Cumberland River Compact Virtual Learning Program Standards

These are the most common grades and standards the programs address. We can adjust the program emphasis depending on the specific content a teacher would like us to touch on (i.e. more focus on the water cycle, or energy pyramids, etc)

Virtual Creek Critters

2nd Grade
2.LS1.1: Use evidence and observations to explain that many animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air.
2.LS1.2 Obtain and communicate information to classify animals (vertebrates-mammals, birds, amphibians, reptiles, fish, invertebrates-insects) based on their physical characteristics
2.LS1.3: Use simple graphical representations to show that species have unique and diverse life cycles.
2.LS2.2: Predict what happens to animals when the environment changes (temperature, cutting down trees, wildfires, pollution, salinity, drought, land preservation).

3rd Grade
3.ESS2.1: Explain the cycle of water on Earth.
3.LS4.2: Infer that plant and animal adaptations help them survive in land and aquatic biomes.
3.LS4.3 Explain how changes to an environment's biodiversity influence human resources

4th Grade
4.LS2.2: Develop models of terrestrial and aquatic food chains to describe the movement of energy among producers, herbivores, carnivores, omnivores, and decomposers.
4.LS2.3: Using information about the roles of organisms (producers, consumers, decomposer), evaluate how those roles in food chains are interconnected in a food web, and communicate how the organisms are continuously able to meet their needs in a stable food web.
4.LS2.4: Develop and use models to determine the effects of introducing a species to, or remove a species from, an ecosystem and how either one can damage the balance of the ecosystem.
4.LS2.5: Analyze and interpret data about changes (land characteristics, water distribution, temperature, food, and other organisms) in the environment and describe what mechanisms organism can use to affect their ability to survive and reproduce.
4.ESS3.2: Create an argument, using evidence from research, that human activity (farming, mining, building) can affect the land and ocean in positive and/or negative ways.

6th Grade
6.LS2.2: Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem.

6.LS2.3: Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem.
6.ESS3.3 Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction.

Virtual Pollution in our Water

2nd Grade
2.ESS2.2: Observe and analyze how blowing wind and flowing water can move Earth materials (soil, rocks) from one place to another, changing the shape of a landform and affecting the habitats of living things.
2.ESS2.4: Use information obtained from reliable sources to explain that water is found in the ocean, rivers, streams, lakes, and ponds, and may be solid or liquid.
2.LS2.2: Predict what happens to animals when the environment changes (temperature, cutting down trees, wildfires, pollution, salinity, drought, land preservation).

3rd Grade
3.ESS2.1: Explain the cycle of water on Earth.

4th Grade
4.ESS3.2: Create an argument, using evidence from research, that human activity (farming, mining, building) can affect the land and ocean in positive and/or negative ways.

6th Grade
6.ESS2.4: Apply scientific principles to design a method to analyze and interpret the impact of humans and other organisms on the hydrologic cycle.
6.ESS3.3: Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction.

Get to Know Trees

1st Grade
1.LS1.1: Recognize the structure of plants (roots, stems, leaves, flowers, fruits) and describe the function of the parts (taking in water and air, producing food, making new plants).
1.LS2.1: Conduct an experiment to show how plants depend on air, water, minerals from soil, and light to grow and thrive

2nd Grade
2.LS2.2: Predict what happens to animals when the environment changes (temperature, cutting down trees, wildfires, pollution, salinity, drought, land preservation).

3rd Grade
3.LS1.1: Analyze the internal and external structures that aquatic and land animals and plants have to support survival, growth, behavior, and reproduction.
3.LS4.2: Infer that plant and animal adaptations help them survive in land and aquatic biomes

4th Grade
4.LS2.1: Support an argument with evidence that plants get the materials they need for growth and reproduction chiefly through a process in which they use carbon dioxide from the air, water, and energy from the sun to produce sugars, plant materials, and waste (oxygen); and that this process is called photosynthesis.

Career Chats / General Presentations
This is a very flexible program! We typically present this to Environmental Science or STEM classes that are looking at the local waters and/or careers.

ECO.ETS2.2: Research and communicate information on a career in ecology. Analyze the role of engineering, technology, and science in that career.
EVSC.ETS2.2: Research and communicate information on an environmental science career. Analyze the role of society, engineering, technology, and science in that career.