

Board of Education Regular Meeting

Tuesday, June 17, 2025 6:30 PM

Town Campus Hammonasset Room/Zoom, 10 Campus Drive , Madison, CT 06443

I. Call to Order / Attendance

I.A. Pledge of Allegiance

II. School / Community Session

II.A. Public Participation

III. Superintendent's Report

Speaker (s): Craig A. Cooke, Ph.D.

III.A.

- End-of-Year Report
- Summer Construction

IV. Board Members' Comments

V. Audience Response to Information Presented (Ref. Bylaw #9540.10)

VI. Board Committees / Liaison Updates (Ref. Bylaw #9450)

VI.A. Curriculum and Student Development

Speaker (s): Members: Steve Pynn, Chair; Catherine Miller, Mary Ann Connelly

VI.B. Facilities Committee

Speaker (s): Members: Emily Rosenthal, Chair, Steven Pynn, Diane Infantine-Vyce

VI.C. Finance Committee

Speaker (s): Members: Galen Cawley, Chair, Christine Maisano, Emily Rosenthal

VI.D. Personnel Committee

Speaker (s): Members: Maureen Lewis, Chair; Catherine Miller, Mary Ann Connelly

VI.E. Policy Committee

Speaker (s): Members: Diane Infantine-Vyce, Chair; Maureen Lewis, Galen Cawley

VI.F. LEARN Liaison

Speaker (s): Mary Ann Connelly

VII. Action Item: Motion to approve the proposed CTE, Science, Theater, and World Language curriculum units recommended by the Curriculum & Student Development Committee.

VIII. Action Item: Motion to authorize the Finance Committee Chair to close out the 2024-2025 fiscal year directly with the Finance Director.

IX. Action Item: Motion to approve the minutes of the June 3, 2025 Board of Education Meeting

(Ref. Bylaw #9540.9)

- X. **Discuss the evaluation of the Superintendent and take possible action on the Central Office contract (discussion proposed for Executive Session)**

XI. Future Agenda Items

XII. Adjournment

- XIII. The Town of Madison does not discriminate on the basis of disability, and the meeting facilities are ADA accessible. Individuals who need assistance are invited to make their needs known by contacting the Town ADA/Human Resources Director, Debra Ferrante, at 203-245-6310 or by email at ferranted@madisonct.org at least five (5) business days prior to the meeting.

Curriculum Unit Overviews

Courses Ready for Board of Education Adoption in June 2025

CTE	Science	Theatre	World Language
<ul style="list-style-type: none">• <i>Entrepreneurship</i>• <i>Investment Analysis</i>	<ul style="list-style-type: none">• <i>Kindergarten Science</i>• <i>Grade 1 Science</i>• <i>Grade 2 Science</i>• <i>Grade 3 Science</i>• <i>Grade 4 Science</i>• <i>Grade 5 Science</i>• <i>Grade 6 Science</i>• <i>Grade 7 Science</i>• <i>Grade 8 Science</i>• <i>Biology Honors</i>• <i>Biology L2</i>• <i>Chemistry for Health Science</i>• <i>Chemistry L2</i>• <i>Conceptual Chemistry</i>• <i>Conceptual Physics</i>• <i>Environmental Science</i>• <i>Infectious Disease</i>• <i>Physics L2 Unit 5</i>	<ul style="list-style-type: none">• <i>Grade 5 Theatre</i>• <i>Stage Production</i>	<ul style="list-style-type: none">• <i>Grade 4 Spanish</i>• <i>Grade 5 Spanish</i>

Entrepreneurship Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>The Idea</i></p>	<p>In the Entrepreneurship course, students will gain hands-on experience of running a business. In unit 1, students will gain an understanding of the "entrepreneurial mindset" and the skills needed in developing a business idea. The PBA will have students create a mission statement, determine what separates their business and makes them different, and then create a survey to research what the perceptions of their market are. Students will then take the information and their idea and give a sales pitch to the rest of the class as to why their product should go forward into being sold.</p> <p>Profile of a Graduate Capacities: Analyzing, Idea Generation, Product Creation</p>
<p><u>Unit 2</u> <i>Launching Your Business</i></p>	<p>In Unit 1, students developed a business idea and pitched it to the rest of the class. In Unit 2, students launch their business by creating a viable product or service. Students develop a marketing & communication plan, create a sales log, website, social media, networking, social responsibility campaign, create financial documents and calculate key performance indicators.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation, Self-Awareness</p>

Investment Analysis Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Risk vs Reward</i></p>	<p>In this first unit of study students will dive into the various options an investor has to choose from, with focus on mutual funds, ETFs, and Index funds. Students will be able to analyze a potential mutual fund, ETF, or other type of investment in order to assess the risk level of the investment and ultimately make a recommendation of what to invest in. Students will learn about the importance of investing and the time value of money, different statistical measures to assess risk. For the PBA students will ultimately create a portfolio for a client that meets their needs balancing their risk tolerance with their life stage.</p> <p>Profile of a Graduate Capacities: Analyzing, Design</p>
<p><u>Unit 2</u> <i>Stock Analysis</i></p>	<p>In this unit students will focus on analyzing individual stocks. Students will learn how to conduct a fundamental analysis and a technical analysis of a stock. The unit concludes with the PBA where students will choose a new stock and analyze it in order to project out its future.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 3</u> <i>Hate to Burst Your Bubble</i></p>	<p>In this third unit of study students will learn about the psychology of investing. They will learn how different cognitive biases may cloud judgement when it comes to investing. This will be applied in studying famous stock market bubbles, common scams and schemes, and how psychology plays a role in these investment decisions.</p> <p>Profile of a Graduate Capacities: Analyzing, Decision Making</p>

Kindergarten Science Curriculum Overview

2024-2025

<p>Unit 1 <i>Plants & Animals</i></p>	<p>In this introductory science unit, kindergarteners will explore the basic needs of plants, animals, and humans, discovering how living things interact with and change their environments to survive. Through engaging activities, hands-on investigations, and guided discussions, students will learn about the connections between organisms and their habitats, including how plants rely on sunlight and water, animals depend on food and shelter, and humans modify their surroundings to meet their needs.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p>Unit 2 <i>Pushes & Pulls</i></p>	<p>In this unit, students explore the concepts of force and motion through hands-on investigations. The focus is on how different strengths and directions of pushes and pulls affect the movement of objects. Young learners will engage in simple experiments to compare these effects and analyze whether their designed solutions successfully change the speed or direction of an object. This foundational knowledge supports their understanding of cause and effect in the physical world.</p> <p>Profile of a Graduate Capacities: Design</p>
<p>Unit 3 <i>Caring for Our Earth (mini unit)</i></p>	<p>In this unit, kindergarteners will explore how their actions and choices can impact the land, water, and air. Through hands-on activities, read-alouds, and guided discussions, they will learn that even young children can help protect the environment by recycling, conserving water, and not littering. Students will understand that caring for the Earth supports all living things, and that working together as a class, family, and community can make a meaningful difference.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p>Unit 4 <i>Weather Patterns</i></p>	<p>This unit engages Kindergarten students in exploring how sunlight affects the Earth's surface, how to design shade structures to reduce heat, and how weather patterns help us prepare for daily activities and extreme conditions. Students will observe, record, and analyze local weather, participate in hands-on experiments, and design simple solutions to protect against the sun's warming effects. Through inquiry, collaboration, and exploration, students will develop foundational scientific understanding and problem-solving skills.</p> <p>Profile of a Graduate Capacities: Design</p>

