New Jersey School of Conservation
One Wapalanne Road • Branchville, NJ 07826-5115
http://friendsofnjsoc.org • info@friendsofnjsoc.org

Questing

This course will tap into students' sense of adventure as they embark on a quest that takes them to various places within the New Jersey School of Conservation. Clues and riddles will lead students on a hike of sorts to different locations around the NJSOC campus. Students will work together in a group as they stop at each station to complete activities and learn about local geology, biology, and ecology.

Questing is an activity that began in England. Though similar to geocaching, questing is less about the destination and more about the journey. The goal of a quest is to teach a person something about their surroundings, whether it be about its wildlife, its people, or its history. At the completion of the course, students will take home traditional letterbox stamps on a wood cookie necklace and sign the SOC log book, showing who has come before in the quest and their experiences.

OBJECTIVES:

1. To understand particular features of the area by using observational skills.
2. To practice map- and compass-reading skills
3. To gain information about local geology, habitats and wildlife
4. To collaborate in order to solve clues and reach each destination

MATERIALS NEEDED:

- Map of NJSOC Questing Course & Movement Clues
- NJSOC Questing Bag

  o Terrariums & strainers
  o Tree Identification sheets
  o Amphibian ID sheets
  o Bird Song IdentiFlyer
  o Mirror

- River Stones
- Wood Cookies
- Leather Lacing

PROCEDURE:

1. Welcome the students and begin class by asking each student to name their favorite place and one thing they love about it. For example, if their favorite place is NJSOC, one thing they could love is looking for salamanders while boating. Elaborate how we enjoy our favorite places for the experiences we have there.

2. Introduce the concept of a "quest." Explain that it focuses on the journey rather than the destination, aiming to teach about a place along the way. Explain that students will be going on a quest around the NJSOC, and that they must work together in order to solve clues and complete riddles along the way. Encourage the students to explore by using their five senses.

3. Pass out clue sheet and map. Begin the hike by having a student read the first clue aloud. Continue to rotate the clue sheet and map through the students throughout the class.

Welcome Riddle

Welcome! You are about to go on a treasure hunt,
It may reward you or leave you stumped.
So before you embark on the first riddle,
Remember the treasure isn't the end, it's the middle!
For in this quest, you will soon find
Ways to open your eyes, ears, and mind
And use your surroundings like an explorer.
Some trails and animals await your discover!

Movement Clue #1

From the open space where everyone plays,
Search for a house from by-gone days.
Next to it, furry friends three,
Will lead you to a red-dotted tree.
Take care to look closely at the rocks,
Under some you will find a box!

Glaciers: Sediment Deposition & Succession

Fifteen thousand years ago,
It was much colder than you'd like to know.
Under a mile of ice we would be,
If the Wisconsin Glacier was with you and me.
Give the bottle a pass and a little shake
Because New Jersey the ice did make
As sedimentation left boulders large to small,
Pick them up if you can, sand and clay have filled them all.

Movement Clue #2:

Follow the bears down the trail that you're on
Deeper into the woods where you'll come upon
A strange home nestled on the side of a tree.

It was put there by people with a sign to read.
In your quest bag, find the mirror to view,
Above and below, there might be a clue!

Birds: Boxes, Signs & Calls

Who says an owl has to hoot?
Birds make plenty of other sounds too!
Play the bird calls from your bag to see who is near,
Quiet! Listen! And then you might just hear.
With the bears you should continue,
And repeat your search on a nest that's new!

Has a feathered friend answered you back?
Play a woodpecker call and see if it taps!
Search for the holes they drill in trees,
For bugs, sap, and even their family.
The finches will lead to another box
Be sure to investigate and see who knocks!

I'm not a bird, no-sir-ree!
But that doesn't mean I can't live in a tree.
I make my leafy nest where no one can bother
Because my presence is food for many others
Like owls, hawks and even the sly fox.
Continue on the trail for another box.

Cheep, Cheep and Tweedle-dee!
We are the warblers that sing for thee!
Only warmth will you find us here
Because food is plentiful and very near.
When the snow comes we will flee
And migrate south in order to feed.
Look to your clues for your next stop
Watch closely the trail, you look for a swamp.

Movement Clue #3:

Three purple birds sit in a tree,
These finches will guide you on a journey
Over rocks to a road that looks a tad-bit harsh,
Don't walk too fast or you will miss a marsh!
A red-dot is hiding where the water flows,
And heads downstream from the road below.

