



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

**WE INVITE YOU TO EXPERIENCE THE NATURAL WORLD IN A WAY YOU HAVE ONLY IMAGINED...**



Lakeside Nature Center's Outdoor Learning Lab is designed to complement and expand classroom studies about the natural world. You, as the teacher or leader, choose objectives that you would like to emphasize based upon themes that we present. Thus, you have the opportunity to customize the experience for your group.

Naturalists plan a day of hands-on activities aimed at meeting your group's learning goals. Students are constantly engaged in sensory-based learning while hiking trails winding through several diverse habitats. Along the way we discover, explore and experience the natural world in a way that makes classroom studies come alive! Our Outdoor Learning Lab site comprises 360-acres of undeveloped natural habitat and is designated as an Environmental Study Area by the U.S. Department of the Interior.

If you are familiar with our Outdoor Learning Lab you may notice that several changes have been made to the curriculum we offer. The objectives within each theme have been updated to meet the Missouri Grade Level Expectations. We hope these changes will more effectively meet your curriculum needs.

Thank you for choosing Lakeside Nature Center's Outdoor Learning Lab. We look forward to working with you.





# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### SCHEDULING YOUR VISIT

**1. Call Lakeside Nature Center to PRE-REGISTER.**

*PHONE: (816) 513-8960*

**2. Choose from the available themes. Choose your specific objectives.**

THEME 1: Diversity, Change and Need in Nature (Grades K-2)

THEME 2: The Importance of Plants (Grade 3)

THEME 3: Organisms and Ecosystems (Grades 4-6)

THEME 4: Map and Compass (Grade 5 to Adult)

THEME 5: Geocaching (Grade 5 to Adult)

*Individual themes are broken down into **specific objectives** which meet various Missouri Grade Level Expectations (GLEs). Detailed information is located at the end of this packet.*

**3. Choose a date.**

*DAYS: Tuesdays – Thursdays  
(Ask about Friday availability for small groups)*

*MONTHS: September – November  
March – May*

**4. Choose a time.**

*Programs last approximately 4 hours (9:30 am-1:30 pm).  
Length can be shortened upon request.*

**5. Cost: \$7.00 per student.**

*This fee can be paid on the day of your scheduled program.*

**6. Fax or mail your REGISTRATION FORM to Lakeside Nature Center at least two weeks before your pre-scheduled field trip.**



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

## TO MAKE YOUR TRIP MORE ENJOYABLE

### Registration

A **REGISTRATION FORM** is included in this packet. **AFTER** you have called to pre-register, please fill out this form. It is needed by Lakeside Nature Center staff to prepare for your group's field trip. You may mail or fax the completed form to us: Lakeside Nature Center, 4701 East Gregory Blvd., Kansas City, MO 64132 OR **FAX: 816-513-8964**. For your convenience a **LEADER CHECKLIST** is also included in this packet.

### Appropriate Clothing

Remind students (and chaperones) that **sturdy walking shoes** and socks are necessary (no flip-flops, sandals or crocs). **Long pants** for protection of students' legs while hiking are preferred. Encourage students to bring raingear if the weather warrants it. Early Fall and late Spring is insect season, so hats and insect repellent are recommended. Sunscreen may be helpful. Late Fall and early Spring can bring wintry weather to Missouri. **Layering clothes** for maximum warmth and wearing hats and gloves will help with comfort in the cold air. We suggest a note home prior to the field trip as a reminder.

### Food, Drink, Backpacks & Electronics

- **Sack lunches are highly recommended.** Please label lunches with students' names and divide the lunches by trail groups. Gather the lunches into boxes for easy transportation by the staff naturalist who meets you upon your arrival. (Lunches will be transported to a building so students do not have to carry them over the trails. Please don't leave lunches in vehicles.) No food/candy/gum will be allowed on the trails (unless medically necessary).
- Water bottles may be carried by students if desired.
- **Backpacks/bags/purses are NOT recommended for students.** We will be engaged in numerous activities and students should not be burdened or distracted by carrying unnecessary belongings. Leave unneeded items in transport vehicles.
- Please remind students and chaperones to turn off all cell phones and portable electronics during the program, as their use is disruptive to students and staff.

