Hartland School

Grade 7 Curriculum at a Glance

Our curriculum is designed to **Educate for Excellence** as we *inspire* & *guide* students to:

- Be responsible and engaged community members
- Demonstrate initiative, persistence and adaptability
- Be curious and value risk taking as part of the learning process
- Access and analyze information, ask questions and formulate opinions
- Communicate effectively and efficiently

Reading Units of Study		
Unit 1 **Investigating Characterization**	**Unit 2** **Historical Fiction**	**Unit 3** **Social Issues**
In this unit, students will learn to consider more complex character traits, investigate how setting shapes characters, and analyze how characters are vehicles for themes. The unit also helps readers to take more charge of their reading lives and engages students with close reading, gathering text evidence, and weighing and evaluating multiple theories about complex characters.	In this unit, students will become skillful readers of narrative fictions that have been placed into historical time periods. They will learn to spot how narrative elements are affected by the settings in which they are placed.	The lens for reading in this unit, is a topic that matters greatly to the young human beings who enter our classrooms every day. In middle school, many kinds of issues start to weigh more heavily on students: relationship issues, school issues, and a growing awareness of larger societal pressures. A driving force in this unit is the power of reading to transform how we see others and to show us new ways to be kind, to connect, and to stand up for what's right.

Writing Units of Study		
Unit 1 **Realistic Fiction**	**Unit 2** **Historical Fiction**	**Unit 3** **Argumentative Essay**
In this unit, students will write a long narrative, focusing on characterization and the use of symbols, imagery, and other figurative language to make the story more realistic.	In this unit, students will take what they have learned about writing powerful narrative fiction and add elements of what they have learned from history and research to create fictional narratives placed in historical settings.	In this unit, students will learn to make a clear explanation of the problem and make a clear position statement. They will support their positions with research and make clear rebuttals of expected criticisms, while proposing plausible resolutions.

Grammar

Grammar instruction supports students in noticing and applying the conventions of the English language. Applying this learning to their everyday speaking and writing skills will elevate the ability of the students to express themselves.

Unit 1	Unit 2	Unit 3
Students will learn the following grammar skills: • Using verbs in sentences • Compound sentences • Tone in compound sentences • Semicolons • Coordinate adjectives **Vocabulary Skills** Students will learn Greek and Latin roots.	**Students will learn the following grammar skills:** • The importance of order with non coordinate adjectives • Compound sentences and *for* • NOR-version • Serial Commas • Coordinate adjectives and commas in a series • Introductory clauses and subordinate openers **Vocabulary Skills** Students will learn Greek and Latin roots.	**Students will learn the following grammar skills:** • Subordinate clause closer • Relative pronoun clause • More than AAAWWUBBIS • Compound-Complex sentences **Vocabulary Skills** Students will learn Greek and Latin roots.

Mathematics

Scale Drawings	Introducing Proportional Relationships	Measuring Circles	Proportional Relationships and Percentages	Rational Number Arithmetic	Expressions , Equations and Inequalities	Angles, Triangles and Prisms	Probability and Sampling
In this unit, students use the terms: scaled copy, to scale, scale factor, scale drawing, and scale. They recognize when two pictures or plane figures are or are not scaled copies of each other. They use tables to reason about measurements in scaled copies.	In this unit, students use the terms: proportional, constant of proportionality, and proportional relationship, and recognize when a relationship is or is not proportional. They represent proportional relationships with tables, equations, and graphs.	In this unit, students use the term “circle” to mean the set of points that are equally distant from a point called the “center.” They gain an understanding of why the circumference of a circle is proportional to its diameter, with constant of proportionality π.	In this unit, students use ratios, scale factors, unit rates (also called constants of proportionality), and proportional relationships to solve multi-step, real-world problems that involve fractions and percentages.	In this unit, students interpret signed numbers in contexts (e.g., temperature, elevation, deposit and withdrawal, position, direction, speed and velocity, percent change) together with their sums, differences, products, and quotients.	In this unit, students solve equations of the forms px+q=r and p(x+q)=r where p, q, and r are rational numbers. They draw, interpret, and write equations in one variable for balanced “hanger diagrams,” and write expressions for sequences of instructions, e.g., “number puzzles.”	In this unit, students investigate whether sets of angls and side length measurements determine unique triangles or multiple triangles, or fail to determine triangles. Students also study and apply angle relationships, learning to understand and use the terms: complementary, supplementary, vertical angles, and unique.	In this unit, students use the terms: event, sample space, outcome,chance experiment, probability, simulation,random, sample,random sample, representative sample, overrepresented, underrepresented, population, and proportion.They design and use simulations to estimate probabilities of outcomes of chance experiments.

