

## **Delaware, Spadefoots, and Squirrels: A Small Wonder**

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### **Introduction/Rationale**

Students in many elementary schools today have never known anything other than how *they paved paradise to put up a parking lot*.<sup>1</sup> At my school, our playground is literally a paved parking lot. Students in New Castle County, Delaware are surrounded by stores, motels, car dealerships, and apartment complexes. Every day they see abandoned storefronts next to new construction. What I am afraid they do not see is the farmland a mile from school, the marshes and trails in White Clay Creek State Park, or even the plants and animals in their suburban backyards. In this unit, students will explore how Delaware has changed and is still changing. They will examine the impact growth and development has on the animals in the state.

While this unit was developed for fifth grade students at Forest Oak Elementary School (K-5) in the Red Clay Consolidated School District of Newark, Delaware, it can easily be adapted for elementary students anywhere. Forest Oak Elementary School has approximately 500 students. Over half of the student population is Hispanic or Latino (51.41%). 34.07% of the students are White or Caucasian, and 8.06% are Black or African American. There is a high population of English Learners (41.13%). Due to the needs of the students, units have been allocated as pull-out English Learner Teachers. 35.48% of the school is considered low-income, and 8.87% of the students have been identified as Special Education. Like English Learners, pull-out teachers service Special Education students at the school.

In comparison to other public schools in Delaware, students at Forest Oak perform below the state average on standardized assessments. In 2019, 53.84% of students were proficient in ELA. 44.32% of students were proficient in mathematics<sup>2</sup>. Typically, Social Studies and Science scores trend even lower. However, the new Smarter Balanced Assessment Consortium (SBAC) test was being piloted this year, and cut scores are not yet set. Not only will this unit address several English Language Arts standards including reading, writing, and speaking/listening, but it is cross-curricular in its' ability to cover relevant Social Studies and Science standards.

### **Objectives**

In this unit, students will be able to identify endangered animals in the state of Delaware. They will complete research, complete readings, and inform others of the animals that have become threatened in the First State. Upon identifying such animals, students will

recognize and describe causes of animal endangerment and their possible solutions. To accomplish this objective, students will examine graphic aids and read informative articles. After completing research, students will be able to present information learned in a novel way. They will be given several choices and formats from which they can choose to address these speaking and listening standards. As a culminating activity, students will be able to write a formal letter given a selection of topics. All objectives will be measured using rubrics to ensure fair and equitable grading.

## **Content**

Delaware is the first state; nicknamed such because it was the first to ratify the Constitution on December 7, 1787. It is the second-smallest state behind only Rhode Island. Delaware is 1,948 square miles in size, snuggled up against the Atlantic Ocean and bordering Maryland and Pennsylvania. It is just across the Delaware Bay and Delaware River from New Jersey. Residents can drive to Philadelphia, PA in less than an hour and New York City and Baltimore are close enough for a day trip. Three counties make up Delaware which is known for the beautiful public beaches, tax-free shopping, and President-Elect Joseph Biden.

According to the US Census Bureau (2019), Delaware is home to 973,764 people<sup>3</sup>. Over half of the residents live in New Castle County (northernmost), where the city of Wilmington is located. New Castle County has 558,753 residents. Delaware is also home to over 800 animal species. Although it is widely recognized that the exact number of species in any given state is unknown. According to Whitlock, 2006, the list of Species of Greatest Conservation Need (SGCN) for the northeastern states includes 87 different mammals, 263 species of birds, 65 reptiles, 73 amphibians, 299 fish, 27 tiger beetles, and 101 freshwater mussel species and subspecies<sup>4</sup>. Some of the mammals found in Delaware include bats, squirrels, foxes, bats, deer, and rabbits. Birds include, but are not limited to, herons, owls, gulls, terns, and warblers. Of the other species, you can find sea turtles, corn snakes, salamanders, frogs, horseshoe crabs, sturgeons, and sharks. Although this is not an exhaustive list, it hopefully provides a snapshot of what Delaware is like. Insects, too, call Delaware home. In summer, there is no denying mosquitoes. Beetles, fireflies, bees, butterflies, and moths are all flying or crawling around the First State. The humid and moderate climate make it a great habitat for many species. With four seasons and unique wildlife, Delaware is full of life for such a small space.