### Transportation & Restrooms

- Outdoor Learning Lab staff will meet the driver(s) of your group at Lakeside Nature Center located at 4701 East Gregory Boulevard. However, students are NOT to be dropped off at Lakeside Nature Center. **Staff will lead your group to the Outdoor Learning Lab site** (located less than 1 mile from our nature center).
- We realize your group may be arriving from a great distance and restrooms are available for student use upon arrival at Lakeside Nature Center. However, please stress the importance of using the restroom before beginning your travel so we can begin your program promptly. Restrooms are also available at the lunch site.
- At the end of the field trip, drivers will pick up students at the Outdoor Learning Lab site (**drop-off and pick-up location are the same**).

### Teacher and Chaperone Participation

Arrange for chaperones to accompany students—at least one adult, but preferably no more than two—for each trail group. Our role as Naturalists at Lakeside Nature Center's Outdoor Learning Lab is to teach themes and guide participants. The accompanying adults should come prepared to **help maintain discipline and safety**. Also, please remember our programs are conducted in a **smoke-free** environment.



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### Group Division

A **TRAIL GROUP ASSIGNMENT** page to divide your students evenly into small groups is enclosed in this packet. Please bring this information with you on the day of your scheduled visit. Students will be asked to cooperate, share and interact with one another throughout the day and we ask that you please consider this interaction when assigning students to trail groups. **Student name tags are appreciated.**

### Inclement Weather

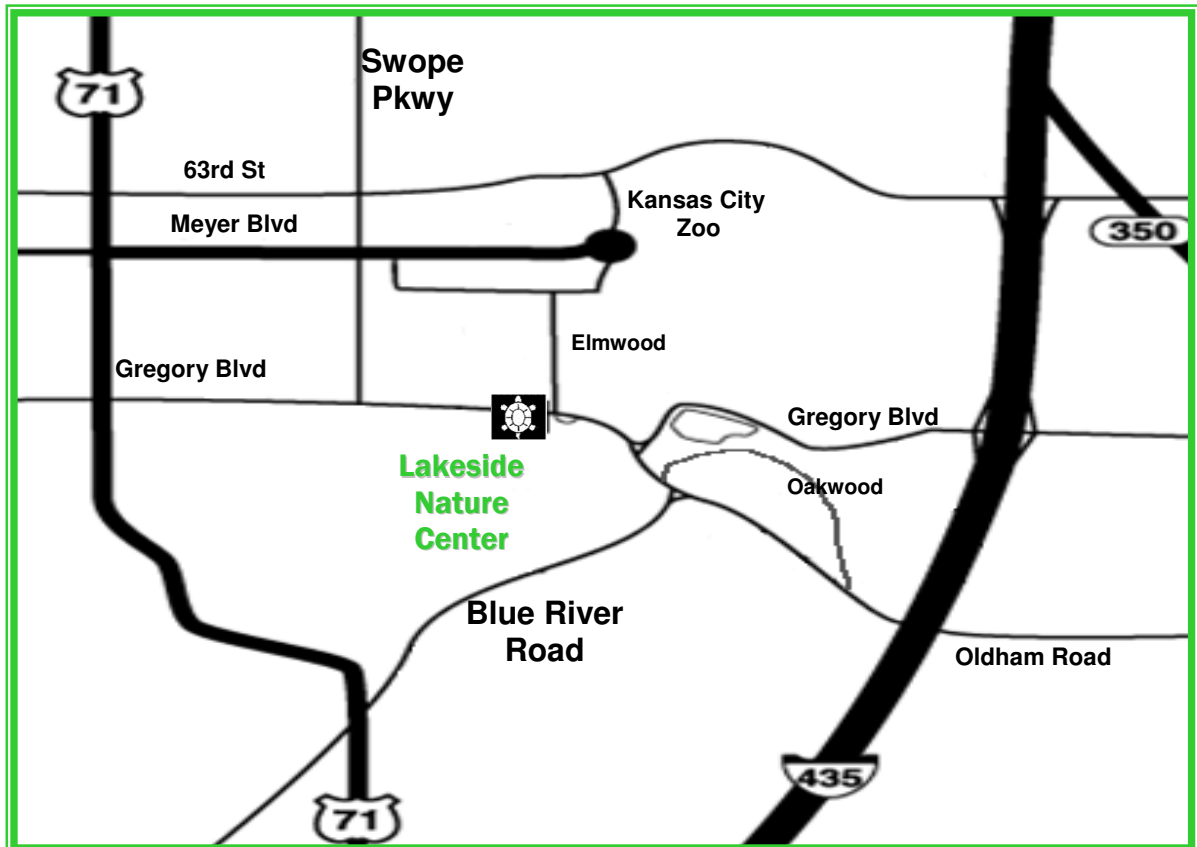
Lakeside Nature Center's Outdoor Learning Lab staff are prepared for effective programming in most weather conditions. We encourage you not to cancel due to light rain or cold if your group is properly attired. However, if severe weather is forecasted and you are concerned about your group, **please call a staff naturalist to discuss the situation 24-hours prior to your scheduled trip** (816-513-8960). Cancellation and rescheduling may be made at that time.