Science Units of Study					
Unit 1 Chemical Reactions & Matter	**Unit 2 Chemical Reaction & Energy**	**Unit 3 Metabolic Reactions**	**Unit 4 Matter Cycling & Photosynthesis**	**Unit 5 Ecosystem Dynamics**	**Unit 6 Earth's Resources & Human Impacts**
In this unit, students start with an experience of observing and analyzing a bath bomb as it fizzes and eventually disappears in water. Their observations and questions about what is going on drive learning that digs into a series of related phenomena as students iterate and improve their models depicting what happens during chemical reactions. By the end of the unit, students have a firm grasp on how to model simple molecules, know what to look for to determine if chemical reactions have occurred, and apply their knowledge to chemical reactions to show how mass is conserved when atoms are rearranged.	In this unit, students start off by thinking about how they would heat up food without having typical methods available. The class explores the flameless heater from MRE's and develop an initial model to consider how a flameless heater works. They attempt to create designs for a homemade flameless heater and compare designs with classmates. Issues that arise during the design comparison motivate the class to build a Design Questions Board and gather ideas for investigations that will guide their work to create a successful homemade flameless heater.	In this unit, students explore a real case study of a middle schooler who is experiencing some concerning symptoms. Students investigate data specific to the case in the form of doctor's notes, endoscopy images and reports, growth charts, and micrographs. They also draw from their results from laboratory experiments on the chemical changes involving the processing of food and from digital interactives to explore how food is transported, transformed, stored, and used across different body systems in all people. They will discover what happens to the food we eat after it enters our bodies and how different symptoms may be connected.	In this unit, students begin by reflecting on what they ate for breakfast. Questions about where their food comes from lead them to consider which breakfast items might be from plants. Then students explore (and taste) a common breakfast food, maple syrup. They see that according to the label it is 100% from a tree. Students then see how some trees are tapped in the spring for their sap, and how water is boiled off, to leave only syrup. Students taste maple sap from the trunks of trees and compare it to the maple syrup they tasted earlier.	In this unit, students discover that the future of orangutans may be in danger due to our consumption of chocolate. Students spend the first lesson understanding the complexity of the problem. They will figure out that palm oil is derived from the oil palm trees that grow near the equator, and that these trees are both land-efficient and provide stable income for farmers, factors that make finding a solution to the palm oil problem more challenging. Students will establish the need for a better design for oil palm farms, which will support both orangutans and farmers. The final set of lessons engage students in investigations of alternative approaches to growing food compared to large-scale monocrop farms. Students work to design an oil palm farm that simultaneously supports orangutan populations and the income of farmers and community members.	In this unit, students begin by observing news stories and headlines of drought and flood events across the United States. Students spend the first lesson gathering evidence for how a change in temperature affects evaporation, precipitation, and other parts of Earth's water system. They use evidence to support a scientific explanation that two climate variables (temperature and precipitation) are changing precipitation patterns in the case sites they investigated. Students figure out that the rising temperatures are caused by an imbalance in Earth's carbon system, resulting in a variety of problems in different communities. The unit ends with students evaluating different kinds of solutions to these problems and how they are implemented in communities.

