

Answer Key (100-Point Scale)

swampscapes.org

PART I: THE SIGHTS AND SOUNDS OF THE SWAMP

Questions	Answers	Pts
1. What do you picture in your mind when you think of a swamp?	Answers may vary	1
How do scientists define a swamp?	Scientists say it is a “forested wetland.” Swamps are found in low-lying areas	2
2. Using the photographs, make a short list of biotic and abiotic factors found in the Everglades	Answers may vary Biotic Factors: All animals and plants Abiotic Factors: water, air, rock, temperature, etc	2
3. A swamp is a type of <u>ecosystem</u> , where living and non-living things interact with one another.	Answers may vary sawgrass; frog; hawk	2
4. Humans often leave their mark on a swamp, too. Which photographs show human activity in the swamp?	Answers may vary but will include photos of tractors, agriculture, buildings, etc	2
5. Why are swamps important??	c, b, d, a	2

Film 1: Mike Owen

Questions	Answers	Pts
6. What does Mike Owen do for living?	Biologist	2
7. How many ghost orchids have been found since scientists began studying them?	400 in 24 years	2
8. Mike Owen says that <u>diversity</u> is the key to why life on Earth has persisted millions of years. What is <u>biodiversity</u> ?	The many different types of living things on Earth	5

Film 2: Betty Osceola

Questions	Answers	Pts
9. What do the Miccosukee call the Everglades?	Shimmering Water	2
10. Name the 2 types of ways humans have impacted the Everglades in her lifetime.	Raising cattle and agriculture	2

Film 3: Larry Brand

Questions	Answers	Pts
10. Larry Brand studies algal blooms. What is an algal bloom?	When the algae in the water grow too fast and too much, not allowing other living things to live and creating dangerous toxins.	5
12. What causes the algal blooms in the Everglades?	The nitrogen coming from fertilizer used in the sugar cane farms	2
13. What is a federal subsidy?	Money from the government given to a industry or business	2
14. How much does the US Government give the sugar farmers annually?	2-3 billion dollars/year	2

Film 4: Reverend Houston R. Cypress

Questions	Answers	Pts
15. A famous saying says, "You are not apart from nature, you are <u>a part</u> of nature." What does Houston Cypress say that aligns with this way of thinking?	He says we drink the water from the Everglades and we are mostly water so we are made of Everglades!	2
16. Houston Cypress mentions Everglades Restoration. What human-made disruptions are we trying to correct with Everglades Restoration?	The reduction in the natural water flow has increased the salinity of the Everglades' water.	2

Film 5: Win Everham

Questions	Answers	Pts
17. Scientists know that there have been many changes in the Earth's average global temperatures in the past. Win Everham mentions that humans are "changing the pace of things" in nature. Do you think we are slowing down or speeding up the pace of change in global climate patterns?	Speeding up	2

Film 6: Donna Molfetto

Questions	Answers	Pts
18. Donna studies the nesting behavior of red-shouldered hawks. What is Donna trying to learn?	How the red-shouldered hawks are adapting to human activity.	2
19. You are a reporter for an online nature blog. You are instructed to interview one of the 6 people featured in the SwampScapes films. Who do you would you like to interview the most? Why?	Answers will vary.	2

Swamp Symphony

Let's listen to some of the sounds of the swamp. Go to <http://www.swampscapes.org/guides.html>

You have met the six different people featured in these short films. For two of the films, click on 360° Landscape button to the right of the film's description.

Questions	Answers	Pts
20. What animals do you hear?	Answers may vary	1
21. What non-living things can you hear?	Breeze, water	1
22. What is your favorite sound?	Answers may vary	1
23. Which sound surprised you the most?	Answers may vary	1
24. Using your phone or other recording device, step outside wherever you are now and record what you hear for 20 seconds.	Answers may vary, but should be in the correct categories, natural sounds vs sounds created by human technology	10

PART 2: EVOLUTION AND CLIMATE CHANGE

Questions	Answers	Pts
Time stamp 0:23 25. What similar traits do the members of the species have? What different traits do the members of the species have?	They all look like rocks. They have different colors and textures.	1
Time Stamp 0:46 26. Which members of the species are more vulnerable to the predator?	The ones that do not blend into the environment, the brightly-colored ones.	1
27. Which members of the species are more likely to survive?	The ones with camouflage that look more like the rocks	1
28. Can you predict what the population will look like over time?	More like the ones that survive, the beige, rock-looking ones.	1
Time Stamp 0:52 29. Can you describe natural selection?	Natural Selection is the process that leads to the build-up of favorable characteristics in a species over time, because individuals with favorable traits survive to reproduce.	4
30. What is adaptation?	The way a population changes over time to suit its environment. REMEMBER: Individuals do not change over time, the population does.	4
Time Stamp 1:33 31. What will happen to the green individuals in this sandy environment? What if the environment changes and gets greener?	They will be eaten by the predator. They will blend in and NOT be eaten by the predator.	1
Time stamp 1:49 32. How does variation play a role in species survival?	It gives the population a chance to survive when there are changes in the environment.	4
33. What do you think is causing sea level rise?	When we burn <u>fossil fuels</u> for energy, <u>carbon dioxide</u> is released into the air. Carbon dioxide is good at trapping heat, so our atmosphere is heating up. This is <u>global warming</u> . It is <u>melting</u> the glaciers and polar ice caps. It is also heating the ocean and things expand when they heat up. This is why we have <u>sea level rise</u> .	8
34. Somebody says to you, "What's the big deal? There have always been natural climate changes on Earth." What would you say back (Hint: You can start with, "Of course there have always been changes, but...")?	Of course there have always been changes, but those changes were gradual, giving some species a chance to adapt to the new environments. This time, instead of happening over thousands of years, it's happening in a couple of hundred years. It is happening TOO FAST for species to adapt.	8
35. Now try this one, "Humans and animals breathe out carbon dioxide, are we causing climate change?"	Carbon dioxide is a natural part of the Earth's atmosphere. It keeps our planet at an average temperature that is good for living things. But we adding to this carbon dioxide level, by taking fossil fuels from underground and burning them.	8