Grade 1 Science Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Exploring Light & Sound</i></p>	<p>This Grade 1 Science unit, Exploring Light and Sound, introduces students to the fascinating world of vibrations, light, and communication. In the opening portion of the unit, students engage in hands-on investigations to discover how vibrating materials can create sound and how sound can cause materials to vibrate—using selected lessons from Mystery Science to support and enrich their learning. They then explore how light is necessary for us to see objects and how different materials interact with light by allowing it to pass through, partially blocking it, or reflecting it.</p> <p>Building on these foundational ideas, students will apply their knowledge and creativity to design simple devices that use light or sound to communicate over distances. By the end of the unit, students will gain a deeper understanding of how light and sound help us experience the world and connect with others.</p> <p>Profile of a Graduate Capacities: Design</p>
<p><u>Unit 2</u> <i>Animals & Plants: Traits & Survival</i></p>	<p>This unit engages students in understanding how living organisms survive through their physical traits, behaviors, and inherited characteristics. Through hands-on activities, read-alouds, discussions, and investigations, students will explore how animals and plants use their external parts for protection, communication, and survival. Additionally, students will examine patterns in how parents care for their offspring and how traits are inherited, leading to similarities and differences between parents and their young. To support this learning, select activities and video content from Mystery Science are used to help students observe and identify inherited characteristics in plants, reinforcing the concept that young organisms often resemble their parents.</p> <p>Profile of a Graduate Capacities: Inquiry, Product Creation</p>
<p><u>Unit 3</u> <i>The Sun, Moon, & Stars</i></p>	<p>This unit introduces first-grade students to observable patterns in the sky, focusing on the sun, moon, and stars. Students will investigate how the movements and appearances of the sun, moon, and stars follow predictable patterns. To support and enhance these investigations, select lessons from Mystery Science are incorporated, providing engaging videos and activities aligned with the unit's learning goals. Through observation, hands-on activities, and guided inquiry, students will deepen their understanding of how the sky changes during the day, night, and across seasons.</p> <p>Profile of a Graduate Capacities: Product Creation</p>

Grade 2 Science Curriculum Overview

2024-2025

<p>Unit 1 <i>Earth's Systems: Processes that Shape the Earth</i></p>	<p>In this unit, students will explore how natural forces like wind and water shape the Earth's surface through processes like erosion and weathering. They will distinguish between Earth events that occur quickly, such as earthquakes and volcanic eruptions, and those that happen slowly, like the formation of the Grand Canyon. Through hands-on experiments, model-building, and problem-solving activities — including selected lessons from Mystery Science — students will investigate how land and water are interconnected and examine ways to slow or prevent changes to the land caused by erosion.</p> <p>Profile of a Graduate Capacities: Idea Generation</p>
<p>Unit 2 <i>Matter: Solids, Liquids, and Gases</i></p>	<p>In this exciting and hands-on science unit, Grade 2 students will explore the three states of matter—solids, liquids, and gases—through observations, investigations, and engaging class experiments. Students will become matter scientists as they observe real chemical reactions, conduct scavenger hunts, and investigate how different types of matter behave and change. Using their Study of Matter Journals, students will draw, write, and reflect on their findings throughout the unit.</p> <p>From “super absorbent” chemistry to a mystery milk spill and melting ice cube races, students will deepen their understanding of the properties and behaviors of matter. They’ll also learn how heating and cooling can cause materials to change—sometimes in ways that can be reversed, and sometimes not.</p> <p>This unit is designed to spark curiosity, support NGSS-aligned learning, and build foundational science skills like observation, data collection, comparison, and explanation.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p>Unit 3 <i>How Plants & Animals Work Together</i></p>	<p>This unit immerses second-grade students in an inquiry-based exploration of how plants grow, how animals support plant reproduction, and how different habitats support a variety of living things. Students will develop foundational science practices by planning investigations, building models, making observations, and communicating findings.</p> <p>The unit begins with imaginative storytelling and hands-on planting experiments to help students understand that plants need sunlight and water to grow. Using real-world scenarios and anchoring phenomena like time-lapse germination, students test variables in plant growth, record data in journals, and analyze outcomes in collaborative groups. Next, students explore animal and plant interactions, focusing on how animals disperse seeds and pollinate plants. Through videos, experiments, and a design challenge, students investigate seed dispersal strategies and create their own “Smarty Plant” adapted for a specific pollinator. The final focus of the unit is on habitat diversity. Students compare different environments to understand how the variety of plants and animals differs from place to place, using Mystery Science lessons to examine real-world examples.</p> <p>The unit culminates in student-led presentations where children share findings from their plant experiments. The learning experience promotes scientific thinking, collaboration, and creativity while deepening students’ understanding of life science concepts and interdependence in ecosystems.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>

<p><u><i>Unit 1</i></u> <i>Weather & Climate</i></p>	<p>In this unit, students build on their previous learning by exploring how scientists study and record weather patterns over time and across different locations. By analyzing weather data, students will learn how patterns can help predict future weather events. They will organize this data into tables and graphs to describe typical weather in Connecticut and compare it to the weather in another region of the world. Select lessons from Mystery Science are incorporated to support student understanding of how weather works and how scientists observe and interpret weather-related phenomena.</p> <p>The unit also introduces the connection between weather patterns and natural hazards. Students will learn that certain natural hazards, such as hurricanes and flash floods, are directly related to weather processes.</p> <p>The guiding question for the unit is: "How can people use weather patterns to predict weather events, and how can steps be taken to reduce the impacts of natural hazards?" To answer this, students will complete a performance-based assessment (PBA) where they design a structure to mitigate the effects of a specific weather-related hazard. This hands-on project emphasizes problem-solving and real-world application of scientific principles.</p> <p>Profile of a Graduate Capacities: Design</p>
<p><u><i>Unit 2</i></u> <i>Forces & Interactions</i></p>	<p>This Grade 3 science unit, Forces and Interactions, is designed to build students' understanding of physical science concepts through hands-on exploration and inquiry-based learning. Anchored by the engaging phenomenon of an "ice board," students begin by observing and questioning how forces act in real-world scenarios. From this initial investigation, they construct conceptual models that they will revisit and revise throughout the unit as their understanding deepens.</p> <p>Organized around key concepts—Forces & Motion, Friction, Predicting Motion, and Magnetism—students engage in a variety of interactive lessons drawn from Mystery Science and supported by experiments, engineering challenges, and performance-based assessments. They explore how forces act as pushes and pulls, investigate how friction impacts motion across different surfaces, and study the predictable patterns of motion. In the final portion of the unit, students delve into magnetism, discovering how magnetic forces can attract and repel and act at a distance. The unit culminates in an engineering design challenge where students apply their learning to create a magnetic toy or game, demonstrating their grasp of scientific concepts in a creative and meaningful way.</p> <p>Profile of a Graduate Capacities: Design</p>
<p><u><i>Unit 3</i></u> <i>Survival of Organisms</i></p>	<p>In this engaging and hands-on science unit, third-grade students will explore the compelling question: What helps organisms survive in their environments? Using ants as the anchoring phenomenon, students will begin by generating observations and wonderings about what makes ants so successful as a species. The unit unfolds across four major conceptual understandings: life cycles, traits and environmental influences, survival through group behaviors, and adaptations to changing environments. Through a blend of Mystery Science lessons, interactive simulations, scientific modeling, and project-based tasks, students will</p>

develop a foundational understanding of how organisms grow, change, and adapt in order to survive. Key science concepts such as inheritance of traits, metamorphosis, and natural selection are explored in developmentally appropriate ways that encourage curiosity, collaboration, and critical thinking.

