

STEVE TRASH SCIENCE

SEASON ONE

Correlation Guide for Teachers

Welcome to Steve Trash Science! This correlation guide will assist you as you plan your lessons for elementary students. This guide refers to the 2015 Alabama Course of Study: Science, the 2010 Alabama Course of Study: Social Studies, and the 2018 Alabama Course of Study: Digital Literacy and Computer Science.

These episodes help provide the content needed for students to master the standards listed. Additionally, students of all grades will enjoy the videos, which can be used to extend and enrich interdisciplinary learning.

We hope you find the videos and this correlation guide useful.

Episode Theme	COS: Science	COS: Digital Literacy and Computer Science	COS: Social Studies
Messy Babies and Pollinators	Grade 2 6. Design and construct models to simulate how animals disperse seeds or pollinate plants (e.g., animals brushing fur against seed pods and seeds falling off in other areas, birds and bees extracting nectar from flowers and transferring pollen from one plant to another). Grade 3 5. Obtain and combine information to describe that organisms are classified as living things, rather than nonliving things, based on their ability to obtain and use		

	resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.		
Your Big Fat Digital Footprint		<p>Grade 2 5. Cite media and/or owners of digital content at an age-appropriate level.</p> <p>Grade 3 16. Conduct basic keyword searches to produce valid, appropriate results, and evaluate results for accuracy, relevance, and appropriateness.</p> <p>Grade 4 Recurring Standard 1. Identify, demonstrate, and apply personal safe use of digital devices. Recurring Standard 2. Recognize and demonstrate age-appropriate responsible use of digital devices and resources as outlined in school/district rules.</p>	
Who Let the Cows Out			<p>Grade 2. 10. Identify ways people throughout the country are affected by their human and physical environments.</p> <p>Grade 4 16. Determine the impact of population growth on cities, major road systems, demographics, natural resources, and the natural</p>

			environment of Alabama during the late twentieth and early twenty-first centuries.
War of the Words		<p>Grade 4</p> <p>16. Gather and organize data to answer a question using a variety of computing and data visualization methods.</p> <p>18. Create a simple digital model of a system, individually and collaboratively, and explain what the model shows and does not show.</p> <p>19. Use data from a simulation to answer a question collaboratively.</p>	
The Super Collaborators		<p>Grade 3</p> <p>15. Describe local, networked, and online or cloud environments.</p> <p>Grade 4</p> <p>12. Use basic features of digital tools to communicate key ideas and details in a way that informs and/or persuades.</p> <p>Grade 5</p> <p>20. Collaborate locally and globally using online digital tools under teacher supervision.</p>	
Sun Sun Sun Here It Comes	<p>Grade 4</p> <p>5. Compile information to describe how the use of energy derived from natural renewable and nonrenewable resources affects the environment (e.g., constructing dams to harness energy from</p>		

	<p>water, a renewable resource, while causing a loss of animal habitats; burning of fossil fuels, a nonrenewable resource, while causing an increase in air pollution; installing solar panels to harness energy from the sun, a renewable resource, while requiring specialized materials that necessitate mining).</p> <p>Grade 5 10. Construct and interpret models (e.g., diagrams, flow charts) to explain that energy in animals' food is used for body repair, growth, motion, and maintenance of body warmth and was once energy from the sun.</p>		
<p>Reduce Reuse Recycle</p>			<p>Grade 3 7. Describe the relationship between locations of resources and patterns of population distribution.</p> <ul style="list-style-type: none"> • Explaining the geographic impact of using petroleum, coal, nuclear power, and solar power as major energy sources in the twenty-first century. <p>Grade 4 16. Determine the impact of population growth on cities, major road systems, demographics, natural resources, and the natural environment of Alabama during the</p>

			late twentieth and early twenty-first centuries.
Soil – The Dirty Filthy Disgusting Messy Truth	<p>Grade 3 11. Construct an argument from evidence to explain the likelihood of an organism’s ability to survive when compared to the resources in a certain habitat (e.g., freshwater organisms survive well, less well, or not at all in saltwater; desert organisms survive well, less well, or not at all in woodlands).</p> <p>Grade 4 13. Plan and carry out investigations to examine properties of soils and soil types (e.g., color, texture, capacity to retain water, ability to support growth of plants).</p>		
Earth is Wicked Awesome	<p>Grade 1 8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky (e.g., sun and moon appearing to rise in one part of the sky, move across the sky, and set; stars other than our sun being visible at night, but not during the day).</p> <p>Grade 5 12. Defend the claim that one factor determining the apparent brightness of the sun compared to other stars is the relative distance from Earth.</p>		