### A FEW RULES:

- Remember ***we are the visitors*** to this natural habitat. Considering the animal and plant life that belongs here, we do not harm them or permanently collect any natural materials from this designated Environmental Study Area.
- Students must stay with their trail group and staff naturalist at all times.
- **NO FOOD on the trails** (unless pre-arranged for medical reasons). The foods we eat can be harmful to animals.

### Our Location:

Lakeside Nature Center and our Outdoor Learning Lab site are both located in Swope Park off of East Gregory Boulevard.



Lakeside Nature Center  
4701 E. Gregory Blvd.  
Kansas City, MO 64132  
816.513.8960



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### REGISTRATION FORM

**LAKESIDE PHONE: 816-513-8960**  
**LAKESIDE FAX: 816-513-8964**

The following information is necessary for us to develop an effective program for your group. **Please complete this form and return it to us AFTER YOU HAVE CALLED TO PRE-REGISTER.** We must receive this form at least 2 weeks BEFORE your scheduled visit.

Date of Field Trip: \_\_\_\_\_

Times: \_\_\_\_\_ to \_\_\_\_\_ (ie. 9:30 am-1:30 pm)

Number of Students Attending: \_\_\_\_\_ Grade/Age Level: \_\_\_\_\_

School/Organization: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Address: \_\_\_\_\_ Fax: \_\_\_\_\_

What **theme** and corresponding **objectives** (1, 2, etc.) would you like emphasized? See the enclosed lists of objectives. Please limit your objective choices to **five**.

**Theme:** \_\_\_\_\_

**Objectives:** \_\_\_\_\_

Please list any other relevant topics related to environmental science that you would like incorporated and we will make every attempt to include them in our activity planning.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Are there any special medical, physical or behavioral situations of which we should be aware? (Please let the naturalists know which groups these students have been assigned to.)

Please circle the level (1-lowest to 5-highest) that best describes your group's functioning ability in the following areas:

**Knowledge of natural environments**  
1 2 3 4 5

**Attention span**  
1 2 3 4 5

**Cooperation with peers**  
1 2 3 4 5

**Learning / Comprehension**  
1 2 3 4 5



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### LEADER CHECKLIST

**PHONE: (816) 513-8960**

**FAX: (816) 513-8964**

- Mail or fax the **Registration Form** to Lakeside Nature Center (4701 East Gregory Boulevard, Kansas City, MO 64132)
- Arrange for payment of balance, due upon arrival.  
(# of students \_\_\_\_\_ X \$7.00 per student = balance due \_\_\_\_\_)
- Stress appropriate dress for hiking in the woods for weather conditions of the day. Sturdy walking shoes are necessary, long pants are recommended.
- Discuss discipline expectations with your group and participating adults.
- Arrange for transportation. Be sure drivers take students to meet Outdoor Learning Lab staff at Lakeside Nature Center parking lot at 4701 East Gregory Boulevard. **Drivers need to stay with students until they have driven the group from Lakeside Nature Center to Outdoor School, following the lead of staff.** At the end of the day, drivers will pick up students at the Outdoor Learning Lab site (same as drop-off site).
- Divide students into trail groups of approximately 10-14 students, using the **TRAIL GROUP ASSIGNMENT FORM**. Bring this information with you the day of your visit to the Outdoor Learning Lab.
- Arrange to have one or two adults accompany each trail group. Please bring no more than two adults for each group of 10-14 students. No younger siblings are allowed to accompany the student groups even if parents are attending.
- Provide nametags for each participant (only first names are necessary).
- Brown bag lunches** need to be collected, separated into trail groups, and placed in containers (cardboard boxes) **before** arrival at Lakeside Nature Center. A staff naturalist will collect your lunches and containers and transport them to the building where the entire group will meet for lunch. **We do not recommend plastic lunch boxes, cooler bags, or coolers, as everything will have to be carried by hand from the lunch site back to the bus.**



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### TRAIL GROUP ASSIGNMENT

Please divide students evenly into groups of 10 – 14 for regular programs, 8 – 10 for Map and Compass, or Geocaching. Please include the names of accompanying adults.