Throughout the unit, students will participate in meaningful activities that allow them to apply their learning in authentic contexts. They will explore life cycles with crafts, try a pollination experiment, study traits passed down in animals, and play games like Camouflage Mouse to learn how the environment affects survival. The unit culminates in a project-based learning task where students research an animal from a chosen biome and explain how its structural and behavioral adaptations help it survive. By the end of the unit, students will be able to make connections between an organism's traits, its environment, and its survival, laying the groundwork for future studies in ecology and biology.

Profile of a Graduate Capacities: Product Creation

Grade 4 Science Curriculum Overview

2024-2025

<p>Unit 1 <i>Earth's Systems: Processes that Shape the Earth</i></p>	<p>In this unit, Grade 4 students will explore the dynamic processes that shape Earth's surface over time, including the role of rock formations, fossils, weathering, and erosion. Students will examine patterns in rock layers and fossils to understand how landscapes change and investigate the effects of natural processes like water, wind, ice, and vegetation on the Earth's surface. The unit also focuses on the importance of maps in recognizing patterns in Earth's landforms and natural hazards, while challenging students to think critically about how human-engineered solutions can reduce the impact of these natural processes.</p> <p>Through a combination of Mystery Science investigations, additional hands-on activities, and data analysis, students will engage with scientific concepts such as how rock layers and fossils provide clues to past environments, how weathering and erosion reshape the land, and how engineers work to protect people from natural disasters. By the end of the unit, students will have a deeper understanding of the forces shaping Earth's surface and the role of engineering in minimizing the effects of geological events like earthquakes, floods, and volcanic eruptions.</p> <p>Profile of a Graduate Capacities: Design</p>
<p>Unit 2 <i>Energy Transfer by Collision & Electricity</i></p>	<p>This Grade 4 science unit introduces students to the foundational concept of energy and how it causes change in the world around us. Students begin by observing everyday phenomena to identify and describe different types and forms of energy, such as kinetic, potential, light, sound, heat, electrical, and chemical. Through engaging demonstrations, multimedia resources, hands-on activities, and read-alouds, students develop a concrete understanding of how energy can be seen and felt in their daily lives. Select lessons from Mystery Science are incorporated to help students explore energy-related phenomena in accessible, real-world contexts. Activities like energy scavenger hunts, flashlight and sound demonstrations, and connections to music and literature help students explore cause and effect relationships—reinforcing the core idea that energy is the ability to cause change.</p> <p>Building on this knowledge, students investigate how energy and motion are related. They explore how speed and mass affect kinetic energy through ramps, marbles, and real-world applications like roller coasters. The unit then progresses to energy transfer, where students discover how energy moves from one object or place to another. Through circuit building with Snap Circuits, heat spinner experiments, and "Power Stations" labs, students observe energy moving through light, heat, sound, and electricity. Aligned with NGSS performance expectations, this unit is designed to cultivate curiosity and scientific thinking through observation, experimentation, and collaborative inquiry—laying the groundwork for deeper understanding of physical science concepts in the grades ahead.</p> <p>Profile of a Graduate Capacities: Design, Self-Awareness</p>
<p>Unit 3 <i>Plants & Animals-Structure , Function & Information Processing</i></p>	<p>In this engaging life science unit, Grade 4 students explore the fascinating ways plants and animals have developed special structures that help them survive in their environments. The journey begins with an anchor phenomenon that challenges the idea of "survival of the fittest": how can slow-moving animals like the sloth and the horseshoe crab survive in the wild? Students kick off the unit by observing sloths and making initial claims about their survival strategies, which they revisit and revise as they uncover more evidence. Through hands-on experiments, interactive Mystery Science videos, and purposeful readings, students investigate both the internal and external structures of a variety of animals and plants. They examine how body parts work together as systems to support survival, growth, behavior, and reproduction—whether it's the claws of a tiger, the roots of a tree, or the sensitive hearing of an owl.</p> <p>As the unit progresses, students learn how animals use senses, memories, and instincts to gather and respond to information from their environments. From camouflaged frogfish to highly sensory raccoons, students discover that organisms don't just survive—they adapt in</p>

Grade 4 Science Curriculum Overview

2024-2025

	<p>incredible ways. They also learn that plants, like animals, have structures and responses that support their survival, such as growing toward sunlight or transporting water through internal tubes. The unit culminates in a transfer task centered on the horseshoe crab, a living fossil that has endured for over 445 million years. By the end of the unit, students will be able to explain how structures and behaviors—some surprising, some familiar—have enabled plants and animals to thrive across time and ecosystems.</p> <p>Profile of a Graduate Capacities: Design</p>
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<p>Unit 1 <i>Properties of Light & Sound</i></p>	<p>This Grade 5 unit explores the properties of light and sound through engaging, hands-on phenomena and inquiry-based learning. Students develop foundational understanding of wave properties and the interactions of waves with materials. Through activities such as using lenses to focus sunlight, building models of the eye, and experimenting with prisms and mirrors, students examine how light behaves—including concepts of reflection, refraction, and the visible spectrum. The unit includes lessons on vision and optical tools, helping students connect how human eyes perceive light and how lenses can correct vision. Students investigate the difference between convex and concave lenses, build eye models, and apply their learning to real-world problems through a transfer task on optometry.</p> <p>The sound portion of the unit emphasizes how vibrations create sound waves, how sound travels through different materials, and how humans and devices can encode and decode information using sound patterns. Students conduct experiments with cup telephones, visual and auditory codes, and wave modeling with ropes to understand how frequency and amplitude affect pitch and volume. Through NGSS-aligned Mystery Science lessons and custom-designed activities, students also investigate sound in space, the role of air in vibration transmission, and resonance phenomena. By the end of the unit, students can model and explain how light and sound travel, how they interact with matter, and how technologies leverage wave properties for communication and problem-solving.</p> <p>Profile of a Graduate Capacities: Design</p>
<p>Unit 2 <i>Earth & Space</i></p>	<p>This Grade 5 Science unit engages students in understanding how Earth's movements influence day/night cycles, seasonal patterns, and gravitational forces. Throughout the unit, students will investigate Earth's rotation and its effects on day and night using models, text-based evidence, and interactive activities like globe and flashlight demonstrations. They will also explore time zones and analyze how Earth's rotation causes different locations to experience different times of day. As they transition to learning about seasonal patterns, students will discover how Earth's axial tilt and orbit lead to varying sunlight angles and changes in the length of daylight throughout the year. They will model the cause of seasons and examine extreme variations in daylight at the poles. Finally, students will explore gravity, investigating its role on Earth and other celestial bodies, and how it affects movement, weight, and planetary orbits within the Solar System. Through hands-on experiments, data analysis, and a targeted Mystery Science activity, students will gain a better understanding of how Earth's physical properties affect things around them locally and globally.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p>Unit 3 <i>Matter & Energy in Organisms and Ecosystems</i></p>	<p>Through four interconnected concepts—Roles in an Ecosystem, Plants and Photosynthesis, Energy Flow in Ecosystems, and Matter Cycling in Ecosystems—students develop a deeper understanding of how organisms depend on each other and their environment to survive. Early in the unit, students learn how producers, consumers, and decomposers each play unique roles in sustaining ecosystems. Using videos, vocabulary exercises, and interactive activities such as building food chains and webs, students construct models to visualize how energy moves from the sun through various organisms. A nature walk reinforces these roles through real-world observation and data collection.</p> <p>The second concept centers on photosynthesis, guiding students through hands-on labs that simulate how different factors affect plant growth. Students apply scientific inquiry skills to design and conduct experiments, analyze data, and communicate findings, all while deepening their understanding of how plants use air, water, and sunlight to produce food and oxygen. Students also build a model of the carbon-oxygen cycle to explain how matter is conserved during photosynthesis. As the unit progresses, students dissect owl pellets to trace energy transfer through trophic levels and create food webs from familiar meals, connecting ecosystems to everyday human choices.</p>