	<p>Grade 6</p> <p>2. Construct models and use simulations (e.g., diagrams of the relationship between Earth and manmade satellites, rocket launch, International Space Station, elliptical orbits, black holes, life cycles of stars, orbital periods of objects within the solar system, astronomical units and light years) to explain the role of gravity in affecting the motions of celestial bodies (e.g., planets, moons, comets, asteroids, meteors) within galaxies and the solar system.</p>		
Biome Sweet Biome	<p>Grade 2</p> <p>7. Obtain information from literature and other media to illustrate that there are many different kinds of living things and that they exist in different places on land and in water (e.g., woodland, tundra, desert, rainforest, ocean, river).</p>		
Water Water Water Cycle	<p>Grade 2</p> <p>10. Collect and evaluate data to identify water found on Earth and determine whether it is a solid or a liquid (e.g., glaciers as solid forms of water; oceans, lakes, rivers, streams as liquid forms of water).</p> <p>Grade 5</p> <p>14. Use a model to represent how any two systems, specifically the atmosphere, biosphere,</p>		

	<p>geosphere, and/or hydrosphere, interact and support life (e.g., influence of the ocean on ecosystems, landform shape, and climate; influence of the atmosphere on landforms and ecosystems through weather and climate; influence of mountain ranges on winds and clouds in the atmosphere).</p>		
<p>Oh Yuck . . . Pollution</p>	<p>Grade 4 5. Compile information to describe how the use of energy derived from natural renewable and nonrenewable resources affects the environment (e.g., constructing dams to harness energy from water, a renewable resource, while causing a loss of animal habitats; burning of fossil fuels, a nonrenewable resource, while causing an increase in air pollution; installing solar panels to harness energy from the sun, a renewable resource, while requiring specialized materials that necessitate mining).</p> <p>Grade 5 16. Collect and organize scientific ideas that individuals and communities can use to protect Earth's natural resources and its environment (e.g., terracing land to prevent soil erosion, utilizing no-till farming to improve soil fertility,</p>		

	regulating emissions from factories and automobiles to reduce air pollution, recycling to reduce overuse of landfill areas).		
Rock Paper Scissors		Grade 4 2. Formulate a list of sub-problems to consider while addressing a larger problem. 5. Use flowcharts to create a plan or algorithm. 7. Create a working program in a block-based visual programming environment using arithmetic operators, conditionals, and repetition in programs, in collaboration with others.	
Ecosystems	Grade 2 7. Obtain information from literature and other media to illustrate that there are many different kinds of living things and that they exist in different places on land and in water (e.g., woodland, tundra, desert, rainforest, ocean, river). Grade 5 11. Create a model to illustrate the transfer of matter among producers; consumers, including scavengers and decomposers; and the environment.		
Wild Wild Life	Grade 3 11. Construct an argument from evidence to explain the likelihood of an organism's ability to survive when compared to the resources in		

	a certain habitat (e.g., freshwater organisms survive well, less well, or not at all in saltwater; desert organisms survive well, less well, or not at all in woodlands).		
Robots Rock		Grade 3 5. Create an algorithm to solve a problem as a collaborative team. Examples: Move a character/robot/person through a maze.	
Rock Guitars and Wicked Waves of Sound	Grade 1 1. Conduct experiments to provide evidence that vibrations of matter can create sound (e.g., striking a tuning fork, plucking a guitar string) and sound can make matter vibrate (e.g., holding a piece of paper near a sound system speaker, touching your throat while speaking). Grade 4 6. Develop a model of waves to describe patterns in terms of amplitude and wavelength, and including that waves can cause objects to move. 8. Construct a model to explain that an object can be seen when light reflected from its surface enters the eyes.		
Teeny Weeny to Monstrously Huge (Plants)	Grade 3 5. Obtain and combine information to describe that organisms are classified as living things, rather than nonliving things, based on		

	<p>their ability to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.</p> <p>Grade 4 9. Examine evidence to support an argument that the internal and external structures of plants (e.g., thorns, leaves, stems, roots, colored petals, xylem, phloem) and animals (e.g., heart, stomach, lung, brain, skin) function to support survival, growth, behavior, and reproduction.</p>		
<p>Birds Are Just Awesome</p>	<p>Grade 3 5. Obtain and combine information to describe that organisms are classified as living things, rather than nonliving things, based on their ability to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment. 10. Investigate how variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing (e.g., plants having larger thorns being less likely to be eaten by predators, animals having better camouflage coloration being more likely to survive and bear offspring).</p>		

The Big-Match-Up			Grade 3 7. Describe the relationship between locations of resources and patterns of population distribution. c) Explaining the geographic impact of using petroleum, coal, nuclear power, and solar power as major energy sources in the twenty-first century.