

A South Carolina Natural History Primer

by

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Sponsored by the

South Carolina Master Naturalist Program

The online South Carolina Natural History Primer is a course comprised of 36 video lectures, each approximately one-half hour in length, and is intended to give you an introduction to nature with special references to South Carolina. It is different from the South Carolina Master Naturalist Program field courses offered throughout the state by the Cooperative Extension Service at Clemson University. There simply is no substitute for being in the field with fantastic naturalists and fantastic students in fantastic places. This online course is not a substitute for that experience or for that knowledge. Rather, it is an ancillary investigation into basic principles of nature, which can serve as either a precursor or a follow-up to the knowledge one would obtain in a face-to-face SC Master Naturalist Program Course. "A SC Natural History Primer" is an asynchronous course (on your own schedule), entirely online, with no interaction with the instructor.

The course is divided into four sections. Section one lays the foundation for natural history by describing what it is, why it matters, and how science contributes to our knowledge of it. We briefly meet some of the early naturalists from South Carolina and abroad. Since biotic organisms discussed later are largely reacting to abiotic factors, we investigate the geological formation of South Carolina and the five ecological regions spawned by the geology beneath. This includes a look at the rock cycle and the theory of plate tectonics. As part of our local geological investigations, we discuss and travel to (virtually) a Carolina Bay to uncover the various hypotheses surrounding these odd and picturesque features.

As naturalists, much of what we marvel at are the connections between species and their environments. Many times, these connections are adaptations. Therefore, section two starts with a look at how adaptations form in nature through the evolutionary process that spawns the robust number of species we have to enjoy. We get to know an early naturalist named Charles Darwin and examine how his work contributed to our understanding of adaptations. While the evolution of so many species has given us much to admire, this vast diversity also presents a problem. How do we name them all? To answer this, we meet Carolus Linnaeus and uncover the rules and methods involved in the naming of species. Finally, we start to unpack life itself, learning what it takes to become a member of three kingdoms - Bacteria, Protista, and Fungi.

In section three, we begin to unpack the Plant Kingdom, especially the more common phyla within it. Then we make our way into the Animal Kingdom and selected phyla there, learning the characteristics of each group, while examining examples along the way. Because insects

have long dominated this kingdom, we spend more time with them than with others, understanding why they are and long have been so successful.

In section four, we move to the vertebrates in pursuit of species more like our own. This includes a look at fish, amphibians, reptiles, birds, and finally mammals. We take a close look at SC Snakes, mainly because they generate a substantial amount of interest in students.

Each day we start our time with “show and tell,” where I’ll discuss a random finding from the natural world, identifying it and discussing its natural history. When appropriate, we will conclude our day with “story time,” where I’ll mention recommended books related to topics of our daily discussion, in the event you want to further investigate the lecture topics or answer any outstanding questions.

Each of the four sections ends with an optional quiz. The quizzes help to reinforce the knowledge gained in each section. We recommend that you take the quiz the first time without using your notes to see how much information you have retained.

Each week, new lectures will be released on Monday, Wednesday, and Friday. Refer to the syllabus for release dates. On the day of the final lecture release in each of the four sections, an optional quiz will also be released. Your access to the lectures and the quiz in each section will end two weeks after that release (see syllabus). Be sure you have watched all lectures in each section by those access ending dates.

Below is a list of differences between the face-to-face SC Master Naturalist Program and the online South Carolina Natural History Primer.

Face-to-face SC Master Naturalist courses	Online SC Natural History Primer course
Students often begin to acquire skills to identify certain SC species.	Students focus more on identifying patterns found in nature.
Meet lots of really special people and instructors, lots of great exchange.	You meet me, sort of, virtually.
You can ask the instructor questions.	You will need to answer your questions with further study. There is no instructor interaction.
You apply all your senses to learn nature.	You use vision and hearing to learn.
You will take a deep dive into the ecoregion where the course is located.	We take a glimpse at each ecoregion, discussing the patterns that run through each.
Sometimes fast paced, you may feel overwhelmed with info at the end of the day.	You can slow down, take your time, pause video, rewind, and rewrite notes in real time.
Field guides or manuals are frequently used.	No books are used, only video content.