In the final concept, students investigate how matter cycles through ecosystems, emphasizing the roles of the water, carbon-oxygen, and nitrogen cycles. A creative poster project allows students to model these processes visually. To wrap up the unit, students monitor decomposition firsthand, using a banana peel investigation and outdoor scavenger hunts to identify real decomposers and their function. The unit culminates in a performance-based assessment where students apply their knowledge to a real-world scenario—evaluating a proposed ecosystem for growing food on Mars. By the end of the unit, students can explain how energy and matter cycle through ecosystems and how human actions can support or disrupt this balance.

Profile of a Graduate Capacities: Analyzing

Grade 6 Science Curriculum Overview

2024-2025

<p>Unit 1 <i>Thermal Energy</i></p>	<p>This 6th grade science unit, adapted from OpenSciEd, explores how different materials and design features affect thermal insulation. Students begin by comparing the rate of temperature change in a standard plastic cup versus a commercially marketed insulated cup. They investigate how variables such as lid design, wall thickness, and the presence of openings influence heat transfer through conduction, convection, and radiation. Through hands-on investigations and simulations, students discover that drinks warm up due to the absorption of radiant energy and the transfer of thermal energy from the surrounding environment, then use this understanding to engineer a container that meets specific performance criteria.</p> <p>Profile of a Graduate Capacities: Design</p>
<p>Unit 2 <i>Weather and Climate</i></p>	<p>In this unit, students will learn how weather forms as a result of the complex interactions between temperature, humidity, and air pressure. Through the study and creation of forecasts they will understand how other conditions play a role in weather. Additionally, students will learn how tools and technology are used to create forecasts and how these forecasts can be used both locally and globally. Working both independently and with their peers, students will practice real world skills in predicting and interpreting the weather. Students will apply their knowledge of weather, weather patterns and the cause and effect relationships of weather and weather systems to a culminating project investigating changes in Earth's climate. Students will be required to use graphs to interpret data and use this data to justify their claims regarding the future of Earth's climate, citing specific references to various locations around the world. This unit was adapted from OpenSciEd.</p> <p>Profile of a Graduate Capacities: Analyzing, Citizenship</p>
<p>Unit 3 <i>Cells & Systems</i></p>	<p>In this unit, students explore how the human body repairs itself after an injury. The learning journey begins with a real-world scenario: a middle school student who needed stitches, pins, and a cast after an accident. By analyzing doctor reports and developing initial models, students investigate what happens inside the body during the healing process. Students then dive deeper, discovering that our bodies are made of cells that work together to help us move and function. Through hands-on investigations, they examine how cells create new cells, what they need to grow, and how different body systems work together to heal injuries. By revisiting their initial models and analyzing a timelapse of a healing wound, students apply their learning to explain the process of healing. Finally, they extend their understanding to explore how children grow into adults, connecting their knowledge of healing to growth at growth plates in bones. This unit is adapted from OpenSciEd, a research-based science curriculum designed to engage students in figuring out real-world phenomena through inquiry and collaboration.</p> <p>Profile of a Graduate Capacities: Analyzing</p>

Grade 7 Science Curriculum Overview

2024-2025

<p>Unit 1 <i>Ecology and Human Impact</i></p>	<p>This unit will focus on ecosystem dynamics as students investigate how changes to an ecosystem can have far-reaching effects. The unit will begin with an environmental phenomenon that students will work to decipher through their content investigations. Students will develop a model of an ecosystem, investigate the interdependence of the biotic and abiotic factors, and recognize how just one change can alter the balance of an environment. Students will further investigate ecosystem dynamics by performing an experiment on the effect of certain chemicals on aquatic environments. In doing so, students will be able to quantify how different concentrations of widely used pollutants can damage our local aquatic ecosystems and use this data to support their explanation for the environmental phenomenon that launched this unit. Students will engage in a Field Study of Bauer Park to assess the health of that ecosystem. The culminating experience will ask students to develop and promote a pollution mitigation plan to help decrease water pollution in Madison, using scientifically-based justifications for their claims. This unit answers the guiding question, "What effect do changes in the physical and biological components of an ecosystem have on the overall health of that ecosystem?"</p> <p>Profile of a Graduate Capacities: Design, Citizenship</p>
<p>Unit 2 <i>Genetics</i></p>	<p>Through the examination of several natural phenomena related to the evolution of adaptation in organisms, students will craft evidence-based explanations for traits that enable organisms to survive in their environment. Students will engage in a variety of simulations and examine case studies as they uncover the principles of natural selection that result in large variety of differences within and between species. As a foundation to this study, students will learn the basics about the genetic code and how sexual & asexual reproduction and genetic mutation give rise to the variations that are crucial for the success of populations.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p>Unit 3 <i>Geologic Processes</i></p>	<p>This unit will begin with students examining "Why is Mt. Everest growing taller?" Students will need to apply their understanding of geologic processes to propose an answer to this mystery and justify their solution with scientific evidence. Throughout this unit, students will be exploring various geologic processes such as continental drift, plate tectonics, rock strata formation over time, distribution of Earth materials, earthquakes and volcanoes and apply their understanding of the processes to natural phenomena. Students will also discover the process of how a scientific theory evolves and becomes accepted by examining the history of geologic discoveries and how these understandings helped us to recognize patterns that allow us to predict future geologic events. Students will use maps and data to provide evidence for their claims as they explain how geologic processes shape the Earth, past, present and in the future.</p> <p>This unit creates a picture of the geologic evolution of our planet. This unit answers the guiding question, "What processes cause the Earth's surface to change?"</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p>Unit 4 <i>Metabolic Reactions</i></p>	<p>This unit on metabolic reactions is adapted from OpenSciEd and begins with students investigating a real case study of a middle school girl named M'Kenna, who visits her doctor with symptoms like trouble concentrating, headaches, stomach issues after eating, low energy, and unexplained weight loss—even though she seems to eat a healthy diet. Her case raises questions about what might be going wrong inside her body and why.</p> <p>To figure this out, students examine evidence from M'Kenna's case, including doctor's notes, growth charts, endoscopy results, and microscope images. They also conduct lab experiments and use digital tools to learn how food moves through the body and is broken</p>

Grade 7 Science Curriculum Overview

2024-2025

	<p>down, stored, and used. By working to explain M’Kenna’s symptoms, students uncover what happens to food after we eat it and how problems in body systems can lead to health issues.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 5</u> <i>Engineering and Design</i></p>	<p>Student will apply their understanding of the functionality of simple machines, that they gained during several inquiry-based experiments, to devise a chain reaction machine. The Engineering Design Process that students have utilized in prior grades will guide their planning and design through several iterations as they work to devise a machine that will complete a given task. At the conclusion of the unit, students will present their machine to the class and explain the physics behind each of the simple machines utilized in their design. This unit is completed if there is additional time available at the end of the school year as it is a supplemental unit to Grade 8: Forces in Motion.</p> <p>Profile of a Graduate Capacities: Design</p>

