

9th-12th Grade Scavenger Hunt Answer* Key

Chesapeake Bay

1. Though large, the Chesapeake Bay is not a very deep body of water. Its average depth is only 21 feet. How can its shallow depths be so important to its large variety of species and richness?
Where sunlight reaches the bottom, aquatic plants thrive, keeping the ecosystem healthy by providing oxygen, food, and shelter for the Bay's diverse inhabitants.
2. What changes in climate can affect the Bay in a negative way?
Changes in temperature, salinity, shifts in the wind, pollution, and sediment can hurt the Bay.
3. How can planting a tree help the Bay?
Trees and other vegetation reduce erosion with leaves that slow rainfall and roots that anchor soil. They also absorb and use excess nutrients that can throw the Bay off balance.
4. What is an invasive species? Give at least 2 examples found in the Bay? What can you do to help?
An invasive species is a plant or animal that is not native and competes with native plants and wildlife for resources and reduces diversity in the watershed's ecosystem. Examples: mute swans, purple loosestrife, and phragmites.
5. How can development in your neighborhood affect the Bay? Development usually requires extensive digging and clearing of vegetation. Without plant cover, bare earth erodes quickly and can wash into the waterways. This clogs streams, clouds water, and carries contaminants to the Bay.

Changing Lives Changing Landscapes

1. List three things that you learned (various responses)
 - a. "Chesapeake" is derived from the Algonquian for "Great Shellfish Bay."
 - b. Fields were exhausted within 3 years by tobacco, so settlers cleared more forests to make room for more fields
 - c. MD's grain helped feed Britain and France during war in the late 1700's
2. List two things that you found interesting (various responses)
 - a. Bran was considered "waste." Now, it's what people want to eat.
 - b. An Archimedes Screw was used to propel flour to the next bucket in a mill
3. List one thing that you would like to know more about (various responses)
 - a. The archaeology site at the mill

Life of the Forest

Summer

1. Which insect is the most nutritious? The grasshopper is very nutritious, followed closely by the field cricket.
2. How does summer sunlight support every living thing in the forest?
Sunlight powers the food web.

Fall

1. Fall means dropping temperatures and dwindling daylight. What do animals do to adapt? **Migration, stock up stores of food, preparing shelters.**
2. Find the gray squirrel. What kind of tree is he on? **Sycamore tree.** What other things can you spot? (*potential answers could include the following answers or others that aren't listed.) **Black rat snake, red bat, raccoon, pawpaw fruit, poison ivy berries, etc...**

Winter

1. How have evergreen trees adapted to survive winter?
Small surface area, waxy cuticles, and sunken stomata reduce water loss.
2. Find the eastern bluebird, downy woodpecker and cedar waxwing in the tree. Why do you think poison ivy is so popular with these birds? **The berries of the poison ivy are edible and abundant in the winter time.**

The Forest Before You

1. Use the binoculars to find something in the forest. What do you see? (*potential answers could include the following answers or others that aren't listed.) **Poison ivy vines, a stream, woodpecker holes, fallen trees...**
2. Why aren't all forests filled with mature trees? What kinds of animals live here?
Disturbances like fires or floods can reset the process of succession. (*potential answers could include the following answers or others that aren't listed.) **Deer, foxes, beavers, and birds live in this second growth forest.**

Spring

1. What change does the American Goldfinch undergo from winter to spring? **The male Goldfinch sheds a dull tan plumage for gold.**
2. What "gets spring going?" **Ample moisture, increasing light energy, rising temperatures trigger changes in vegetation.**

The Forest Floor

1. List three things that you learned (various responses)
 - a. **If animals did not die and decompose, there would be no new life.**
 - b. **Some caterpillars depend on specific plants, like the Monarch needing the milkweed plant.**
 - c. **Owls eat frogs.**
2. List two things that you found interesting (various responses)
 - a. **Pollinators are responsible for 1 out of every 3 bites of food you eat.**
 - b. **Invasive species plants are typically ornamental and pretty.**
3. List one thing that you would like to know more about (various responses)
 - a. **How animals can see with night vision.**