Fifth Grade Science
2020-2021

Thomas County Middle School
Miss Pam Lewis, Teacher
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Daily Schedule

Homeroom 7:30 - 8:00
Reading 8:00 - 8:35
Academic 1 8:40 - 10:10
Academic 2 10:10 - 10:45
Lunch 10:45 - 11:15
Planning/Exploratory 11:20 - 12:30
Academic 2 continues 12:30 - 1:25
1:05-1:20 – Recess
Academic 3(Remote) 1:25 - 2:45
Busloads 2:55 - 3:30

Textbooks and Materials

We will be using various curriculum sources throughout the year. The textbook can be found online by accessing the Clever page. It is labeled *HMH - 5th Grade Science*. We incorporate the use of multiple text and resources to best reach each child.

Overview

Over the course of this next school year, you will be exploring topics of Earth, Physical, and Life Science. "Students at this grade level are able to identify the causes of some of Earth's surface features, explain the difference between a physical and a chemical change, investigate electricity and magnetism and the relationship between them, use scientific procedures to classify organisms, understand the difference between behaviors and traits, contrast the parts of animal and plant cells, and argue from evidence on how microorganisms can be beneficial or harmful to other organisms" (GaDOE, 2016).

Our science curriculum is broken down into six units.

- Unit 1: Changing Earth
- Unit 2: Physical and Chemical Changes in Matter
- Unit 3: Electricity and Magnetism
- Unit 4: Classification of Animals and Plants
- Unit 5: Traits and Behaviors
- Unit 6: Cells and Microorganisms
- *After Milestones (TBA), we will engage in Project Lead the Way modules where the students learn about Robotics and Automation. They will learn the basics of robotics, how to build a robot, drive the robot, as well as code the robot to drive a course on its own.

Assessments

- A pretest will be given at the beginning of the 1st 9 weeks, again at the end of the 2nd 9 weeks, and a post test will be given a the end of May. This will be used to measure progress of each standard for your child.
- We will have at least 2 quizzes and 2 summative tests per 9 weeks. There will also be a benchmark covering the taught standards at the end of each 9 weeks. You will be notified via Remind about upcoming assessments.
- Types of assessment questions: short answer, narrative responses, multiple choice, matching, or true/false.
- Study guides will only be given for summative assessments and benchmarks. Interactive notebooks can be used as a study source for all assessments. Study guides WILL NOT be exactly like the assessments, they are a guide, not a cheat sheet.
- For any at home labs, we will give you a list of household items that can be used for each lab at least 2 weeks beforehand.

The following is a tentative schedule of the pacing for our science units. This can change based on unforeseen events and/or schedule changes.

	Pacing Guide	Week	**Standards/Units/Topics**	
Fall Se	1st Quarter	1	Rules, Rituals, and Routines / Lab Safety / Science Tools/Remote Training	
		2	Inquiry Skills and Scientific Method/Pretest	
		3	Changing Earth	Constructive and Destructive Processes (S5E1a,b)
		4		

mester		5		
		6		
		7		Technology and Human Intervention (S5E1c)
		8		
		9		
	2nd Quarter	10	Physical and Chemical Changes in Matter	Physical Changes (S5P1b)
		11		Changes in Matter (S5P1a)
		12		Chemical Changes (S5P1c)
		13	Electricity & Magnetism	Static and Human-Harnessed (S5P2a)
		14		Circuits / Conductors & Insulators (S5P2b,c)
		15		
		16		Permanent and Electromagnets (S5P3a,b)
		17		
		18	Progress Monitoring Evaluation	
Spring Semester	3rd Quarter	19	Classification of Animals and Plants	Vertebrates and Invertebrates / Seed and Non-Seed Producers (S5L1a,b)
		20		
		21		
		22	Traits and Behaviors	Inherited and Learned (S5L2a,b)
		23		
		24	Cells & Microorganisms	Plant and Animal Cells (S5L3a,b,c)
		25		
		26		Helpful and Harmful Microorganisms (S5L4a,b)
		27	Milestone Review/Progress Monitoring	
		28		

	4th Quarter	29	
		30	Milestones-TBA
		31	
		32	Project Lead the Way/Post Test TBD
		33	
		34	
		35	

Unit 1 Standards:

S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

a. Construct an argument supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms).

b. Develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes.

c. Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes.

