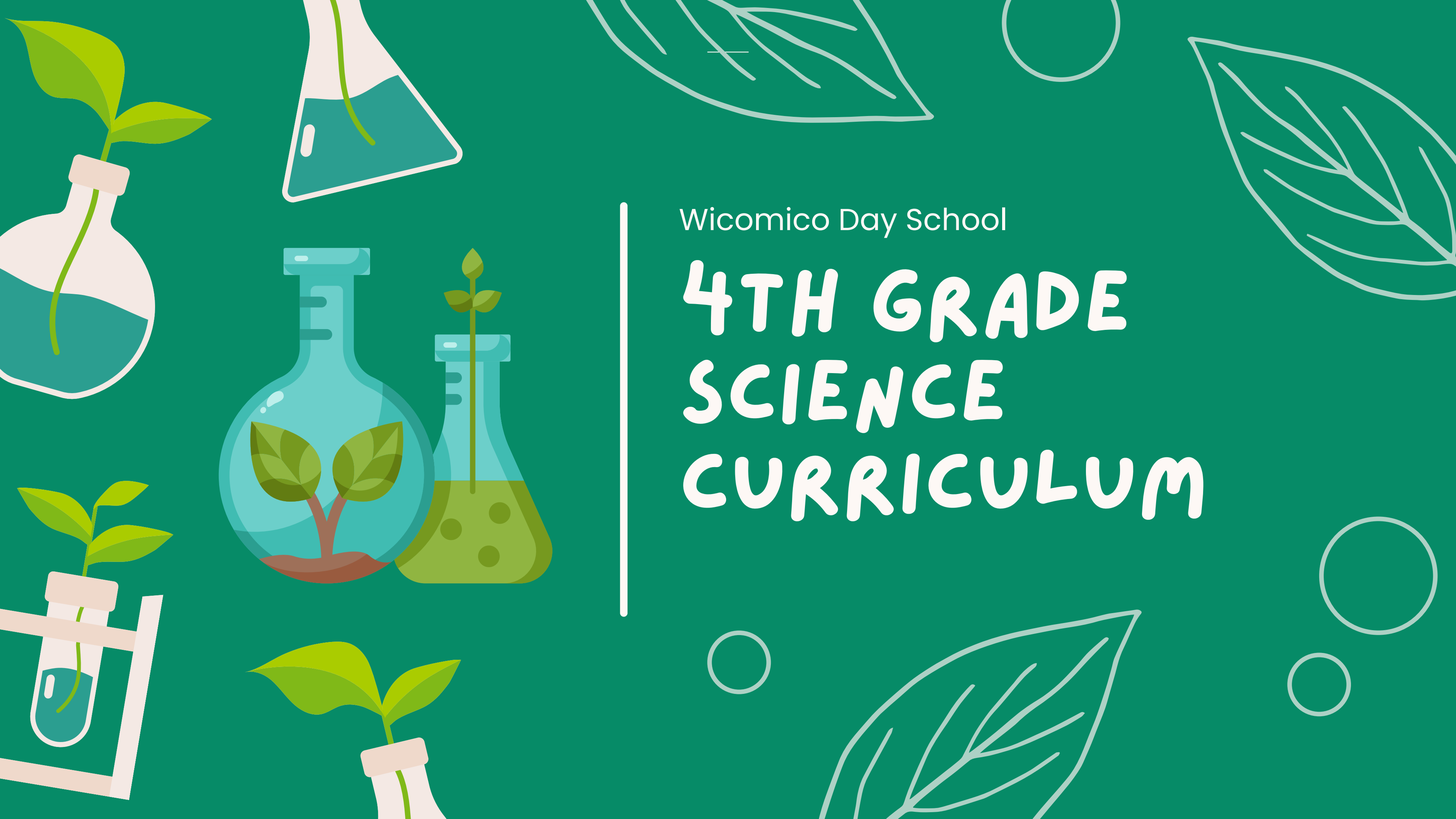




Wicomico Day School

4TH GRADE SCIENCE CURRICULUM



EXPLORING THE CHARACTERISTICS OF CELLS

- Identifying biology as the study of life.
 - Identifying characteristics of organisms.
 - Identifying a cell as the smallest unit of an organism
 - Using a microscope to observe a specimen
 - Identifying parts of a microscope
 - Using a microscope to observe a cheek cell
 - Identifying the nucleus of a cheek cell
 - Describing the functions of structures in animal cells
 - Describing the functions of structures in plant cells
 - Describing fungus cells
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EXPLORING THE CHARACTERISTICS OF CELLS

