

## SCIENCE COMPONENT (September)

### Virtual Plant Collection Entries

In this activity individual students identify trees and wildflowers in local areas with an emphasis on visiting land in conservation. As a custom feature of the website, students enter the following data, curated into a digital collection, with specimen, gallery, and a map view. Their plant collection entries are viewable by members of the site and comments are enabled.

▪Image taken by student ▪Family name ▪Scientific name ▪Common name ▪Diagnostic characters ▪Location ▪Longitude/latitude  
▪Habitat name/type ▪Aspect ▪Notes

**2-LS-1 Planning and Carrying Out Investigations:** Make observations (first hand or from media) to collect data which can be used to make comparisons. Students who demonstrate understanding can: Make observations of plants and animals to compare the diversity of life in different habitats. *NGSS Biodiversity and Humans*

**Patterns.** Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them. *NGSS Cross Cutting Concepts*

**Structure and function.** The way in which an object or living thing is shaped and its substructure determine many of its properties and functions. *NGSS Cross Cutting Concepts*

**Common Core Reading Standards for Literacy in Science and Technical Subjects 6-8** Determine the meaning of symbols, key words, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to 6-8 texts and topics.

## SOCIAL STUDIES COMPONENT (October)

### TR's Trail Entry

In this activity, pairs of students digitally research the archives of the Roosevelt Collection, Houghton Library, Harvard University, as well as other sources of primary documents, to create a multimedia presentation on an event in TR's life, and relate it to one of his conservation achievements. Their TR's Trail entry is viewable by members of the site and comments are enabled.

This will be a custom feature of the website and it is currently in development. Anticipated entry fields include:

▪Title ▪Date of event ▪Image from Roosevelt collection ▪Image from other research ▪Citation data ▪Recorded narration by students

**PEI E1 Historical Knowledge, Concepts, Themes, and Patterns 6-8** Identify and analyze major historical eras, major enduring themes, turning points, events, consequences, and people in the history of Maine, the United States, and various regions of the world

**Common Core 7<sup>th</sup> Grade Anchor Standards for Production and Distribution of Writing** Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

## CHALLENGE BASED LEARNING COMPONENT (September-December)

[https://www.challengebasedlearning.org/public/toolkit\\_resource/02/0e/0df4\\_af4e.pdf](https://www.challengebasedlearning.org/public/toolkit_resource/02/0e/0df4_af4e.pdf) (FMI)

### Phase 1 Challenge Presentation

In pairs, students create a **challenge presentation (rubric/standards to follow)** to introduce themselves, their school, the big idea, resources, and challenge. This will be uploaded and shared with peers on the website. Students will contribute the following data to a shared workspace with students from other schools in a defined team that will work together for the project. •Name of school, size of class, location/geography, why paired •Local resources related to biodiversity and conservation •what we want to learn/big idea/local issue •why it is important to us/community impact

### Phase 2 Guiding Questions

In pairs, students will begin to research a local biodiversity or conservation issue by talking to experts and using reliable resources. A local expert should be brought in at this phase as a guest speaker to talk to the students and help them jumpstart their learning. Students will contribute the following data to a shared workspace with students from other schools on their team. •Name of local expert visiting •Local resource will be discussing •Questions we need to ask/asked/answered •Facts we now know •Best resources •Surprises encountered

### Phase 3 Action Plan and Timeline

In pairs, students will create an action plan and timeline for addressing a local issue in either biodiversity or conservation. Students will contribute the following data to a shared workspace with students from other schools on their team. •What you decided to do to address the issue •Why you think this will make a difference •What the plan is to get it done •Timeline for completion

### Phase 4 Implementation and Evaluation

In pairs, students will implement and evaluate their plan of action to solve a local issue. Students will contribute the following data to a shared workspace with students from other schools on their team. •Statement of the challenge •How you plan on measuring success •How you put it in to action •What worked, didn't work, or predictions of what might work/obstacles

### Phase 5 Solution Presentation

In pairs, students will create a **solution presentation (rubric/standards to follow)**. As a component of this presentation, they will ask their statewide team to provide a component of the presentation by **outsourcing** (requesting a media artifact). This presentation will be uploaded and shared with peers on the website. Students will contribute the following data to a shared workspace with students from other schools on their team. •Description of challenge, description of learning process, results or predictions of implementation •outsourcing requests •roles/plan of creating presentation

**NETS 2 Collaboration and Communication** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

**NETS 3 Research and Information Fluency** Students apply digital tools to gather, evaluate, and use information

**NETS 5 Digital Citizenship** Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.