Grade 8 Science Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Forces and Motion</i></p>	<p>By performing several investigations that demonstrate the laws of physics, students will develop an understanding of the forces that are at work everyday in their lives. Students will begin the unit by being challenged to create a working roller coaster that meets a set of requirements. As students engage in hands-on, inquiry-based experiences they will uncover not only how their roller coaster demonstrates the laws of physics in its performance, but also how our world operates according to these laws. In order to engage in, and quantify how Newton's Laws impact the world around us, students will apply their understanding of math and graphical analysis to solve physics problems and communicate experimental results. Students will demonstrate their understanding of Newton's Laws in regards to forces and motion when they complete a Mars Mission task to design, construct, test and revise a rover and lander. At the end of the unit, students will tie together all of the concepts they have investigated as they complete their final unit model to demonstrate their level of understanding of the concepts taught in the unit, and answer content and design process related questions.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u>Unit 2</u> <i>Astronomy</i></p>	<p>Students will demonstrate their understanding of how the relationship between Earth, Sun, and Moon cause the patterns and phenomena we experience here on Earth as they explore these celestial bodies and their place in the universe. Students will develop an understanding of Earth's position and movement through space, the impact of gravity and inertia, the reasons for the seasons, moon phases, eclipses, and tides. Students will make scientific discoveries through inquiry-based laboratory investigations, virtual labs, and problem-solving challenges. Students will be asked to create models that will serve to correct misconceptions using scientific claims that are justified with evidence and data and ultimately make their learning visible and to close the unit, they will create and deliver a narration to a science video featuring the Earth, Moon and Sun in motion. The unit answers the guiding question, "How are we connected to the patterns we see in the sky and space?"</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 3</u> <i>Chemistry</i></p>	<p>Students will develop an understanding of the structure of matter at the atomic level, including how atoms combine to form molecules, how substances can be identified by their properties, and how chemical reactions involve the rearrangement of atoms to create new substances with different properties, emphasizing the concept of conservation of mass during chemical reactions. Students will be able to synthesize and apply these concepts to laboratory experiences where they will need to identify if a chemical reaction has occurred and analyze reactions to determine the reactants, products, and types of solutions produced. Students will model chemical reactions and create balanced equations to illustrate the atomic and molecular changes that occurred. Additionally, students will gather and make sense of information to describe that synthetic materials come from natural resources and impact society.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 4</u> <i>Invisible Energy: From Vibrations to Voltage</i></p>	<p>Students will explore how energy and information move through waves and fields. They model wave behavior and learn how wave amplitude relates to energy. Students will investigate how waves reflect, absorb, or transmit through materials and compare analog and digital signals to see why digital is more reliable for communication.</p> <p>The unit also connects to life science as students learn how sensory receptors detect stimuli and send messages to the brain. Finally, students explore electric and magnetic forces, conducting investigations to see how these invisible fields work and how their strength can be changed.</p>

Grade 8 Science Curriculum Overview

2024-2025

	<p>By the end of the unit, students will understand how waves and forces shape both natural phenomena and human-made technologies.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
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Biology Honors Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Biochemistry</i></p>	<p>Students will begin their study of Biology by engaging in scientific investigations that allow them to hone their laboratory skills and refine and apply their understanding of proper experimental design. Through the lens of biochemistry, students will work through several complex laboratory experiments. Ultimately, students will plan and conduct their own experiment to develop a deeper understanding of the processes and properties that determine the function of macromolecules. Throughout this unit, students will learn the four major categories of macromolecules and their structures and functions and begin to uncover why these molecules are essential for organisms. As students move through this year of a molecular-based biology course, they will continually engage in content that requires an understanding of macromolecules. Students will not only apply prior knowledge of macromolecules to new situations, but also enhance and deepen their understanding of biochemistry as the year progresses.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence</p>
<p><u>Unit 2</u> <i>The Cell: Structures, Functions, and Feedback</i></p>	<p>Students will explore the cellular processes that govern organisms. Beginning with case studies that involve errors in cell functions, students will uncover basic cell types, organelles, and how the molecular structure of the cell membrane allows material to pass into and out of the cell. Students will use microscopes to examine cellular structures, compare and contrast cell types. The levels of organization and the organization of cells into tissues, organs, systems and organisms will allow students to go from microscopic to macroscopic focus. Lab experiments will help them visualize the movement of water into and out of the cell as it works to maintain homeostasis. Ultimately, students will return to the analysis of case studies as they apply their understanding of cell structure and function to scenarios that people frequently experience that are part of feedback mechanisms controlled by cell processes.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 3</u> <i>Inheritance</i></p>	<p>Students will explore the molecular basis of inheritance of traits as they apply their understanding of cellular organelles and processes to how organisms pass traits from parents to offspring. Beginning with the study of the cell cycle, students will take a deeper dive into the cell as they learn about the structure and function of DNA and RNA, control of cellular reproduction and inheritance. Students will use basic mathematical probability to determine the likelihood of offspring expressing or carrying genes. Students will also learn about mechanisms such as mutation and nondisjunction that can result in unexpected changes to the genetic or chromosomal makeup of organisms. Ultimately, students will use all of the knowledge in this unit to analyze and design a model that explains how DNA sequence impacts protein synthesis and the expression of traits.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 4</u> <i>Energy and Matter in Ecosystems</i></p>	<p>Students will explore ecosystems through the macroscopic lens of ecosystem dynamics and then from the molecular level when they examine the processes that sustain life on Earth. Students will investigate what factors lead to a balanced, healthy ecosystem and, through a case study, learn about how ecosystems become unbalanced and the factors that cause this disruption. In doing so, students will need to apply their understanding of the cellular processes and chemical reactions, analyze data and consider what it means to have balance in an ecosystem.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 5</u> <i>Mechanisms of Evolution</i></p>	<p>The final unit brings together several concepts studied during the year. As students engage in applying their understanding of genetics and inheritance to the mechanisms of evolution, they will explore the genetic basis of natural selection as well as the scientific evidence for evolution. As students analyze phylogenetic trees, adaptations, and examples of natural selection, they will be synthesizing their knowledge of molecular biology, inheritance, and populations. In order to demonstrate their understanding of the dynamic process of</p>