Social Studies Units of Study			
Unit 1 Geography & Earliest Humans	**Unit 2 Ancient Civilizations**	**Unit 3 Ancient Japan, Rome, and the Middle Ages**	**Unit 4 Crusades, The Age of Exploration, & the Reformation**
In this unit, students will learn about the Continental Drift Theory of Alfred Wegener and the evidence he used to develop his theory. Students will learn about scientists who study people— archaeologists, historians, anthropologists, sociologists and political scientists. Students will learn about how leisure time gave earliest humans time to devote to better weapons, shelter, clothing, pottery and cave paintings. Students will learn about the contributions of the Assyrians (first paved roads, postal system, etc.) and the Chaldeans (calendar with seven day week, astronomy/astrology, etc.). Students will learn about the first alphabet, purple dye and other cultural advancements of the Phoenicians. Students will learn about paper and other inventions and discoveries of the ancient Egyptians and will learn about ancient leaders such as Hatshepsut, Ramses XI and Tutankhamen, the boy king. Articles will discuss archaeologists Howard Carter, Dr. Kent Weeks and Jean-François Champollion, the man who cracked hieroglyphics. Students will also read about ancient Egyptian architecture.	In this unit, students will learn about African kingdoms such as Kush, Ghana, Mali and Songhai. They will study the history, culture and geography of the Israelites. Articles will discuss Judaism, the history of the disputed land of Palestine and well-known Israelites and their contributions to the world. Students will learn about the development of a writing system through cultural contact with the Phoenicians and the first Olympic Games as they focus on the ancient Greeks, including the geography of Greece. Students will focus on the Golden Age of the Greeks, including the architecture of the time. They will learn about Alexander the Great and his Macedonian Empire, and use maps to study the extent and geography of the empire. Students will learn about Hinduism, Buddhism, Sikhism and the geography of India, including civilizations and archaeological discoveries at Harappa and Mohenjo Daro, the Aryans, Sanskrit, caste system, as well as the Maurya and Gupta empires. They will study Ancient China and dynastic rule, including the geography of China and how it was isolated from the rest of the world. They will discuss the Takla Makan Mummies, early writing system, Confucius, Laozi, the Great Wall, the Silk Road and Qin Shi Huangdi. Students will read about the contributions of ancient Chinese cultures to the world.	In this unit, students will focus on the geography of Japan and how geography shaped its opinion of the outside world, as well as learn about the contributions of ancient Japanese cultures to the world. They will study government, religion, architecture and the geography of Rome and Italy. Students will learn about the Golden Age of Rome and will discuss the Pax Romana, famous Romans, the cities of Pompeii and Herculaneum and everyday life of citizens of the Roman Empire. Students will learn about the Roman Empire, including Caesar, Constantine and Hadrian's Wall. They will discuss the contributions of the empire to the world. Students will read about the Romans' clash with the Vikings in the British Isles and the barbarian invasions that led to the fall of Rome. Students will learn about the spread of Christianity, Jesus Christ, the early Christians and the Christian Church. Students will read about monks and their contribution to keeping books alive and the Catacombs of Rome. They will learn about the geography of the Middle East, Mohammad and the spread of Islam. Students will learn about the barbarians who came through Europe causing people to huddle for protection under the feudal system. They will discuss towns, money, diminishing trade and the fading of the Greek and Roman democratic ideals. Students will also learn about life in a castle.	In this unit, students will learn about the Catholic Church, the Crusades and how cultural contact brought about huge change in Medieval Europe. They will discuss the end of the feudal system, the renewed interest in Greek and Roman ideas and how the rise of towns and guilds brought back democratic thinking. Students will learn about the brave people who went off to explore the world. They will learn about the Mesoamerican Empire, including the Maya, Aztec and Inca civilizations. Articles will discuss the geography of the region and the end of each civilization. They will study famous people of the Renaissance and their contributions to the world in art, literature, architecture and knowledge. Students will study the change in the Catholic Church known as the Reformation, and will discuss Joan of Arc, Martin Luther and the invention of the printing press by Johannes Gutenberg. Students will learn about the oceanic peoples of the Pacific, including the contributions of Australian aborigines, Maori of New Zealand, Papuans of New Guinea and ancient Polynesians.