The SGCN has identified threatened or endangered animals in Delaware by designating them to tiers. Tier 1 being the most severe or threatened down to Tier 4 which are animals and insects abundantly found in Delaware. Tier 1 is defined as "... the highest need of conservation action. These include the rarest species in the state, species that are highly globally imperiled, and species with regionally important Delaware populations that are also under high threat from climate change." Tier 2 is designated as

“... species of moderate conservation concern in Delaware...”<sup>4</sup> It is remarkable how many animals are in the most at-risk tiers.

Hundreds of years ago, during European settlement, Delaware was covered in forests. So, what is causing the threat to animal species in Delaware? While approximately 100,000 acres are protected, land use and development remain a major factor in the decline of animal species and their habitats. There are other reasons too like climate change, fire, natural disasters, etc. Today just 30% of the state is forested and the Delaware Forest Service<sup>5</sup> reports that 6% of that has been included in proposed housing developments. In the past 10 years, 32,043 residential units for future development were approved in Delaware (NCCo@2050).<sup>6</sup> This makes one wonder, *How can planned growth continue while conserving land for animals?*

This curricular unit will focus on two endangered species in Delaware, but students are welcome and encouraged to explore others independently. The Delmarva Fox Squirrel is the first. It has faced many trials and tribulations in Delaware and the surrounding regions. First listed as Endangered in 1967 (U.S. Fish and Wildlife Service/USFWS), when just 10% of its’ population was left due to habitat loss from development and timber harvesting.<sup>7</sup> Efforts to relocate populations of the large tree squirrels were successful in Prime Hook National Wildlife Refuge of Sussex County, Delaware. Moving the squirrels to this park kept them safe. However, a separate population at Assawoman Wildlife Area, also in Sussex County, was reported eliminated by 2012 according to USFWS.<sup>7</sup>

In 2015, the Delmarva Fox Squirrel was successfully removed from the Endangered List (Chesapeake Bay Program) due to its’ growing numbers. In 2020, another translocation is planned from Maryland to Delaware. While students and volunteers cannot participate in the relocation, everyone in Delaware can help by reporting sightings of Delmarva Fox Squirrels at <https://dnrec.alpha.delaware.gov/fish-wildlife/conservation/fox-squirrel/sightings/>.<sup>8</sup>

This unit will also focus on the Mud Salamander. The reddish-brown salamander is one of 28 species of amphibians in Delaware and a Tier 1 SGCN. While spadefoot toads are common in the southeast, 64% of the amphibians in Delaware are considered SGCN<sup>4</sup>. Found in streams, swamps, and in moist areas like under rocks, the numbers are dwindling in Delaware due to habitat loss. Mud salamanders cannot regulate their body temperature, and although tiny (7-16 cm long), they need a fitting habitat suited for thriving. A contributing factor to habitat loss is that Delaware is a flat state and much of it is fit for development.<sup>4</sup>

## **Teaching Strategies**

This curricular unit will be taught using various genres of literature including Native American folklore and the text “Night of the Spadefoot Toads” by Bill Harley.<sup>9</sup> We will both read the story as a class and listen to select chapters read aloud. The text, set in Massachusetts, focuses on a teacher, Mrs. Tibbets, and student, Ben, with a unique fascination of both spring peepers and spadefoot toads. Set in a fellow eastern seaboard state, both Delaware and Massachusetts feature similar habitats and are home to spadefoot toads. An endangered species, spadefoot toads are known for burying themselves up to 8 feet in the ground, using their spade-like feet, and emerging for just one night every 1-4 years after a substantial rainfall. The text, “Night of the Spadefoot Toads,” addresses how to protect the amphibians and their land. Partner work and online discussion boards will be used to discuss story events and character actions. Such discussions will address CCSS.ELA-LITERACY.SL.5.1 in which students engage in effective discussions using prepared research to share out, defend viewpoints, and justify their responses.<sup>10</sup> Both genres of text expose students to the animals of a region. The folklores introduce students to the importance of animals in Native American culture. The book introduces students to the idea of endangered animals and human and nature interactions.

