



Grade 9 Curriculum Newsletter
April - June 2021

Guiding Question:

How can we demonstrate resilience as we experience transitions in our lives, society and the environment?

Provocation:



Just as the caterpillar morphs into a butterfly, grade nine students will experience several transitions over the course of the year. Using the analogy of metamorphosis as a roadmap of how we want our students to develop this year we will explore transitions in nature and society. In our core classes we will be exploring the curriculum through a cycle of three phases: past, present and future. In each of these phases students will examine stories of resilience and the impact of successful transitions throughout time.

Science:

Our Guiding question of "How can we demonstrate resilience as we experience transitions in our lives, society and the environment?" will shape how we explore past scientific events and discoveries, present innovations and what the future holds for us. Our main focus for the next three months will focus on future events and innovators in science will lead to our future possibilities of Biology, Chemistry, Physics and Space Exploration. Transition and change will be a constant theme throughout all units. We will explore how future scientists will face resilience to overcome adversity to bring us into the future understanding of Science. We will explore the following innovations and their future relevance:

1. Biology -We will explore the future of biotechnologies which could include, GMOs, genetic engineering and cloning. We will investigate the ethical side of biotechnologies
2. Chemistry - The focus of this period will be on chemical reactions. Students will be asked to demonstrate a chemical reaction and the properties of the reactions

3. Physics - Transformation of Energy. What is the future of energy production. Can we move into a world that can acquire energy in more efficient ways?
4. Space Exploration - Given the current exciting events that are happening in the world of space, we will examine what possible explorations will be happening in the near future and what could the distant future hold?

Students will have the opportunity to demonstrate their understanding of current contributions to future understandings through daily discussions and tasks, visual journaling, and culminating projects. Students will have an opportunity to explore a scientist or scientific event may contribute to our future understanding of that specific field of Science. They will be able to explain how resiliency was necessary for that scientist to transition for “current ways of knowing” to “future ways of knowing”

Mathematics:

Through our guiding question about resilience and transition in our lives students will demonstrate an understanding and appreciation of the different strands of math. This will focus on how to improve their number and mental math skills. Students will continue to meet the following curricular outcomes based on patterns and relations, shape and space, number, and data and probability. This will be demonstrated as they use number sense to estimate and calculate physical properties of a butterfly. We will focus on how these concepts can be related to real life phenomenon using a mathematical lens at a societal and environmental level.

1. Probability and Statistics - Students will use surveys and graphs to demonstrate difference in size, mass, antenna length and will use probability of genetics while looking at physical traits of butterflies. What are dominant and recessive traits that can be passed on from one generation to the next of a butterfly.
2. Number - Use of rational numbers and algebra to solve for unknown numbers and how to predict unknowns in the natural world.
3. Patterns and Relations - Apply spatial reasoning and measurement to make sense of the natural world. How is the butterfly able to survive in an expansive environment?

Humanities:

Over the past two terms students have been examining how humans demonstrate resilience in transition by exploring how Canadians have faced challenges in both the past and present. This term students will apply what they have learned earlier this year to determine how Canadians can deal with the challenges we will face in the future.

Students will investigate the concept of utopia by exploring the ways in which we have tried to create a perfect society in the past and will develop their own ideas of what utopia looks like. In order to do so students will apply what we have learned about the importance of diversity in the creation of a society that is pluralistic, bilingual, multicultural, inclusive and democratic. Additionally, students will reflect on what they have discovered about Canada’s political and economic processes and draw conclusions about their own beliefs and values.

Students will evaluate the challenges that Canadians face in building a better future through a focus on research, critical thinking, persuasive speech and source analysis. We will investigate emerging issues of human rights and justice in Canada with a focus on the climate crisis and contemporary Indigenous issues.

As part of our inquiry into the concept of utopia we will be exploring what can go wrong when a nation attempts to create a perfect society and how citizens can be resilient in the face of the challenges that may arise. As part of our inquiry students will explore the genre of dystopian fiction and will embark on a novel study of "The Marrow Thieves" by Indigenous author, Cherie Dimaline. Using the "Daily 5" reading structure students will continue to practice applying strategies such as annotation to improve their reading comprehension skills. In preparation for high school students will continue to strengthen their functional and narrative writing skills by composing personal and critical responses.

Over the course of the year students have come to understand that just as a butterfly flapping its wings can cause a tsunami across the world, the small actions we undertake in our daily lives create ripple effects in society. As students transition out of junior high school, move on to grade ten and subsequently their futures, they too will make big changes in society. As a culmination of learning students will reflect on their own story of resilience and participate in a cross-curricular inquiry project examining how extraordinary humans have been able to transform our society through time.

Technology:

Students will use D2L Brightspace to access important information and submit assignments digitally. Assignments will include different options for completion and will allow for students to utilize many different tools and computer programs including but not limited to: iMovie, podcasts, voice to text, etc.

Assessment:

The teacher will utilize a variety of formative and summative assessment tools to assess student achievement. Students will be provided with various opportunities to demonstrate their knowledge, skills, attitudes and learning. Students will be given feedback often, along with opportunities to improve on and refine the skills we will be developing.

Through conversations and observations teachers will be creating a safe space for students to express themselves comfortably in order for students to build their self advocacy capacity, while also identifying their own individual learning needs. Through the use of visual journals students will practice visual thinking routines and teachers will have a running record of evidence that will provide opportunities to assess and respond to learning needs accordingly throughout the year.

Utilizing project based learning our students will expand on their learning and challenge themselves to create projects that are of interest to them, and relevant to their lives. In preparation for high school and later post secondary or professional life, students will be prepared to undertake quizzes and tests throughout the year to check their learning.