Squirrel Tales

Tree Squirrels in New Hampshire & the Stories They Tell

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Lyme School Grade 3
School Year 2018/2019
Unit Goal:
From acorns, to life cycles, and a variety lessons that emphasize systems thinking, this yearlong, multi-disciplinary approach will closely investigate the unique adaptable life of New Hampshire’s tree squirrels.

Grade Level:
Kindergarten - Sixth Grade

Essential Questions:
1. What is the relationship between acorns to the squirrel populations in New Hampshire?

2. How do tree squirrels exist and adapt throughout the cold winter in New Hampshire?

3. Will tracking squirrels throughout the winter benefit oral and written storytelling experiences?
Unit Project:

**Acorn Mania:** As a homework project, students will collect acorns around their home or neighborhood to bring into school. They note where they found their acorns and make an estimate of how many they were able to collect. *Specify that they are meant to collect acorns without damage.*

Use the acorns to support math thinking and skill developing. For a week of lessons, we sorted, estimated, counted, totaled, and analyzed data from our acorn cash. The week culminated with students creating their own bar graphs to represent how many acorns each student collected.

ADDITIONALLY: To support learning in the classroom, 2-3 lessons on plant life cycles focused on the Oak Tree might benefit your students. This allowed for discussion on observing, classifying, drawing, and measuring leaves. It also helped us find more acorns out in the field once we could identify a mature oak tree.
Unit Project:

Adaptations: Learning about how squirrels live through the cold harsh winters of New Hampshire is both fascinating and fun. These lessons focus on comparing and contrasting animals that stay and adapt, with those who migrate or hibernate. Exploring how squirrels stay warm together and under the snow brings up the subnivean layer and how squirrels can dig tunnels through snow.

Additionally, we had a Dartmouth professor come into our classroom for a hands on lesson about squirrel anatomy. She brought a dead red squirrel and within a small group settings identified the squirrel’s heart, eyeball, leg muscles, tendons, and ligaments. Students in other stations focused on observing, measuring, and diagramming both gray and red squirrel pelts and skulls.

Finally, Students complete a research report on tree squirrels as they learn the process of identifying resources, taking notes, drafting, editing, and publishing. These reports are shared with their forest pen pal and are supported with diagrams of both red and gray squirrel pelts, skulls, and evidence of tracks from the forest. Each of these diagrams has measurements labeled to the nearest half inch or centimeter.
Unit Project:

Storytelling with Tracks:
As winter approaches and squirrels are adapting to the cold weather, their stories become more interesting. Storyteller, author, poet, and naturalist, Michael Caduto visited our class for three hours, one afternoon.

The focus of the session was to behave as if we were red squirrels. He led the lesson with a variety of stories and songs that related to both red and gray squirrels. In order to feel like a squirrel who doesn’t have thumbs, Students taped their thumbs down and tried to unpeel oranges. Not many tried to use their mouths, but perhaps if they had their own orange they might have. Once we were in the forest space students listened like squirrels by cupping their ears and trying to hear our nearby stream.

Finally as a culminating activity, out in the forest, we played Cache Collection. This was meant to simulate what it might be like to be a red squirrel. Each team of six was equivalent to one squirrel. First they were given a unique type of candy; peppermints, large gummies, candy corns, etc. Each squirrel team then “cached” or hid their entire collection of food in a spot. Once all squirrels had hidden their cache squirrels began to hop around to steal from one another’s cache. Students must move or hop like a squirrel and may only collect one piece of food from another cache, at a time.

In the end we counted our new cache to see how many more piece of food each squirrel team ended up with. The kid were thrilled to see who got the most, but we hoped they might begin to understand how squirrels steal from one another to survive the cold winters.
Common Core Standards &
Next Generation Science Standards:

**CCSS.MATH.CONTENT.3.MD.B.4**
Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

**CCSS.MATH.CONTENT.3.MD.D.8**
Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

**CCSS.ELA-LITERACY.RI.3.2**
Determine the main idea of a text; recount the key details and explain how they support the main idea.

**CCSS.ELA-LITERACY.RI.3.5**
Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

**CCSS.ELA-LITERACY.RI.3.7**
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

**CCSS.ELA-LITERACY.W.3.2**
Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

**LS1.B: Growth and Development of Organisms**
- Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)

**ESS2.E: Biogeology**
- Plants and animals can change their environment. (K-ESS2-2)

**LS4.C: Adaptation**
- For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all.