Biology Honors Curriculum Overview

2024-2025

	<p>evolution, students will analyze examples of natural selection in species to make and justify scientifically-based claims regarding the mechanisms that drove the evolution of the species.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
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Biology Level 2 Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Ecology and Ecosystems</i></p>	<p>This unit introduces students to the broad fundamental principles governing living things. Students will explore the integral parts of an ecosystem, specifically the linear flow of energy as it moves within and between organisms. Students will learn about selective pressures driven by relationships among and between different organisms, and nonliving factors within the biosphere that affect populations. Students will explore population dynamics influenced by limiting factors such as predator-prey relationships, climate, and availability of natural resources. Students will investigate what factors lead to a balanced, healthy ecosystem and, through a case study, learn about how ecosystems become unbalanced and the factors that cause this disruption. Through collaborative work, they will develop and revise a model to explain an anchoring phenomenon, and use this model to make predictions about related phenomena. By the end of the unit, students will have a deeper understanding of the essential processes that sustain life on our planet and the delicate balance between matter and energy within ecosystems.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 2</u> <i>Energy Flow in The Earth System</i></p>	<p>In this unit students will explore the interconnected processes of photosynthesis and respiration, and how these processes play a crucial role in the cycle of matter within the biosphere. They will learn how matter is constantly moving and being recycled within ecosystems, and how it is essential for the survival of living organisms. Additionally, students will discover the cyclical nature of matter in contrast to the flow of energy, and how physiological changes in organisms can affect this balance. Through collaborative work, they will develop and revise a model to explain the Feeding Frenzy anchoring phenomenon, and use this model to make predictions about related phenomena. By the end of the unit, students will have a deeper understanding of the essential processes that sustain life on our planet and the delicate balance between matter and energy within ecosystems.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 3</u> <i>Cellular Transport</i></p>	<p>This unit aims to deepen students' understanding of the vital role played by cell transport in the functioning of living organisms. Through an exploration of cell structure and function, students will gain a grasp of the intricate physiological processes that occur within and between cells. They will come to appreciate how the interactions and communication between cells form the basis of higher levels of organization, from tissues to organs to whole organisms. By delving into topics such as the regulatory function of the cell membrane and the concept of solubility, students will gain a deeper understanding of the fundamental importance of cell transport in sustaining life. Ultimately, this unit will extend students' learning in unit 1 and 2 to demonstrate the intimate connection between cellular interactions and the broader interactions and communication among and between organisms.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>

Chemistry for Health Science Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Aqueous Solutions</i></p>	<p>Unit 1 will focus on the characteristics of aqueous solutions. Students will explore the polarity of water and its relevance to body chemistry, electrolytes, diffusion and osmosis, osmotic pressure (isotonic, hypertonic, and hypotonic solutions for intravenous application), pH and buffers. Emphasis will be on the importance of ions in the body and units of concentration used in intravenous solutions (percent, parts per million, and molarity). As a culminating experience, students will research the application of solutions, diffusion, and osmosis in the human body and/or medical field and present their findings to the class.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 2</u> <i>Introduction to Organic Chemistry and Biochemistry</i></p>	<p>As students engage in a variety of hands-on laboratory experiments, they will be developing skills necessary for laboratory investigations in a chemistry course while also learning about the types of molecules that are essential for life. These skills and understandings will support students as they advance in this course and any future chemistry courses. Content emphasis will be on the structure of organic compounds, how different functional groups impact the properties of organic compounds, and types of macromolecules in the human body. To demonstrate their ability to apply their understanding from this unit, students will research the application of organic compounds to health science.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Product Creation</p>

Chemistry Level 2 Curriculum Overview

2024-2025

<p>Unit 1 <i>Classification and Properties of Matter</i></p>	<p>Students are introduced to Chemistry through the study and classification of matter and its properties at the macroscopic level. Students will become familiar with the language of the course, various laboratory techniques, safety etiquette, elements of the Periodic Table and basic chemical compounds. Students will perform laboratory investigations and observe chemical phenomena allowing the students to distinguish between chemical and physical changes. Students will make precise measurements and use both qualitative and quantitative observations to process experimental data.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence</p>
<p>Unit 2 <i>Atomic Structure and Electron Structure</i></p>	<p>Students explore the Periodic Table as an organizing framework for the fundamentals of chemical behavior. Students take a deeper dive into their understanding of subatomic particles, the relationship between the particles and their relevance to atomic mass and isotopes. Students will describe the quantum mechanical model of the atom and an in depth study of the electromagnetic spectrum as the anchoring phenomenon will lead students to develop a model for the electronic structure of the atom. By evaluating electron configuration and orbital diagrams, students will explain Periodic Law. Students will apply their understanding of periodic law to interpret and predict properties of elements including ionization energy, electronegativity, and atomic radius and their relationship to the electron structure of each element.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence, Self-Awareness</p>
<p>Unit 3 <i>Chemical Bonding & Intermolecular Forces</i></p>	<p>Students will focus on bonding in ionic and covalent compounds as a continuum ranging from equal sharing of electrons to an effective transfer of valence electrons from one atom to another. The degree of electron sharing impacts bond type and is predicted through evaluation of electronegativity, a periodic property, and the differences in electronegativity between bonding atoms. Students, through constructing Lewis dot diagrams, will show how electrons are shared in covalent bonds. Students predict the shapes of small molecules as well as molecular polarity using two dimensional Lewis Structures and the Valence Shell Repulsion Theory as the basis for their predictions. Students use this knowledge to identify the intermolecular forces present in a molecule and how these forces explain and predict the physical and chemical properties of that molecule. The unit will then explore the application of this phenomenon to everyday applications.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p>Unit 4 <i>Nomenclature and Types of Reactions</i></p>	<p>In Unit 4, students focus on a study of nomenclature, the highly structured process of writing names and formulas of ionic compounds, molecular compounds, and organic compounds. Next, they will apply the nomenclature they learned to help develop formulas within chemical reactions. Students will continue by learning how to balance chemical equations and then identifying the types of reactions by looking given reactants. To finalize students will be asked to predict the states of matter of reactants and products, to predict the products of given reactions based on the observations of the reactions and classify the types of reactions observed.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p>Unit 5 <i>Chemical Quantities</i></p>	<p>In Unit 5, students begin to take an in depth look at chemical quantities in order to begin developing a better understanding of the quantitative properties of matter and eventually chemical reactions. Students begin by learning mathematical approach to problem solving. From there, students will complete simple conversions between moles, mass, and particles of a certain substance. Based on the concept of the mole, students will be able to determine the percent composition of a substance and deduce the empirical and molecular formula of an unknown hydrate.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence</p>

<p><u>Unit 6</u> <i>Stoichiometry of Chemical Reactions</i></p>	<p>In Unit 6, the previous learnings of Units 4 and 5 are brought together as students begin to quantify substances that react and are produced in a full chemical reaction. Students begin by learning how to apply molar ratios from a balanced equation to use as a conversion factor to compare one substance in a chemical reaction to another. They expand on this by comparing reactants and products in terms of mass, moles, and particles. Students will continue to learn what a limiting reactant and what an excess reactant is, as well as using these data to accurately predict a theoretical yield from a chemical reaction and determine the amount of excess reactant remaining at the conclusion of a chemical reaction where an excess reactant occurs. The end of the unit concludes by determining percent yields of chemical reactions both theoretically and experimentally.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence</p>
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Conceptual Chemistry Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>The Study of Matter</i></p>	<p>The study of matter and the periodic table are the focus of this first unit in Conceptual Chemistry. Students will understand how matter is classified and the role of the periodic table in the organization of matter. Students will understand how matter is organized using Bohr models and Lewis structures. Students will explore how chemical formulas are derived and named. Students will use the periodic table as a reference to calculate molar mass. Students will engage in a variety of activities that will emphasize scientific inquiry skills such as collecting, analyzing, and communicating data with tables and graphs as well as making claims that are supported with data and evidence.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 2</u> <i>Chemical Reactions</i></p>	<p>Chemical reactions are the focus of this unit in Conceptual Chemistry. Students will understand how substances change and they will explore the Law of Conservation of Matter as they perform and analyze chemical reactions. Students will balance equations and apply their understanding of the periodic table and periodic trends to the types of reactions and the reactivity of different elements. Students will engage in a variety of laboratory experiments that will emphasize scientific inquiry skills such as collecting, analyzing, and communicating data with tables and graphs as well as making claims that are supported with data and evidence. Students will experience activities that will require them to follow safety protocols and appropriately use laboratory equipment. Students will work with mathematical conversions, commensurate with the level of challenge and rigor found in Algebra 1.</p> <p>Profile of a Graduate Capacities: Analyzing</p>