Unit 2 Standards:

S5P1. Obtain, evaluate, and communicate information to explain the differences between a physical change and a chemical change.

a. Plan and carry out investigations of physical changes by manipulating, separating and mixing dry and liquid materials.

b. Construct an argument based on observations to support a claim that the physical changes in the state of water are due to temperature changes, which cause small particles that cannot be seen to move differently.

c. Plan and carry out an investigation to determine if a chemical change occurred based on observable evidence (color, gas, temperature change, odor, new substance produced).

Unit 3 Standards:

S5P2. Obtain, evaluate, and communicate information to investigate electricity.

a. Obtain and combine information from multiple sources to explain the difference between naturally occurring electricity (static) and human-harnessed electricity.

b. Design a complete, simple electric circuit, and explain all necessary components.

c. Plan and carry out investigations on common materials to determine if they are insulators or conductors of electricity.

S5P3. Obtain, evaluate, and communicate information about magnetism and its relationship to electricity.

a. Construct an argument based on experimental evidence to communicate the differences in function and purpose of an electromagnet and a magnet.

b. Plan and carry out an investigation to observe the interaction between a magnetic field and a magnetic object.

Unit 4 Standards:

S5L1. Obtain, evaluate, and communicate information to group organisms using scientific classification procedures.

a. Develop a model that illustrates how animals are sorted into groups (vertebrate and invertebrate) and how vertebrates are sorted into groups (fish, amphibian, reptile, bird, and mammal) using data from multiple sources.

b. Develop a model that illustrates how plants are sorted into groups (seed producers, non-seed producers) using data from multiple sources.

Unit 5 Standards:

S5L2. Obtain, evaluate, and communicate information showing that some characteristics of organisms are inherited and other characteristics are acquired.

a. Ask questions to compare and contrast instincts and learned behaviors.

b. Ask questions to compare and contrast inherited and acquired physical traits.

Unit 6 Standards:

S5L3. Obtain, evaluate, and communicate information to compare and contrast the parts of plant and animal cells.

a. Gather evidence by utilizing technology tools to support a claim that plants and animals are composed of cells too small to be seen without magnification.

b. Develop a model to identify and label parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplasts) and of an animal cell (membrane, cytoplasm, and nucleus).

c. Construct an explanation that differentiates between the structure of plant and animal cells.

S5L4. Obtain, evaluate, and communicate information about how microorganisms benefit or harm larger organisms.

a. Construct an argument using scientific evidence to support a claim that some microorganisms are beneficial.

b. Construct an argument using scientific evidence to support a claim that some microorganisms are harmful.

Grading

Assignments and exams will be weighted using the following percentages:

Type of Assessment	Grading Weight Percentage
Formative (Tests, Benchmarks, Projects and Essays)	30%
Summative (Quizzes, Labs, etc.)	40%
Daily (Daily Assignments and Homework)	30%

Late Work Policy:

Students will have 5 days to complete late assignments for 10 points off. After the end of the 5 days, students will receive no credit for that assignment.

If answers are given for an assignment that is due, (i.e. study guide, vocabulary check, etc.) then no late credit will apply. In addition, no late work will be accepted after the last day of each nine-week period.

Makeup Work

All assignments are expected to be completed and students missing class must make arrangements to make up missed assignments. Students will have 5 days from the date they return to school to complete missing assignments for 10 points off. After those 5 days, students will receive no credit for that assignment. If students are absent from class, there will be an assignment bin in the side of the classroom where the assignments can be picked up. I am holding each student responsible for making up any missed assignments. We will not be able to use any classroom instruction time to make up missed assignments.

The objective of this course is for the students to **learn** the material. If a quiz is given that indicates a majority of the class is not understanding the material, the teacher may, at her discretion **re-teach** the material and give a "**retake**" quiz.

Collaboration

It is a goal of mine to work collaboratively with parents and/or guardians to ensure their child's educational success. **I welcome contact and interaction with parents and guardians.** Please use the email or phone number listed near the top of this syllabus to contact me with any questions or concerns.

Please contact your science teacher via email or Remind if you have any questions!

We look forward to an awesome year!