When dividing students, please consider the compatibility of students and potential difficulties should the trail group be broken into pairs for certain activities.

Please inform the appropriate trail group naturalist of any special medical, physical or behavioral circumstances.

**Bobcats**

**Coyotes**

**Hawks**

**Owls**

**\*\*\* Bring this form with you the day of your visit to the Outdoor Learning Lab!**



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### PROGRAM THEMES

#### **THEME 1: Diversity, Change and Need in Nature (Grades K-2)**

This introduction to the natural world encourages students to explore nature using their senses. Students will learn about the basic needs of plants and animals, the differences between living and non-living things, and how changing seasons affect all organisms in an ecosystem. This program can be shortened for younger participants (we recommend two hours for Kindergarten and three hours for 1st grade groups).

#### **THEME 2: The Importance of Plants (Grade 3)**

Students gain an appreciation for the plant world through interactive exploration focusing on growth, adaptation and the needs of plants. Students will discover the process of photosynthesis, as well as how plants fit into the food chain. This program is exceptional in any season.

#### **THEME 3: Organisms and Ecosystems (Grades 4-6)**

Reinforce your curriculum as students explore complex relationships between various organisms and their ecosystems. Includes adaptation, classification, consumer type, and human and natural impact on the environment. This exciting program will encourage critical thinking about our human responsibility and role on this planet.

#### **THEME 4: Map and Compass (Grade 5 to Adult)**

Students go off the beaten path to learn how to find their way through the wilderness using a compass and topographic map. Participants will learn the parts of a compass, how to interpret a topographic map, and follow a pre-set course after taking a bearing. Teamwork is key throughout the day.

#### **THEME 5: Geocaching (Grade 5 to Adult)**

Discover new technology in this exciting and active program using the Global Positioning System (GPS). Students will be introduced to latitude and longitude, discuss how and why the GPS system works and learn to accurately input data and coordinates into a GPS unit. Then the fun begins as students use teamwork and their new skills to locate hidden caches.

- Theme 4 (Map & Compass) and Theme 5 (Geocaching) can be combined into one program. Due to the nature of the combined program, an additional fee per student will apply. Please contact us for more information.





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## OUTDOOR LEARNING LAB

### THEME 1: Diversity, Change and Need in Nature (Grades K-2)

- *Missouri GLE's are listed in italics. All GLE's are science based unless otherwise noted.*
  - *Activities are designed to meet these requirements.*

Please choose **up to five** of the following objectives to include in your program:

1. Observe and discuss the many **different kinds of life** in the forest.  
*(Kindergarten-Grade 2) Strand 7:1.A.a, 1.B.a, 1.B.b, 1.C.a*
2. Compare how plants and animals are **alike and different**.  
*(Kindergarten) Strand 3:1.D.a (Grade 1) Strand 3:1.E.a*
3. Discover that **living things have offspring** which can be alike or different from their parents.  
*(Kindergarten) Strand 3:3.D.a, 3.D.b (Grade 2) Strand 3:3.D.a, 3.D.b*
4. Discuss the differences between **living and non-living** things.  
*(Kindergarten-Grade 2) Strand 7:1.B.a, 1.B.b*
5. Discover the **basic needs of plants**.  
*(Grade 1) Strand 3:1.A.b*
6. Discover **what animals need to survive** in their habitats.  
*(Grade 1) Strand 3:1.A.a*
7. Identify ways that **humans depend on plants and animals** for survival.  
*(Grade 1) Strand 4:1.A.a*
8. Use your senses to discover **textures, colors, shapes, smells and sounds** in nature.  
*(Kindergarten-Grade2) Strand 7:1.B.a, 1.B.b*
9. Describe how the **different seasons affect animals**, including humans.  
*(Kindergarten) Strand 4:1.A.a, 1.A.b*
10. Discuss **how plants are affected by the changing seasons**.  
*(Kindergarten) Strand 4:1.A.a*