Addressing Delaware State History Standard 2, students will analyze photographs, maps, and graphs/charts to determine how the land in Delaware has changed, going back 30 years, and then specifically focusing on the years which they (the students) were alive: 2010-present. They will use groupwork to study maps and “I Notice, I Wonder” graphic organizers to record information. Teacher led discussion will highlight human growth and loss of forests and animal habitats. Students will use their inferencing skills to analyze the representations. Addressing Delaware State Geography Standard 3 and Next Gen Science Standard LS4.D, we will dive into how people have caused change in the area and how that change has adversely affected those living in the habitat (people, plants, and animals). Videos on environmental change and endangered and extinct animals will provide background information. More specific background information will be provided to students through the use of images of Delaware animals. Whole-class discussions will be thoughtfully led with questioning prompts prepared ahead of time. Students will be expected to come to discussions with research completed so that they can thoughtfully and accurately share their opinions, justify their responses, and evaluate others’ ideas. Nonfiction texts will be used to fill-in-the-gaps. The readings on the Delmarva Fox Squirrel and mud salamander will level the playing field for students by giving them access to the same background knowledge.

As we move through the unit, students will be asked to consider how best to protect similar animals in Delaware (Delmarva Fox Squirrel, Mud Salamanders, and more). We will use examples from the text as models, and consider unique ideas presented by students. At the culmination of the unit, students will present out information learned in a variety of ways. They will have the opportunity to choose their mode of presentation

from slides, reports, or creating a book. As a whole-group we will also practice letter-writing to address the leaders of Delaware.

### **Classroom Activities**

I plan on introducing this unit with an introduction to Native American folklore. I will tell students that our next unit of study will focus on Delaware animals, just as we read about the animals of New Mexico and Massachusetts in the text, “Night of the Spadefoot Toads.” Before presenting any information, I will see what students already know about Delaware animals by having them complete an independent word web with “Delaware Animals” in the middle. Given a brief amount of time, students will jot down any animals that are native to the state (zoos and aquariums do not count). *This web could be modified to name the animals of any region or state.* Afterwards, I will collect accurate information from students to add to a classroom web that will be posted throughout the duration of the unit. I can supplement the activity by presenting images of the animals that they list. That way, students who are unfamiliar with an animal can visualize it.

After checking-in on students’ background knowledge, we will read a Native American folklore as a class. The folklore will focus on squirrels. In Native American culture, most squirrels are known as troublemakers. However, some tales present them as caretakers of the forest. With the class, we will discuss why people might view squirrels as annoyances. Then we will talk about how they could be considered caretakers through observations outside our classroom or in our own yards. From there, we will read the tale “Old Man and the Roasted Squirrel.” After reading, the students will be asked to characterize the squirrels in the story. I will question students about what they notice about the format and central message of such folklore. Possible student responses include that the stories make-up possible explanations for natural events, that they are fictitious but use familiar animals, and/or that animals and objects are personified. When finished, I will throw out a question that most students will find silly- “Do you think that this is the reason why some squirrels are endangered today?” Obviously, one man killing squirrels is not the reason for their endangerment, but it will get the students thinking of more realistic and plausible explanations.

Another story will be presented to students to read independently. Guiding questions will be provided for them after reading. The story will focus on lizards in Native American stories. Before reading, students will be asked to characterize lizards by describing how they look, how they move, and how they behave. Do they possess any human characteristics? While squirrels, in the previous story, were considered pests, lizards are revered in Native American history. They are considered bad luck when killed, used in healing medicines, and some tribes tie birth rituals to the lizard. Students will then read “Blue Jay and Lizard and the Grizzly Bears.” After reading, the students will answer questions such as “How was the lizard characterized in the story?” and “What similarities did you notice between the two stories?” Possible student responses

include that both include ashes (*What does that tell you about Native American habits?*), animals are the main characters (*Why might animals have been used instead of people?*), and that there are distinct feelings associated with animals.

