move in the same direction that the direction-of-travel arrow points. Be sure to keep the red needle lined up inside the orienting arrow as you go.