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### THEME 2: The Importance of Plants (Grade 3)

- *Missouri GLE's are listed in italics. All GLE's are science based unless otherwise noted.*
  - *Activities are designed to meet these requirements.*

Please choose **up to five** of the following objectives to include in your program:

1. Learn the **basic parts of a plant** and why each is important.  
*Strand 3:1.D.a*
2. Discover the process of **photosynthesis**, including the necessities of air, water, soil and sunlight.  
*Strand 3:1.A.a, 4:2.A.a*
3. Compare and contrast **plants that grow in different habitats**, discussing any necessary adaptations.  
*Social Studies Strand 5:D*
4. Discuss **how a plant grows**, from germination through death.  
*Strand 3:1.B.a*
5. Identify **different trees** by bark, branching, leaf structure, fruit or seed dispersal.  
*Strand 7:1.E.a*
6. Explore the **variety of fungi**, discussing the importance of decomposers.  
*Strand 7:1.B.b*
7. Investigate **the path of water** as it travels through a plant.  
*Strand 3:2.C.a*
8. Discover **plant defenses and attractions**.  
*Strand 7:1.B.b, 1.C.a*
9. Explore how **energy** moves through the **food chain**, discussing the importance of plants.  
*Strand 4:2.A.a, 2.A.c*
10. Discuss how all animals depend on plants for energy, and the differences between **producers and consumers**.  
*Strand 4:2.A.a, 2.A.b, 2.A.c*



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### THEME 3: Organisms and Ecosystems (Grades 4-6)

- *Missouri GLE's are listed in italics. All GLE's are science based unless otherwise noted.*
  - *Activities are designed to meet these requirements.*

Please choose **up to five** of the following objectives to include in your program:

1. Discover that **organisms in an ecosystem may compete for resources**.  
(Grade 4) Strand 4:1.A.a (Grade 6) Strand 4:1.B.a
2. In a variety of habitats, discuss what happens when a **new living thing enters**, or when an organism is taken away.  
(Grade 4) Strand 4:1.A.a (Grade 6) Strand 4:1.B.c, 1.D.a
3. Discover the **similarities and differences used to classify animals** (both vertebrate and invertebrate).  
(Grade 5) Strand 3:1.E.a, 1.E.c, 1.E.d
4. Discuss unique **adaptations of plants and animals** and how these help them survive in their environments.  
(Grade 4) Strand 4:3.C.a, 3.C.b
5. Explore the differences between **producers, consumers and decomposers**, and the importance of each in a habitat.  
(Grade 4) Strand 4:2.A.a (Grade 5) Strand 3:1.E.b
6. Identify **predators and prey**, and which type of consumer (**herbivore, carnivore, omnivore**) they are.  
(Grade 4) Strand 4:2.A.b, 2.A.c
7. Discuss the process of **photosynthesis**, including the necessities of air, water, soil and sunlight.  
(Grade 5) Strand 3:1.E.b, 2.C.a (Grade 6) Strand 3:2.B.a
8. Compare and contrast **different food chains found in different environments or ecosystems**.  
(Grade 4) Strand 4:1.A.b (Grade 6) Strand 4:2.A.a
9. Identify the **human impact** on plants and animals in the environment.  
(Grade 4) Strand 4:1.D.a (Grade 6) Strand 4:1.D.a, Social Studies Strand 5:1
10. Discuss the **impact of natural disasters** on plants and animals in the environment.  
(Grade 6) Strand 4:1.D.b, Social Studies Strand 5:1



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### THEME 4: Map and Compass (Grades 5 to Adult)

The purpose of this workshop is to give students knowledge of the proper use of a magnetic compass and confidence in navigating through an unfamiliar area using topographic map reading skills and teamwork.

The following activities/objectives are included in your program:

1. Describe the parts of the compass and their purposes.
2. Interpret a topographic map and its symbols.
3. Determine compass bearings using a topographical map and compass.
4. Follow a course when given compass bearings.