Conceptual Physics Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Kinematics</i></p>	<p>Students will explore the relationship between forces on an object and the motion of that object. Students will examine how physics operates in everyday life as well as the objects they create in class. Students will engage in lessons that challenge them to use the scientific process as they perform several inquiry-based experiments to uncover and investigate fundamental principles of physics, such as acceleration and velocity. Students will practice important science skills such as metric system measurements and conversions as well as creating and analyzing graphs.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 2</u> <i>Forces and Energy</i></p>	<p>Students will explore the relationship between forces on an object and the motion of that object. Students will examine how physics operates in everyday life as well as the objects they create in class. Students will engage in lessons that challenge them to use the scientific process as they perform several inquiry-based experiments to uncover and investigate fundamental principles of physics, such as acceleration and velocity. Students will practice important science skills such as metric system measurements and conversions as well as creating and analyzing free body diagrams. These topics will carry over into further Physics classes.</p> <p>Profile of a Graduate Capacities: Design</p>

<p><u>Unit</u></p>	<p>Throughout this Environmental Studies course students will learn the dynamic interaction between Earth's four spheres and the impact humans have on the environment. They will learn how to analyze local and global environmental issues through a wide variety of perspectives. Students will develop the skill of fully analyzing environmental issues through the lenses of: Politics, Economics, Society, Technology, Law and the Environment, by applying the PESTLE analysis tool. Throughout the course, students will understand the political forces connected to many environmental issues and consider the economic impact of decision makers, technological innovations and the varying impact on global and local stakeholders. Students will learn how to keep the earth healthy, the amazing scientific innovations that are occurring throughout the world and the varying impact people can have on the environment. The goal of the course is to empower students to deeply analyze, interpret or critique complementary and competing approaches, experiences, and world views to develop an empathetic perspective on local and global environmental issues.</p> <p>Profile of a Graduate Capacities: Analyzing, Alternate Perspectives</p>
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Infectious Disease Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Outbreak!</i></p>	<p>This introductory unit will expose students to the chain of infection and the epidemiological triad by which all infectious diseases operate. This will serve as a foundation for students to research one disease through the lens of an epidemiologist by developing chain of infection and epidemiological triad models. Topics to be explored include: types of pathogens, factors that contribute to the spread of disease, and mechanisms of infection. Special thanks to Dr. Linda Niccolai and Dr. Danyell Stewart for their assistance in the development of this course. This unit should take approximately 5 weeks.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 2</u> <i>The Agent</i></p>	<p>Students will explore the world of microbiology as they investigate microbes to better understand how pathogens are able to cause disease, become resistant, and spread through vectors. Students will be able to classify and differentiate various types of pathogens with an emphasis on treatment and prevention of different pathogenic illness. Students will utilize standard laboratory procedures, such as gram-staining and bacterial culturing, including interpretation of the zone of inhibition and microscopic analysis, as they analyze a case study of a person suffering from a mysterious illness. Students will grapple with global issues with regard to the factors that influence the susceptibility of different countries to the spread of disease as well as how globalization has increased exposure to pathogens. Additionally, students will engage in discourse about the various societal issues impacting disease transmissions such as the availability of medicines for treatment and prevention as well as the ongoing concerns about vaccines and overuse of antibiotics and the associated consequences. Ultimately, students will synthesize their understanding of infectious disease, treatment, and transmission as they analyze and diagnose a patient and propose a scientifically-supported prevention plan.</p> <p>Profile of a Graduate Capacities: Inquiry, Analyzing</p>

<p>Unit 5 <i>Work and Energy</i></p>	<p>Students will explore three different types of mechanical energy: kinetic energy, potential gravitational energy, and potential elastic/spring energy as well as conservation of energy, the work-energy theorem and power. Students will begin with analyzing the three common types of mechanical energy (kinetic, potential gravitational, and potential elastic). They will analyze transformation between these types of energy to uncover the conservation of energy theorem. They will continue with analyzing the transformation of work into energy and energy into work in order to uncover the work-energy theorem. Students will also explore the six types of simple machines and their advantages and disadvantages and uncover how to calculate actual mechanical advantage, ideal mechanical advantage and efficiency. They will uncover that the rate the energy transfers is called power. The unit will also include a focus on the change in motion of two objects in a collision or an explosion. Students will connect these ideas to safety features in automobiles (seat belts, air bags, crumple zones). Students will be able to describe how these safety features result in a smaller force on the passengers in a vehicle. As a part of this unit, students will also spend time looking at the importance of units and unit conversions in calculations and understanding of what units and numbers really mean. The unit lasts approximately 3.5 weeks, spending around 2 weeks on Work and Energy and 1.5 weeks on Momentum.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
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Grade 5 Theatre Curriculum Overview

2024-2025

<p><u>Unit</u> <i>Everyone's an Actor!</i></p>	<p>Through this course, students will discover they have the chops to perform on the stage. Starting with warm-up techniques for the mind and voice, students will develop strategies and skills needed to bring a student-selected text to life on the stage. This class is comprised of eighteen 30-minute classes, running for half of the school year.</p> <p>Profile of a Graduate Capacities: Design</p>
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Stage Production Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>To Play or Not To Play?</i></p>	<p>Students will be introduced to foundational elements of theater and the stage. This includes the physical space that is the stage, elements of plays and the theater, as well as various roles and responsibilities within the creation of a stage production. This unit will ultimately end with students analyzing a script to make an informed decision on how they might adapt the script for a modern production. From there, the teacher and students can make a collaborative decision on which adaptation they would like to produce.</p> <p>Profile of a Graduate Capacities: Idea Generation, Collective Intelligence</p>
<p><u>Unit 2</u> <i>Ideas in Action</i></p>	<p>This unit will put ideas into action as students bring their selected adaptation to life. Since this course focuses on the entire experience of a stage production, students will be working in small groups to fulfill the vision of the adaptation. Moving beyond methodologies of acting in a stage production, each crew will devise a plan to execute the various roles and responsibilities related to a stage production (lighting, sound, set, props, costumes, etc.). As students bring this vision to life, they will be rehearsing their adaptation to prepare for a performance. Due to the nature of many moving parts, this unit has been heavily influenced by the DHHS Independent Project course.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>

Grade 4 Spanish Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Mi Clase de Español</i></p>	<p>In this first unit of fourth grade, students will be introduced to their new classroom. Students will be able to share their likes, dislikes, and things they love regarding activities, weather, and other high frequency words.</p> <p>Students will also be able to identify classroom materials, and use basic questions to communicate what they need in their classroom.</p> <p>At the culmination of this unit, students will produce a video recording using the valued super 7 verb list to express what they do and do not have in their backpacks through a video recording.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p><u>Unit 2</u> <i>Amigos y Mascotas</i></p>	<p>In this second unit of fourth grade, the students will explore the themes of friendships and pets. They will be introduced to their first chapter book in Spanish. The focus will be for the students to gain perspectives on how the character feels in relationship to friendships and pets and to investigate how the super 7 high frequency verbs will guide them in analyzing the text to support a growth in language acquisition.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p><u>Unit 3</u> <i>¡Feliz cumpleaños!</i></p>	<p>In this final unit of fourth grade, students will continue reading about Brandon Brown and his desire to have a dog as a birthday gift. Here, students will share their thoughts and predictions about the events in the story while developing the required vocabulary to become party planners themselves.</p> <p>At the culmination of this unit, students will create their own birthday invitation and share the details of a friend's in a recording.</p> <p>Profile of a Graduate Capacities: Product Creation</p>