Wetland: Amphibians

These amphibians may hide under logs,
For their life cycle began in this bog.
From slimy eggs to tadpoles in puddles,
Salamanders and frogs prefer to muddle
Where moist leaves keep their skin wet
To breath and where insects are an easy bet.

Take a sheet and watch your feet,
Flip the boards and listen for peeps.
When you're finished with what you've found,
Place back the boards and return our friends to the ground!

Clue #4:

Take the road in the direction of northwest
Your next stop will include a bit of a test.
Along the road, at the top of a hill
You will spy a white pine, enormous and still.
Its name on its trunk, yellow dot on its side
This tree has a trunk unbelievably wide!
From the tree, look for a red dot and a weatherproof case
Its contents will teach you of trees in this place.

Trees: Identification

Not all these trees were originally here,
Many were shipped both far and near.
Lumber for houses, fences, and ships
Even charcoal for cooking bits!
Now the trees have returned to Stokes State Forest
Allowed to regrow since the days of their harvest.
Use the sheets in your bag to identify the surrounds trees
There's paper and crayons to make a rubbing, if you please.
The white oaks riddle will lead you toward new friends
Choose wisely or you may head to a dead end!

Letterboxing

This English tradition started in 1854,
A local guide hid a bottle in a moor.
His letter found inspired others to sightsee,
And to gather stamps as forms of memories.
Take a woodcookie medallion in preparation,
For crafted imprints of your investigation.

Clue #6:

Directly across from our large hugging tree
Some finches await you, perched where you can see.
Follow their flight through the woods, over rocks
Until you arrive at an old, grand hemlock.
The tree will be marked with a large red dot,
But you should know how it looks after our last stop!
Look out for mammals that may be on your way
We'll learn about them during our hemlock stay.

Mammals: Adaptations

We are warm and furry with plenty of adaptations
That's why we can get out of sticky situations.

Mammals give milk to their young to grow
Pass around the cards, and be careful not to show.
Have your teammates guess your mammal
By the traits it's gained from centuries of ramble.

Clue #7:

Your final task is to solve a matching game,
Each path has a footprint to be paired with a name.
When you match a footprint to a rodent that glides
Choose that path to follow, with footprints as guides.
They will wind through the forest, I guarantee,
And the markers will be at the bases of trees.
At the end of the path you'll be able to rest
After you find SOC's treasure chest!

Final Destination:

Congratulations! You've completed the quest!
You've located the SOC treasure chest!
You will find a small book and a writing tool,
To fill in the date and the name of your school.
Add a note to be read by those coming next,
Of something you learned or the part you liked best!

WRAP-UP:

Have each student tell you something that they learned about local history, wildlife, or the area in general on the quest. Discuss why it might be important to make personal connections to the places around us or that we live in. Encourage students to make these sorts of investigations in their hometown. They might be surprised by what they discover!

NJ Student Learning Standards

This field lesson touches upon the following NJ Science Performance Expectations and can be tailored to focus on any of the following standards

MS-LS2: Ecosystems: Interactions, Energy, and Dynamics

Students who demonstrate understanding can:

- MS-LS2-2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

- MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS4: Biological Evolution: Unity and Diversity

- MS-LS4-2 Apply scientific ideas to construct an explanation for real-world phenomena, examples, or events.

- MS-LS4-4 Construct an explanation that includes qualitative or quantitative relationships between variables that describe phenomena.

MS-ESS2: Earth's Systems

- MS-ESS2-2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

Comprehensive Health and Physical Education

- 2.2.8.MSC.7 Effectively manage emotions during physical activity (e.g., anger, frustration, excitement) in a safe manner to self and others.

Career Readiness, Life Literacies and Key Skills

- 9.4.8.GCA.2: Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.

Natural Resources Systems

- 9.3.12.AG-NR.2: Analyze the interrelationships between natural resources and humans.

Climate Change

- MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Scientific and Engineering Practices / NGSS

This field lesson has students directly involved with

- Asking Questions and Defining Problems
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information

Social and Emotional Learning

All of our field lessons integrate the concepts of self-awareness, self-management, social awareness, responsible decision-making, and relationship skills found in the New Jersey's Core Social and Emotional Learning (SEL) Competencies.