#### Activities are designed to meet the following Missouri Grade Level Expectations:

<b>Science</b>	(Grade 5) (Grades 6-8) (Grades 9-11)	<i>Strand 8:3.A.b</i> <i>Strand 7:1.B.b, 1.B.c, 1.C.b, 1.C.c, 1.D.a</i> <i>Strand 7:1.B.a, 1.B.c, 1.B.d, 1.B.e, 1.C.c</i>
<b>Math</b>	(Grades 6-7) (Grade 5) (Grades 6-12)	<i>Measurement 2.B, 2.D</i> <i>Geometric/Spatial Relationships 2.A</i> <i>Geometric/Spatial Relationships 4.B</i>
<b>Social Studies</b>	(Grades 5-8)	<i>5.A</i>

Before your visit, please take a few minutes to teach your students the parts of a compass. This gives them a basic familiarity with the instrument so that more time can be spent actually using the compass on the course. Please use the diagram of the compass that is enclosed.

**Base plate:** supports the compass

**Compass housing:** rotates and includes a 360-degree dial

**Direction of travel arrow:** indicates the direction in which one should travel

**Index pointer:** the point at which a bearing is read

**Imprinted colored arrow (doghouse):** used for aligning the magnetic needle

**Magnetic red needle:** points to magnetic north



# LAKESIDE NATURE CENTER

## OUTDOOR LEARNING LAB

### THEME 4: Map and Compass (Grades 5 to Adult)

**Base plate:** supports the compass

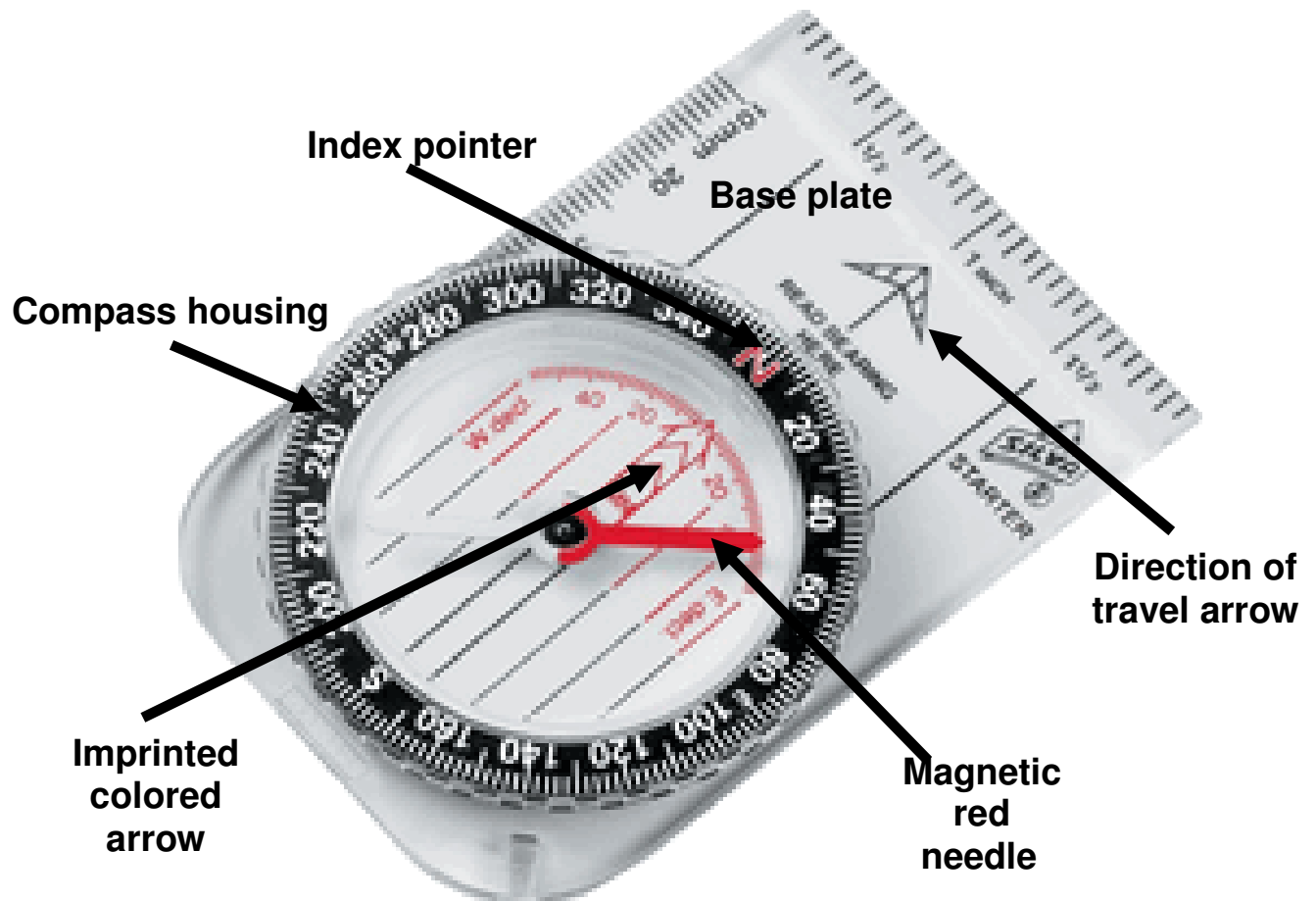
**Compass housing:** rotates and includes a 360-degree dial

