

# Grade 9 Theme: Connections

**Moral Education**  
Introduction to Global Ethics.

**SCF:**

Digital Competence: -access and select information from a relevant number of digital sources.

Problem Solving: -solve different types of problems using a variety of methods, technologies and skills.

Critical Thinking: -solve problems in conventional or innovative ways using their knowledge and understanding.

Creativity: -demonstrate originality and inventiveness in developing ideas.

**Social Studies:**

**Arabic**

**Biology :**

-Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy

-Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

-Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem

-Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.

**Computer Literacy:**

Create a website using wix.com explaining internet and social media safety.

**PE:**

Girls will be introduced to individual sports, such as badminton and tennis, where they will learn to correctly demonstrate the following skills:

- ☐ Overhand striking
- ☐ Weight transfer while striking
- ☐ Forearm/backhand striking
- ☐ Volleying
- ☐ Serving
- ☐ Game Strategy

**Chemistry**

-Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

-Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

-Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles

**Arts:**

2.1Solve a visual arts problem that involves the effective use of the elements of art and the principles of design

.student will understand the Zentangles and they will create their own Image ,to understand the combining between elements of Art and principle of Design

**Physics**

-Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration

-Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system

-Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.

**ELA:**

Reading & Writing Language weeks 1-3 = informational, argumentative & explanatory writing/reading in which student effectively incorporate elements - W9.1&9.2.

RL9.1&9.2 - students able to cite strong and thorough textual evidence with inferences drawn. Able to read & determine the theme/central idea of a text - produce an objective summary.

S&L 9.1, 9.2& 9.3 - participate & initiate in collaborative discussion - correctly using phrases & clauses to convey meaning.

Weeks 3-6 - Research based projects of varying lengths - clarify meanings & fully explore the topic - W10.7&10.8

RL9.4 - Students determine the meaning of words & phrases used within various texts.

S&L9.4 - present information, findings, and supporting evidence clearly, concisely, and logically incorporating audio, visuals, and text fit for purpose & audience.

Weeks 6-11 - write explanatory/argumentative essays in which students will write for a variety of ideas - W9.1&9.2.

W9.3&9.4 - write narratives to develop real or imagined experiences or events using effective techniques & produce clear & coherent writing.

W9.5-9.9 - develop & strengthen writing using literary or informational texts to draw evidence from - use technology to help with shared projects.

S&L9.5&9.6 - demonstrate understanding of figurative language & acquire & use accurately general academic words & phrases.

**Stem:**  
Students will connect, make connections to real life using critical thinking and ICT formatting to create a STEM project.

**Math:**

Students will understand and explain what the terms of an equation or inequality mean in the context of a situation that it models, as well as which linear equations, linear inequalities, and exponential equations based on a given scenario (word problems).

**Key Vocabulary: ELA**

Connections	Friendship
Refutation	Colleague
Reconciliation	Paras
Disconnection	Intermediary
Reconciliation	Relative