Both stories not only expose children to a different genre of story, but they personify the animals. Such descriptions evoke empathy for the animals that students might not otherwise have. While we continue to work on the remainder of the unit, I will make a book display featuring nonfiction animal texts and folklore/folktales. Students can continue to explore varying texts while focusing on the endangered animals of Delaware.

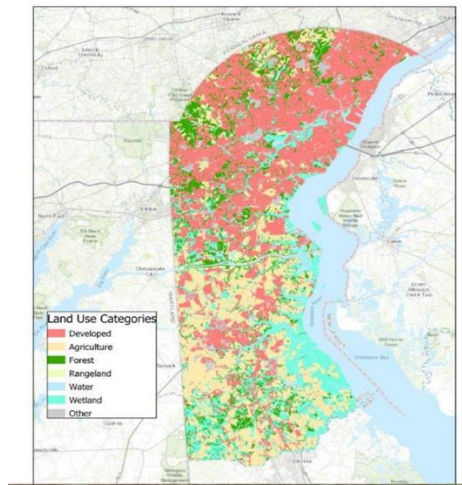
In addition to Native American folklore, students will have read “Night of the Spadefoot Toads” by Bill Harley prior to starting the unit. Using the context as a model, we will talk about how the main character, Mrs. Tibbets, was being forced to sell her home for a new and more profitable housing development. Students will be challenged to discuss the possible pros of a housing development (for example, more housing for a growing population, builders/electricians/plumbers/etc. are employed and make money) and possible cons (i.e. animals losing their homes, cutting down of trees, Mrs. Tibbets becoming homeless). In the story, eventually Mrs. Tibbets and Ben were able to save the spadefoots by getting her land designated as home to an Endangered Species. Students could be posed questions such as *What was unique about the land surrounding Mrs. Tibbets home? Describe the habits of Spadefoot Toads., Why are spadefoot toads endangered? What are the pros for building a housing development on Mrs. Tibbet’s land? What are the cons for building a housing development on Mrs. Tibbet’s land? , Why was Mrs. Tibbet’s land spared from development? Does Delaware have endangered species like the text? How can we find out if Delaware (or X state) has endangered animals? How can we protect endangered animals here in Delaware? and Who might we contact to learn about protecting endangered, local animals?*

In the following class periods, students will watch the video “Environmental Change” on [www.flowcabulary.com](http://www.flowcabulary.com). The video focuses on causes and subsequent changes in the environment including habitat loss. Next, students will research the land of Delaware by examining maps. The maps will feature very basic topography, landforms, and water. After gaining a basic of the geography of Delaware, students will be presented with a 2012 map of land use for New Castle County, Delaware.



