Grade 3 - Unit 1 - Our Changing Land; Science and Social Studies Interdisciplinary Unit

Unit Focus

This unit has been developed through an interdisciplinary collaboration between Science and Social Studies. Students will begin the unit by exploring maps of Connecticut and the geologic forces that have shaped the Northeast. Through the investigation of maps as well as the location of rock types and formations, students will be able to see evidence of the geologic history of our region. Students will move into the exploration of the natural resources that became available due to volcanic activity, glaciation, and erosion as they explore how early Americans used the natural resources for survival and how the quest for these resources shaped settlements, trading, and land use. Learning experiences will be infused with the scientific basis of these conclusions based on archeology and analysis of artifacts by scientists. Students will apply this understanding to Social Studies as they learn about where the Europeans settled in Connecticut, their interactions with native communities, and how Connecticut has developed into our modern society.

Stage 1: Desired Results - Key Understandings

Standard(s)

C3 Framework for Social Studies State Standards
Social Studies: 3

- Use deliberative processes when making decisions or reaching judgments as a group (D2.Civ.9.3-5.)
- Identify the beliefs, experiences, perspectives, and values that underlie their own and others' points of view about civic issues. (D2.Civ. 10.3-5.)
- Construct maps and other graphic representations of both familiar and unfamiliar places. (D2.Geo.1.3-5.)
- Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their environmental characteristics. (D2.Geo.2.3-5.)
- Use maps of different scales to describe the locations of cultural and environmental characteristics. (D2.Geo.3.3-5.)
- Explain how culture influences the way people modify and adapt to their environments. (D2.Geo.4.3-5.)
- Explain how the cultural and environmental characteristics of places change over time. (D2.Geo.5.3-5.)
- Describe how environmental and cultural characteristics influence population distribution in specific places or regions. (D2.Geo.6.3-5.)
- Explain how cultural and environmental characteristics affect the distribution and movement of people, goods, and ideas. (D2.Geo.7.3-5.)

Transfer

Students will be able to independently use their learning to...
T1 Communicate effectively based on purpose, task, and audience to promote collective understanding and/or recommend actions.
T2 Analyze how geography impacts people and people impact geography.
T3 Apply geographic reasoning of earth's physical and human features to better understand problems, predict outcomes, and/or develop solutions.

Meaning

Understanding(s)

Students will understand that...
U1 Geologic forces have formed the landscape of CT, evidence of which can still be seen locally.
U2 Rock formations reveal changes and patterns over time due to earth's forces.
U3 Fossils provide evidence about the types of extinct organisms that lived long ago and also about the environments in which they lived.
U4 Humans use natural resources for everything they do.
U5 The expansion and redistribution of the human population affects patterns of settlement, environmental changes, and resource use.
U6 Living things need water, air, and resources from the land, and they live in places that have the things they need.

Essential Question(s)

Students will keep considering...
Q1 How have natural forces created the landscape of Connecticut?
Q2 What evidence do scientists use to study the geologic and cultural history of Connecticut?
Q3 How have the natural resources in CT been used in the past and how did this impact people?
Q4 How does where people live shape how they live?

Stage 1: Desired Results - Key Understandings

- Explain how human settlements and movements relate to the locations and use of various natural resources. (D2.Geo.8.3-5.)
- Analyze the effects of catastrophic environmental and technological events on human settlements and migration. (D2.Geo. 9.3-5.)
- Compare information provided by different historical sources about the past. (D2.His. 10.3-5.)
- Draw on disciplinary concepts to explain the challenges people have faced and opportunities they have created, in addressing local, regional, and global problems at various times and places. (D4.6.3-5.)

Next Generation Science Standards (DCI)

Science: 2

- Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (ESS1.2.C1)
- Wind and water can change the shape of the land. (ESS2.2.A1)
- Maps show where things are located. One can map the shapes and kinds of land and water in any area. (ESS2.2.B1)
- Different properties are suited to different purposes. (PS1.2.A2)

Science: 3

- Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (ESS2.3.D2)
- When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (LS2.3.C1)
- Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (LS4.3.A1)
- Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (LS4.3.A2)
- For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (LS4.3.C1)
- Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (LS4.3.D1)

Acquisition of Knowledge and Skill

Knowledge

Students will know...

K1 Volcanoes and glaciers formed many of the landscape features in CT.

K2 CT has different types of rock in specific places in the state. This is due to the different geologic forces that have created these rocks, including: volcanic activity, continental drift and erosion.

K3 The climate in CT has changed over millions of years.

K4 Glaciers are large sheets of ice, miles high, that covered CT and created Long Island and Long Island Sound.

K5 When glaciers were present, the sea level was very low and Long Island Sound was a freshwater lake. When glaciers melted, the sea level rose and changed the lake into Long Island Sound.

K6 Archaeologists are scientists who used artifacts to help people understand the past.

K7 Paleo-Americans and Native Americans traveled to places where they were able to find food and shelter and make necessary tools for their survival.

K8 People use specific rock types for specific functions. For example, basalt (igneous) is very strong and good for axes while quartz chips easily and forms sharp edges and is good for spear points.

K9 Atlatls were important tools for hunting and were made from various natural resources.

K10 Paleo-Americans came to CT after the glaciers retreated because there were large animals they needed for food.

K11 Animals that are no longer alive used to live in CT and were used by Paleo Americans for food and resources. These include: Giant Sloth, Mastodon, Short-faced Bear, and the Giant Beaver. Scientists believe this because they have found their fossils in CT.

K12 Many locations in CT have produced artifacts that scientists have used to understand the history of CT.

Skill(s)

Students will be skilled at...

S1 Use maps to identify areas that provide natural resources for people and animals.

S2 Make and justify claims based on evidence and reasoning.

Stage 1: Desired Results - Key Understandings		
Science: 4 • Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed. (ESS1.4.C1) • Living things affect the physical characteristics of their regions. (ESS2.4.E1) **Next Generation Science Standards (content standards)** Elementary Standards: 4 • Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. (4-ESS1-1) • Analyze and interpret data from maps to describe patterns of Earth's features. (4- ESS2-2) **Madison Public Schools Profile of a Graduate** • Decision Making: Make responsible decisions, based on potential outcomes. (POG.4.2) • Alternate Perspectives: Interpret or critique complementary and competing approaches, experiences, and worldviews in order to develop an empathetic perspective. (POG.5.2)		