- Comparing and contrasting animal, plant, and fungus cells
 - Identifying characteristics of eukaryotic cells
 - Identifying organisms with eukaryotic cells
 - Using a microscope to observe protists
 - Identifying characteristics of prokaryotic cells
 - Identifying organisms with prokaryotic cells
 - Classifying organisms as single-celled or multi-celled
 - Classifying organisms into domains
 - Identifying kingdoms of eukaryotes
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EXAMINING AND CLASSIFYING PLANTS



- Describing the function of vascular tissues
- Identifying vascular and nonvascular plants
- Describing how plants make their own food through the process of photosynthesis
- Describing ways plants reproduce
- Conducting a one-variable experiment
- Identifying the steps in the scientific method
- Describing gymnosperms; Describing leaves of gymnosperms
- Using a resource book to locate information about gymnosperms
- Describing the life cycle of gymnosperms
- Describing angiosperms
- Describing the structure and function of flowers
- Describing seed development in angiosperms
- Describing the life cycle of angiosperms; Describing leaves of angiosperms
- Using a dichotomous key to identify trees





INVESTIGATING CHARACTERISTICS OF ANIMALS

- Identifying vertebrates and invertebrates
 - Identifying characteristics of vertebrates; Classifying vertebrates
 - Identifying characteristics of classes of vertebrates
 - Describing the life cycles of vertebrates
 - Identifying animals that are invertebrates
 - Identifying and describing annelids, cnidarians, and echinoderms
 - Identifying and describing mollusks
 - Identifying characteristics of arthropods
 - Identifying characteristics of insects
 - Describing the metamorphosis of insects
 - Observing the larva of an insect
 - Identifying characteristics of arachnids and other arthropods
 - Classifying animals according to what they eatn. Describing how animals obtain energy
- 



EXAMINING ECOSYSTEMS



- Identifying characteristics of ecosystems
- Describing producers, consumers, and decomposers in an ecosystem
- Identifying producers and consumers in a food chain
- Describing food webs; Identifying food chains in a food web
- Describing symbiotic relationships between organisms
- Identifying inherited physical characteristics of plants and animals
- Identifying inherited behaviors of plants
- Conducting two experiments to observe plant behavior
- Identifying inherited and learned behaviors of animals
- Identifying physical adaptations of animals
- Describing physical and behavioral adaptations of plants
- Describing physical and behavioral adaptations of predators and prey
- Identifying how an adaptation benefits an organism
- Identifying extinct and endangered animals
- Recording and Analyzing Data from Experiments





EXPLORING ENERGY

- Describing energy
- Describing kinetic energy
- Comparing the kinetic energy of objects
- Describing potential energy
- Describing gravitational potential energy
- Observing the conversion of energy
- Identifying characteristics of sound
- Describing how musical instruments produce sounds
- Comparing the pitch of sounds
- Describing radiant energy
- Describing visible light
- Observing how light waves are reflected





EXPLORING ENERGY

- Describing radiant energy
 - Describing visible light
 - Observing how light waves are reflected
 - Identifying opaque, transparent, translucent matter
 - Observing shadows
 - Describing how the Earth's rotation causes shadows
 - Describing the refraction of light waves
 - Describing heat
 - Observing and describing the transfer of heat by radiation and conduction
 - Identifying good conductors and insulators of heat
 - Observing and describing the transfer of heat by convection
 - Identifying renewable and non-renewable energy resources
 - Earth Day Lesson: April 22
 - Describing ways to help the environment by recycling, reducing, and reusing
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INVESTIGATING ELECTRICITY

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- Identifying sources of electricity
 - Describing how electricity is used
 - Describing static and current electricity
 - Identifying and describing open and closed circuits
 - Observing and describing a dry cell battery and electrical wire
 - Identifying conductors and insulators of electric current
 - Examining an incandescent light bulb
 - Making a closed circuit
 - Tracing the path of an electric current through a closed circuitj. Making a closed circuit to observe how the number of batteries affects the brightness of a light bulb
 - Testing materials to determine if they are conductors or insulators of electric current
 - Using a switch to open and close a circuit
 - Reading a circuit diagram
 - Identifying characteristics of a series circuit
 - Making a series circuit
 - Identifying characteristics of a parallel circuit
 - Making a parallel circuit
 - Making an electromagnet
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