**Direction of travel arrow:** indicates the direction in which one should travel

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**Imprinted colored arrow (doghouse):** used for aligning the magnetic needle

**Magnetic red needle:** points to magnetic north





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### THEME 5: Geocaching (Grades 5 to Adult)

Geocaching is an outdoor treasure-hunting game in which students use a Global Positioning System or GPS receiver and other navigational techniques to hide and seek containers called geocaches. This is a multidisciplinary, inquiry-based learning lab applicable to many subjects, including mathematics, geography, earth science and environmental studies.

The following activities/objectives are included in your program:

1. Develop an understanding of latitude and longitude.
2. Learn how and why the Global Positioning System works.
3. Discover how to input data and coordinates accurately.
4. Work with a team and use the GPS handheld unit to locate hidden caches.
5. Understand the science and sport of Geocaching.

**Activities are designed to meet the following Missouri Grade Level Expectations:**

<b>Science</b>	(Grades 6-8) (Grades 9-11)	<i>Strand 7:1.B.b, 1.B.c, 1.C.b, 1.C.c, 1.D.a</i> <i>Strand 7:1.B.a, 1.B.c, 1.B.d, 1.B.e, 1.C.c, 8:B.a</i>
<b>Math</b>	(Grades 6-7) (Grade 5) (Grades 6-12)	<i>Measurement 2.B, 2.D</i> <i>Geometric/Spatial Relationships 2.A</i> <i>Geometric/Spatial Relationships 4.B</i>
<b>Social Studies</b>	(Grades 5-8)	<i>5.A</i>



Visit [www.geocaching.com](http://www.geocaching.com) to explore this new “sport” and locate coordinates for caches all over the world.



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## OUTDOOR LEARNING LAB

### ADDITIONAL PROGRAMS AND OPPORTUNITIES

#### Habitat Hikes

- Wetland Study (Grades 2-Adult)
- Glade Study (Grades 2-Adult)

#### Wildlife Programs

- Nature Connection (Ages 4 and up)
- Birds of Prey (Ages 4 and up)
- Radical Reptiles (Ages 4 and up)
- Owl Laboratory (Grades 2-4)
- Fantastic Frogs (Grades K-2)
- Frog Anatomy Exploration (Grades 2-6)
- No Bones About it (Grades 1-5)
- Fur, Feathers, Scales, and Slime (Pre K-Grade 2)
- Bugs Among Us (Pre K)

#### Scout Programs & Projects

- Eagle Scout Projects Available
- Webelos Badges
- Brownie and Junior Girl Scout Badges



#### Youth Volunteer Program

- “Jr. Keeper” program designed for young people ages 10 to 17 with an interest in science, nature and animal care.

#### Adult Volunteer Opportunities



The Friends of Lakeside Nature Center (FOLNC) is a volunteer support group for Lakeside Nature Center and has various opportunities for adults interested in native Missouri wildlife rehabilitation and educational programming. General memberships are also available.

#### Rentals

- A wide variety of facilities are available to rent for any occasion, including lodges, cabins, campsites, meeting rooms and pavilions.

#### Hiking

- Lakeside Nature Center has several hiking trails ranging from 1/3 to 2 miles in length. Trails are open from dawn until dusk, dogs are permitted but must be on a leash.

#### Hours of Operation

- Tuesday – Saturday, 9:00 am to 4:00pm.
- Admission is FREE.
- Live animal displays and interactive exhibits will make your visit to our nature center an educational and exciting experience!

**FOR MORE INFORMATION PLEASE CALL LAKESIDE NATURE CENTER OR VISIT**  
[www.lakesidenaturecenter.org](http://www.lakesidenaturecenter.org)



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