Grade 5 Spanish Curriculum Overview

2024-2025

<p><u>Unit 1</u> <i>Mi casa ideal</i></p>	<p>In this first unit of fifth grade, students will be using story-telling strategies to promote reading and listening comprehension of the essential super siete verbs. Students will learn about the many Spanish-speaking countries and their capitals to support their own research when they design their dream home in a Spanish speaking country.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>
<p><u>Unit 2</u> <i>Mi Armario</i></p>	<p>In this second unit of fifth grade, the students will be introduced to vocabulary and expressions related to clothing, colors, and personal preferences. Students will learn to describe what they and others are wearing, express their likes and dislikes, and participate in interactive learning experiences. Ultimately, the unit will culminate in the design of a closet for their dream home.</p> <p>Profile of a Graduate Capacities: Product Creation, Self-Awareness</p>
<p><u>Unit 3</u> <i>Un viaje por el mundo latino</i></p>	<p>In this final unit of fifth grade, the students will travel the world to explore Spanish speaking countries. They will experience culture through the eyes of a book character named Renata who travels the world with her magical piñata. The students will develop the skills to look for language patterns that ultimately allow them to tell a story using the same themes and structures they have been working with to learn about Renata, as they continue to explore cultural details about their selected country.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>

Board of Education Regular Meeting
Tuesday, June 3, 2025 7:30 PM

Daniel Hand High School LMC/ ZOOM
286 Green Hill Road
Madison, Connecticut 06443

Subject to Approval

Meeting Minutes

I. Call to Order / Attendance

The regular meeting of the Board of Education was called to order at 7:31 p.m. by Secretary Emily Rosenthal. Mrs. Rosenthal led the Pledge of Allegiance.

Present: Galen Cawley, Seth Klaskin, Maureen Lewis (on Zoom), Steven Pynn, Emily Rosenthal

Also present: Dr. Craig Cooke, Ph.D., Superintendent of Schools; Gail Dahling-Hench, Assistant Superintendent; Heather Dobson, Director of Human Resources; Kathryn Hart, Polson Middle School Principal; Kelly Spooner, Ryerson Elementary School Principal

II. School / Community Session

One member of the public - Cheryl Chiat, 90 Sandalwood Drive – spoke about the high school start time. Comments can be heard in full on the meeting recording posted on the District website.

III. Board of Education Student Representatives' Report

Brooke Anderson and Grace Ackerman

Grace reported on the Junior Awards, trimester three exams, class officers, upcoming events like Summerpalooza, and spring sports. Brooke reported on past and upcoming Senior activities including senior prom, cap and gown distribution, the elementary walk through, Senior Awards night, Senior Brunch, Graduation, and Nite-Out-of-Hand.

IV. Superintendent's Report

Craig A. Cooke, Ph.D.

- Elementary Closings – Dr. Cooke congratulated Principal Spooner and Principal Frost on two excellent closing-of -school ceremonies for Jeffrey and Ryerson.
- Board of Education Student Representative Recognition / Introduction of new Student Representative – Dr. Cooke thanked Brooke for her time on the Board and wished her all the best in her future endeavors. Mr. Klaskin then introduced the new Board of Education Student rep, Katherine Rizzo.
- Staff Recognition – Dr. Cooke introduced Larry Brundrett, Commander of the VFW Post #2096-Madison, who presented Polson Principal Kathryn Hart with the Post's Americanism Award.

V. Board Members' Comments

Mr. Klaskin complemented Principal Spooner on the Ryerson Final Bell closing ceremony.

VI. Audience Response to Information Presented (Ref. Bylaw #9540.10)

No members of the public spoke.

VII. Consent Agenda (Ref. Bylaw #9540.2)

- Line Item Transfers as of May 29, 2025
- Budget Expenditures as of May 29, 2025
- May 2025 Personnel Report

VIII. Action Item: Motion to approve the Consent Agenda

MOTION: by Rosenthal, seconded by Cawley to approve the Consent Agenda.

AYES: Cawley, Klaskin, Lewis, Pynn, Rosenthal

NAYS:

ABSTAIN:

MOTION CARRIED: 5 – 0

IX. Board Committees / Liaison Updates (Ref. Bylaw #9450)

Curriculum and Student Development

Members: Steve Pynn, Chair; Catherine Miller, Mary Ann Connelly

Mr. Pynn gave a report on the meeting that took place on June 2. The meeting included a presentation on the curriculum units up for adoption.

Facilities Committee

Members: Emily Rosenthal, Chair, Steven Pynn, Diane Infantine-Vyce

No report.

Finance Committee

Members: Galen Cawley, Chair, Emily Rosenthal

No report.

Personnel Committee

Members: Maureen Lewis, Chair; Catherine Miller, Mary Ann Connelly

Mrs. Lewis shared they are now in negotiations with the nurses' union.

Policy Committee

Members: Diane Infantine-Vyce, Chair; Maureen Lewis, Galen Cawley

No report.

LEARN Liaison

Mary Ann Connelly

No report.

X. Discuss and take possible action on the Madison Association of Educational Supportive Services (MAESS) collective bargaining agreement (07/01/25 - 06/30/28) (Discussion proposed for executive session).

MOTION: by Lewis, seconded by Rosenthal to approve the Madison Association of Educational Supportive Services (MAESS) collective bargaining agreement (07/01/25 - 06/30/28).

AYES: Cawley, Klaskin, Lewis, Pynn, Rosenthal

NAYS:

ABSTAIN:

MOTION CARRIED: 5 – 0

XI. Action Item: Motion to approve a donation to Polson Middle School from the Polson PTO in the amount of \$2,000 to help fund the Grade 8 Holiday Hill field trip.

MOTION: by Pynn, seconded by Rosenthal to approve a donation to Polson Middle School from the Polson PTO in the amount of \$2,000 to help fund the Grade 8 Holiday Hill field trip.

AYES: Cawley, Klaskin, Lewis, Pynn, Rosenthal

NAYS:

ABSTAIN:

MOTION CARRIED: 5 – 0

XII. Action Item: Motion to approve the minutes of the May 20, 2025 Board of Education Meeting (Ref. Bylaw #9540.9)

MOTION: by Rosenthal, seconded by Pynn to approve the minutes of the May 20, 2025 Board of Education meeting.

AYES: Cawley, Klaskin, Lewis, Pynn, Rosenthal

NAYS:

ABSTAIN:

MOTION CARRIED: 5 – 0

XIII. Future Agenda Items

XIV. Adjournment

MOTION: by Rosenthal, seconded by Cawley to adjourn at 8:19 p.m.

AYES: Cawley, Klaskin, Lewis, Pynn, Rosenthal

NAYS:

ABSTAIN:
MOTION CARRIED: 5 – 0

The Town of Madison does not discriminate on the basis of disability, and the meeting facilities are ADA accessible. Individuals who need assistance are invited to make their needs known by contacting the Town ADA/Human Resources Director, Debra Ferrante, at 203-245-6310 or by email at ferranted@madisonct.org at least five (5) business days prior to the meeting.