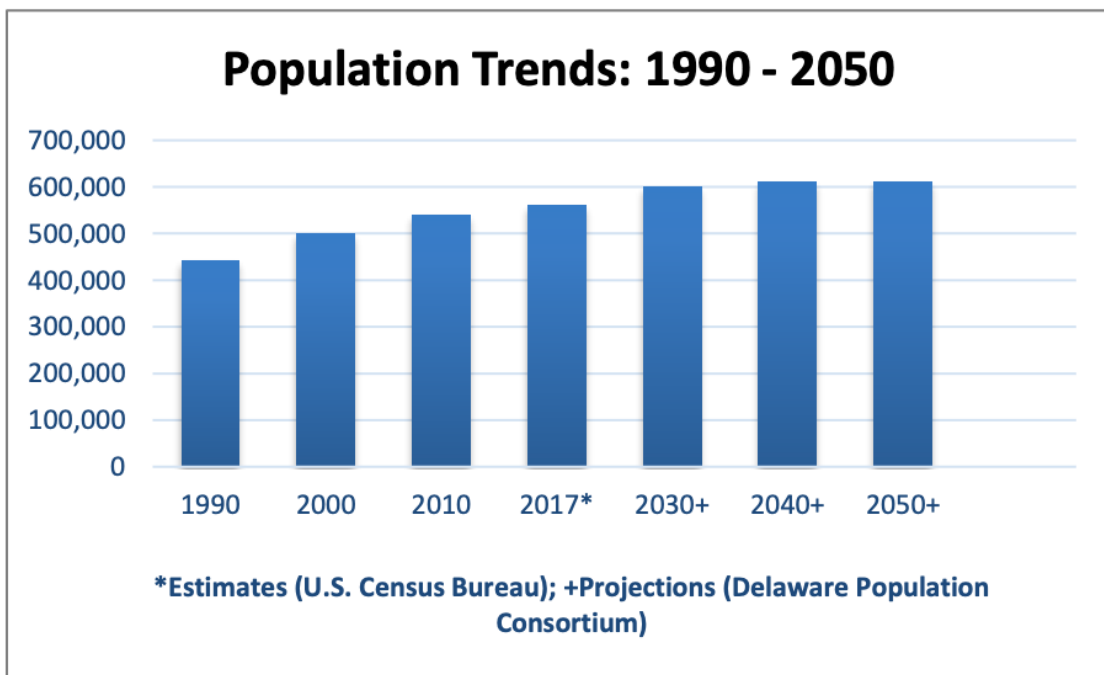
Courtesy of [The U.S. Geological Survey](#)

Land Use / Land Cover, New Castle County  
 Source: State of Delaware, 2012



Using an “I Notice/I Wonder” graphic organizer, students will be asked to jot down notes about the provided maps. As a t-chart, this graphic organizer challenges students to write down statements about the maps on the left column. Entry point statements could include “I see 2 colors” or “It’s a map of Delaware.” Whereas students with more geographical awareness could add more detailed and descriptive statements. On the right-hand side, students will list questions that they still have. These questions we will seek to answer through examining the map and as a class. Possible prompts for Graphic Organizer include telling students to describe the geography of most of Delaware, asking them why there are only two colors, challenging them to think of when more colors could be added, and/or posing questions such as *Will Delaware’s geography ever change? What is most of the land in New Castle County used for? What land use is represented the least? Does anything surprise you?*

Next, we will use class discussion to identify developed land and to make inferences about the habitats of animals. Students will examine a graph titled “Population Trends 1990-2050” presented by the US Census Bureau and a “Delaware Forest Extent” graph created by Lister and Pugh (2014), Oswald (2014), and the Delaware Forest Service (2010).



This graph shows Delaware Population Trends from 1990-2050. While this is a great resource to show steady increments in growth, it should be noted that the state’s population has actually been more explosive, with close to 1 million (approximately



970,000) people in 2020. Discussing with students why this graph shows land conservation is crucial and how the increased population affects land use would be a valuable discussion.

