

Research the Past

4th Grade

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References:

- “Plants of the Past” lesson plan from 4th grade Earth Science curriculum guide

Benchmarks:

(Benchmark C): Compare changes in an organism’s ecosystem/habitat that affect its survival. LS-5: Observe and explore how fossils provide evidence about animals that lived long ago and the nature of the environment at that time. ST-2: Investigate how technology and inventions change to meet peoples’ needs and wants.

Objectives:

By studying the plants of our past, we can get an idea of what the ecosystems were like. Plants played an important role in providing food for animals and they had historic significance to ancient civilizations. Investigating their historical utility can help students understand cultural and technological evolution and how plants serve as inspiration for inventions.

Materials:

- Lab sheet
- Computer w/ internet access
- Library books

Initial Demonstration:

There is no initial demonstration for this particular lesson.

Target Model:

- Plants have always played a central role in the everyday workings of human societies. The process of discovering new plants by scientists and the development of new technologies by inventors never stops. This results in the replacement of plant-based products with man-made products.

Procedure:

Have students do research on different inventors and their inventions. They should record all of their findings on the lab sheet provided for them. This lab sheet provides them with specific areas to research about their inventor, as well as how their inventions have impacted our lives. Below is a list of some inventors:

1. George de Mestral's (Velcro)
2. Eli Whitney (Cotton Gin)
3. Eliza Pinckney (Indigo in the U.S.)
4. George Washington Carver (Peanuts)
5. Normal Borlaug (Green Revolution)
6. Carl Linnaeus (Scientific Classification)
7. Rachel Carson (Field Scientist and environmental philosopher)
8. George Crum (Potato chips)
9. Clatonia Joaquin Dorticus
10. Norbert Rillieux (Sugar Processing)
11. Coenraad Johannes Van Houten (Dutch processing or alkalisation)
12. Frank Epperson (Popsicle)
13. John Montagu (Sandwich)
14. Thomas Sullivan (Tea bag)
15. Ruth Graves Wakefield (Chocolate cookie)

When students have completed their sheets, which may take more than one day, have them share something they learned about their inventor and how their product has impacted us as consumers.

Target Observations:

- The inventions of all of these inventors have greatly impacted how we live our lives today
- Some of the inventions are still used the same today, but many have been adapted to our fast paced lifestyles
- These inventors were students long ago that studied plants from the past and they were able to take those plants and develop something new

Summary:

Students have taken part in a lesson involving inventors, which have taken plants that have been around for thousands of years and turned them into something new and useful. By exploring the history and lives of these inventors, students may develop more interest in and a deeper respect for how they have made our life much simpler in the 21st century. Perhaps they might feel stimulated to pursue some inventions of their own!