Danville Area School District
Course Overview and Scope and Sequence

Course Title: 5th Grade Science
Content Area: Science
Grade Level: 5th
Date Developed: Fall of 2023

COURSE OVERVIEW: Throughout this course students will integrate relevant science and engineering practices and crosscutting concepts into their learning and understanding of the core ideas. The core ideas found in the course are: identifying matter, matter and energy in the ecosystems, earth's interactive systems, and earth and space patterns.

ANCHOR STANDARDS:

5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.
5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
5-ESS2-1 Develop a model using an example to describe ways in which the geosphere, hydrosphere, biosphere, and/or atmosphere interact
5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun
5-ESS2-2 Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth
5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment
3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost
3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of

a model or prototype that can be improved
5-ESS1-2 Represent data in graphical displays to reveal patterns or daily change in length and direction of shadows, dany and night, and the seasonal appearance of some stars in the starry sky.
5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down
5-ESS1-1 Support an argument that the gravitational force exerted by Earth on objects is directed down
5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.
5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, that total weight of matter is conserved.
5-PS1-3 Make observations and measurements to identify materials based on their properties.
5-PS1-4 Conduct an experiment to determine whether the mixing of two or more substances results in new substances.

KEY COURSE TEXT AND MATERIALS: Inspire Science, Science Investigator Magazine, McGraw-Hill Online Platform, and teacher made materials

KEY ASSESSMENTS:
Diagnostic: 8th Grade PSSA and 5th Grade PSSA 2025
Formative: Labs and Activities, Simulations and Model Construction, Bell Ringers, CER and Class Discussions
Summative: Projects and Lesson Reviews/Checks

SCOPE AND SEQUENCE					
Unit	PRIORITY STANDARDS	SUPPORTING STANDARDS	ASSESSMENT	MATERIALS	TIMEFRAME
Unit 2 Ecosystems: Part 1 Matter in Ecosystems	3.1.5.A Support an argument that plants get the materials they need for growth chiefly from air and water. 3.1.5.B Develop a model to describe	5-LS1-1 5-LS2-1	Module Pretest Lessons, 1, 2, & 3 Checks Module Post-Test CER response sheet	Science Investigator Magazine Student workbooks Unit 2 Inquiry kit materials Teacher Made	30 Days

	the movement of matter among plants, animals, decomposers, and the environment. 3.3.5.E Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. 3.3.5.F Generate and design possible solutions to a current environmental issue, threat, or concern.			Materials McGraw-Hill online platform	
Unit 2 Ecosystems: Part 2 Energy in Ecosystems	3.2.5.G Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. 3.3.5.C Develop a	5-ESS2-1 5-LS2-1 5-PS3-1	Module Pretest Lesson 1, 2, & 3 Checks Module Post-test CER response sheet	Science Investigator Magazine Student workbooks Unit 2 Inquiry kit materials McGraw-Hill online platform Leveled Reader	28 Days

	model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.				
Unit 3: Earth's Interactive Systems Part 1 Earth's Water System	3.3.5.D Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. 3.3.5.C Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	5-ESS2-1 5-ESS2-2 5-ESS3-1 3-5-ETS1-1 3-5 ETS1-2 3-5-ETS1-3	Module Pretest Lesson 1, 2, & 3 Checks Module Post-test CER response sheet	Science Investigator Magazine Student Workbooks Unit 3 Inquiry Kit Materials McGraw-Hill online platform	28 Days
Unit 3: Earth's Interactive Systems Part 2 Earth's Other System	3.3.5.C Develop a model using an example to describe ways the geosphere,	5-ESS2-1 5-ESS3-1	Module Pretest Lessons 1, 2, & 3 Checks Module Post-Test CER response	Science Investigator Magazine Student Workbooks Unit 3 Inquiry kit	30 days

	biosphere, hydrosphere, and/or atmosphere interact.		sheet	materials McGraw-Hill online platform	
Unit 4: Earth and Space Patterson: Part 1 Earth's Patterns and Movement	3.3.5.B Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. 3.2.5.F Support an argument that the gravitational force exerted by Earth on objects is directed down.	5-ESS1-2 5-PS2-1	Module Pretest Lessons 1 & 2 Checks Module Post-Test CER response sheet	Science Investigator Magazine Student Workbooks Unit 4 Inquiry kit materials McGraw-Hill online platform	21 days
Unit 4: Earth and Space Patterns: Part 2 Earth and Space	3.3.5.A Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. 3.3.5.B Represent	5-ESS1-2 5-ESS1-1	Module Pretest Lessons 1 & 2 Checks CER response sheet Module Post-Test	Science Investigator Magazine Student Workbooks Unit 4 Inquiry kit materials McGraw-Hill online	21 days

	data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.				
Investigate Matter Unit: 1	3.2.5.E Conduct an investigation to determine whether the mixing of two or more substances results in new substances. 3.2.5.D Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	5-PS1-1 5-PS1-2 5-PS1-3 5-PS1-4 3-5-ETS1-3	Module Pretest Lessons 1, 2, 3, & 4 Checks CER response sheet	Science Investigator magazine Student Workbooks Unit 1 Inquiry Kit Materials McGraw-Hill online platform Flocabulary	36 Days