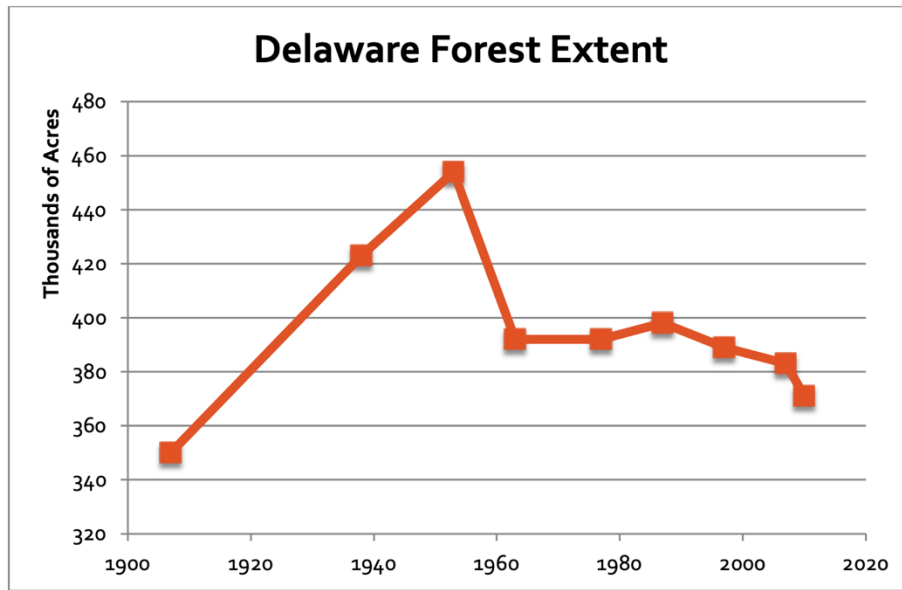


Figure 2. 7 Changes in Forest Acreage in Delaware since 1907. Sources: Lister and Pugh (2014), Oswald (2014), Delaware Forest Service (2010)

This line graph shows the changing acreage of forests in Delaware from 1900-2020. It is important for students to note the increases, sudden decreases, and gradual decreases. Can they come up with possible explanations? How could this downward trend impact us, as well as the plants/animals in Delaware?

At this point, I will question my students and ask them to provide evidence from the text, independent readings, selected readings, or presented graphs to support each statement. Statements could include *Which resource supports the statement that there is limited forest land in Delaware?* with the follow-up questions of *If not forests, what category does most New Castle County land fall under (wetland, rangeland, agriculture, or developed)?* Another possible question is *“Describe the trends in the population of Delaware. What, if any, impact might that have on Delaware land use?* I can pose follow-up questions like *How might this affect the animals in the area?* and *Can you think of any possible solutions to the inevitable housing needs in the next 30 years?* Examination of these resources will allow for students to visualize the land use of Delaware and predict how a growing population might change that land in the coming years.

After students have some grasp on land use and population trends in Delaware, we will begin to research the animals that are losing their habitats in Delaware such as the Delmarva Fox Squirrel, mud salamander, Broad-Winged Hawk, Green Sea Turtle, Little Brown Bat, and more. As a class, we will watch the “Extinct and Endangered Species” video on the Brain Pop Jr site. Students will be asked to read grade-level appropriate texts with information about each animal and answer comprehension questions to demonstrate understanding. In addition, they will be given graphic organizers to research the Delmarva Fox Squirrel and mud salamander independently. The graphic organizer can be a generic research one or teachers can create a unique one that features sections for Animal Name, Habitat, Diet, and Endangerment. They are invited to research other animals independently if they would like to.

Once student research is complete, students will choose a way to present the research that they collected. Students will have the option of creating a Google Slides or PowerPoint presentation using both information and appropriate graphics, writing an informational essay, or writing and publishing a book tailored to elementary children. All students will present their information, which addresses CCSS.ELA-LITERACY.SL.5.2. In that standard, students will present learned information in varied formats. Also addressed is CCSS.ELA-LITERACY.SL.5.4 as students report out information while speaking clearly.<sup>12</sup> The Google Slides and/or PowerPoint presentations will also feature graphics that address CCSS.ELA-LITERACY.SL.5.5 (use of multimedia components), while the report and elementary books focus more on writing and the standard CCSS.ELA-LITERACY.W.5.2 and its’ related strands 5.2A, 5.2B, 5.2C, and 5.2D.

After students have presented their information, I want to focus our efforts on writing in a whole-group conclusion. In this assignment, students will hone their letter writing skills when addressing a Delaware leader. Students will be asked to choose from writing to members of the DNREC/DEWAP Oversight team thanking them for their efforts and/or seeking ways to get involved or members of Delaware’s State Legislature persuading them to stop unnecessary development, to pass legislation protecting Delaware animals, and/or to inform them about the problems facing Delaware wildlife.

While I know students will be engaged in the content, I think that adding in Speaking and Listening Standards, as well as Writing Standards help keep the unit aligned with the expectation of the 5<sup>th</sup> grade standards.

## **Bibliography**

Blue Jay and Lizard and the Grizzly-Bears. (n.d.). Retrieved December 09, 2020, from [https://www.firstpeople.us/FP-Html-Legends/Blue\\_Jay\\_And\\_Lizard\\_And\\_The\\_Grizzly-Bears-Achomawi.html](https://www.firstpeople.us/FP-Html-Legends/Blue_Jay_And_Lizard_And_The_Grizzly-Bears-Achomawi.html)

This story was found among a collection of other Native American tales. Many are

available for students to read and gain an understanding of how the relationship between Native Americans and their environment was so special.

Delaware Forest Service (n.d.) Retrieved December 09, 2020, from

<https://agriculture.delaware.gov/forest-service/>

Too often, it's hard to find resources tailored to the state. However, the Delaware Forest Service provides wonderful and easy-to-understand information that would be nearly impossible to collect on one's own (i.e. forested land, historical data).

Delaware Land Use (2012). <https://www.newcastlede.gov/174/Land-Use>

This map shows the public how land is used in New Castle County, Delaware. It is a colorful graphic that is easy to grasp even for elementary students.

Delaware Wildlife Action Plan. (n.d.). Retrieved December 09, 2020, from

<https://dnrec.alpha.delaware.gov/fish-wildlife/conservation/wildlife-action-plan/>

Delaware's Wildlife Action Plan is a detailed plan on animals and plants in the First State. The information specific to Delaware is fascinating and valuable to readers of any age.

Division of Fish and Wildlife. (n.d.). Retrieved December 09, 2020, from

<https://dnrec.alpha.delaware.gov/fish-wildlife/>

The Division of Fish and Wildlife provides an exhaustive list of animals that live in Delaware. Despite being a Delaware native, even I did not know that some species are present in the small coastal state.

Harley, B. (2012). *Night of the spadefoot toads*. Atlanta: Peachtree.

A well-written book, *Night of the spadefoot toads*, takes the reader through the start of a new school year for Ben. Set in Massachusetts, and appropriate for upper elementary or middle school readers, the story examines the relationships and interactions between people and animals in a habitat.

McCorkle, et. Al (2006). *Delaware's Wildlife Species of Greatest Conservation Need*.

In this resource, animals are helpfully categorized by conservation need. The tiered approach to grouping animals indicates whether the animal is doing well, in need of support, dying off, or making a comeback.

Mitchell, Joni (1970). *Big Yellow Taxi*, record.

This song is a classic. It is eerie that a song written 50 years ago can transcend time. How have humans not been able to curb their actions? What can we do to solve this problem? People from any generation can relate to the lyrics.

Next Generation Science Standards. (2020, December 03). Retrieved December 09, 2020, from <https://www.nextgenscience.org/>

The NGSS were created to engage students in rigorous academics. For over a decade now, they have been challenging students K-12 by outlining expected proficiency measures at each grade level.

NCCo@2050 (2013), <https://www.nccde.org/350/Comprehensive-Plan>

When beginning my research, I stumbled upon this document. With so much development obvious in New Castle County, this document is reassuring in that so many have been working on a plan to curb unnecessary development and protect our state's precious resources.

Old Man and the Roasted Squirrels (n.d.). Retrieved December 09, 2020 from

[http://www.turtletrack.org/IssueHistory/Issues15/CO05\\_2015/CO\\_0515\\_Story\\_Roasted\\_Squirrels.htm](http://www.turtletrack.org/IssueHistory/Issues15/CO05_2015/CO_0515_Story_Roasted_Squirrels.htm)

Like the other Native American tales featured in this unit, "Old Man and the Roasted Squirrels" highlights the unique, yet profound, relationship that Native Americans have with their land and the animals that inhabit it.

Preparing America's students for success. (n.d.). Retrieved December 09, 2020, from

<http://www.corestandards.org/>

Standards for elementary students to keep the content and instruction aligned.

Social Studies / Standards for Social Studies. (n.d.). Retrieved December 09, 2020, from

<https://www.doe.k12.de.us/Page/2548>

Delaware has a set of Social Studies Standards unique to the needs of students in the state. Grouped by Civics, Economics, History, and Geography, the standards are easy to understand and navigate.

Tiner et. al. (1985). *Wetlands of Delaware*, US Fish and Wildlife Service.

This resource was valuable, as much of the land in the state is wetlands. Nestled on a peninsula between the Chesapeake Bay, Delaware Bay, Delaware River, and Atlantic Ocean, this resource gives the reader a good idea of the land found in Delaware.

Vaughn, Gerald (1962). *Land use in Delaware*, Newark, Del.: University of Delaware, Division of Urban Affairs.

Like other land use resources, this book was written to help the reader understand how Delaware's land has changed throughout the years from farming and agriculture to developed land for building homes and businesses.

## **Appendix A**

## Standards Addressed in the Unit-

### ELA

CCSS.ELA-LITERACY.RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

CCSS.ELA-LITERACY.RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

CCSS.ELA-LITERACY.RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

CCSS.ELA-LITERACY.W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

CCSS.ELA-LITERACY.W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

CCSS.ELA-LITERACY.SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.5.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-LITERACY.SL.5.3 Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

CCSS.ELA-LITERACY.SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

CCSS.ELA-LITERACY.SL.5.5 Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

### Social Studies

Geography Standard 1: Students will demonstrate development of mental maps of Delaware and of the United States which include the relative location and characteristics of major physical features, political divisions, and human settlements.

Geography Standard 2: Students will apply a knowledge of topography, climate, soils, and vegetation of Delaware and the United States to understand how human society / alters, and is affected by, the physical environment.

Geography Standard 3: Students will understand the reasons for the locations of human activities and settlements and the routes connecting them in Delaware and in the United States.

History Standard 2: Students will examine historical materials relating to a particular region, society, or theme; chronologically arrange them, and analyze change over time.

Science

LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

### End Notes

<sup>1</sup> Joni Mitchell, *Big Yellow Taxi*, 1970.

<sup>2</sup> Forest Oak Elementary School Snapshot,

<https://reportcard.doe.k12.de.us/detail.html#aboutpage?scope=school&district=32&school=240>, 2019.

<sup>3</sup> US Census Bureau, <https://www.census.gov/quickfacts/DE>, 2019.

<sup>4</sup> *Delaware's Wildlife Species of Greatest Conservation Need*, (DNREC, 2006).

<sup>5</sup> Delaware Forest Service, <https://agriculture.delaware.gov/forest-service/>, 2020.

<sup>6</sup> NCCo@2050, [newcastle.de.gov/LU](http://newcastle.de.gov/LU), 2012.

<sup>7</sup> US Fish and Wildlife Service, <https://www.fws.gov/endangered/esa-library/pdf/squirrel.pdf>, 2008.

<sup>8</sup> Delaware Fox Squirrel Conservation, <https://dnrec.alpha.delaware.gov/fish-wildlife/conservation/fox-squirrel/>.

<sup>9</sup> Bill Harley, *Night of the Spadefoot Toads*, Peachtree Publishing Inc., 2012.

<sup>10</sup> Common Core State Standards Initiative, <http://www.corestandards.org/>, 2020.

<sup>11</sup> State of Delaware Land Use Map,

<https://opendata.firstmap.delaware.gov/datasets/delaware-2012-land-use-land-cover>, 2012.

<sup>12</sup> United States Census Bureau, <https://www.census.gov/quickfacts/DE>, 2020.

<sup>13</sup> Richard Widman, Delaware Forest Service, *Delaware Forest Extent*,

[https://www.fs.fed.us/ne/newtown\\_square/publications/brochures/pdfs/state\\_forests/de\\_forest.pdf](https://www.fs.fed.us/ne/newtown_square/publications/brochures/pdfs/state_forests/de_forest.pdf)

### Attachments

1. Synopsis
2. Learning Focused Map