Tomah Area School District

High Quality Student Learning
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Essential Learning

Grade/Course: Grade 7 ELA

Essential Knowledge:

Cite textual evidence to support an analysis of what the text says explicitly/implicitly and make logical inferences. (RI&RL)

Summarize texts, from a variety of genres, to determine a theme or central idea and analyze its development over the course of the text. (RI&RL)

In literary texts, analyze how structure, including genre specific features, contributes to the development of themes or central ideas. (RL) In informational texts, analyze the structure an author uses to organize a text, including how the sections contribute to the whole and to the development of themes or central ideas. (RI)

In literary texts, analyze how an author develops and contrasts the point of view, possible biases, and the perspectives of different characters or narrators. (RL) In informational texts, explain how an author's geographic location, identity, and/or culture affect perspective. Analyze how the author distinguishes his or her position from that of others. (RI)

Write text in a variety of modes:

- Write arguments to support claims with clear reasons, relevant evidence and literary theory. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. Use accurate, credible sources.
- Write informative text that examines a topic and conveys ideas, concepts, and information through the selection and organization of relevant content by introducing and developing a topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples, organizing ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
- Write narratives that develop real or imagined experiences or events using relevant descriptive details and well-structured event sequences that organize an event sequence logically. Engage and orient the reader by establishing a context and point of view and introduces a narrator or characters; using techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and characters.

Create writing that utilizes:

- Organization: provide an introduction that creates suspense and anticipation for the reader. Structure of the text supports and clarifies the purpose and topic. Provide a concluding statement appropriate to the mode of writing.
- Transitions: use a variety of appropriate transitions that connect and develop ideas.
- Word Choice (including domain specific): use words, phrases, and clauses to create cohesion and clarify the relationships. Use sensory language to describe experiences and events.

Draw evidence from literary or informational texts to support analysis, reflection, and inquiry. (Apply grade 7 Reading standards)

Present claims and findings, emphasizing significant points in a focused, coherent manner using relevant evidence. Communicate clearly and in an engaging manner, considering the audience, purpose, and situation. Explain purpose of language choices.

Determine or clarify the meaning of unknown and multiple-meaning words and phrases in grade-level reading and content; use context clues, analyze meaningful word parts, consult general and specialized reference materials, and apply word solving strategies (for meaning) as appropriate

- Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
- Use grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word.

Demonstrate contextually appropriate use of the conventions of standardized English grammar and usage when writing or speaking. Discern when and where it is appropriate to use standardized English. Appropriately use and explain the intended purpose of language choice with:

- Phrases and clauses
- Simple, compound, and complex sentences signaling differing relationships among ideas
- Recognizing and correcting dangling modifiers

Demonstrate contextually appropriate use of the conventions of standardized English capitalization, punctuation, and spelling when writing. Discern when and where it is appropriate to use standardized English. Appropriately use and explain the intended purpose in conventions with:

- Commas to separate coordinate adjectives
- Correct spelling

Essential Questions:

1. What do good readers do?
2. Am I clear about what I just read? How do I know?
3. Author's choice: Why does it matter?
4. What makes a story a "great" story?
5. In what ways does creative choice impact an audience?
6. Whose story is it, and why does it matter?
7. What makes collaboration meaningful?
8. Making meaning from a variety of sources: What will help?
9. What makes a presentation "great"?
10. "What I say" versus "how I say it", does it really matter?
11. Why do the rules of language matter?
12. Communicating clearly: What does it take?
13. How does situation affect meaning?
14. How does author's choice impact an audience?
15. When a word doesn't make sense, what can I do?
16. How do I use what I know to figure out what I don't know?

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Essential Learning

Grade/Course: Grade 7 Math

Essential Knowledge:

Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

- Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
    - Describe situations in which opposite quantities combine to make 0.
    - Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
    - Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (–q). Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
    - Apply properties of operations as strategies to add and subtract rational numbers.
- Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
    - Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
    - Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real world contexts.
    - Apply properties of operations as strategies to multiply and divide rational numbers.
    - Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

Analyze proportional relationships and use them to solve real-world and mathematical problems.

- Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
- Recognize and represent proportional relationships between quantities.
    - Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
    - Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
    - Represent proportional relationships by equations.
    - Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, r) where r is the unit rate.
- Use proportional relationships to solve multistep ratio and percent problems

Solve algebraic equations and inequalities with at least one variable.

- Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume

- Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.
- Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

Essential Questions:

1. In what ways can rational numbers be useful?
2. How can algebraic expressions and equations be used to model, analyze, and solve mathematical situations?
3. How can ratios and proportional relationships be used to determine unknown quantities?
4. How does geometry better describe objects?
5. How is probability used to make informed decisions about uncertain events?

Units:

1. The Number System
2. Ratios and Proportional Relationships
3. Expressions and Equations
4. Geometry
5. Statistics and Probability

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Essential Learning

Grade/Course: Grade 7 Science

Essential Knowledge:

Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism.

Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

Gather and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms.

Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

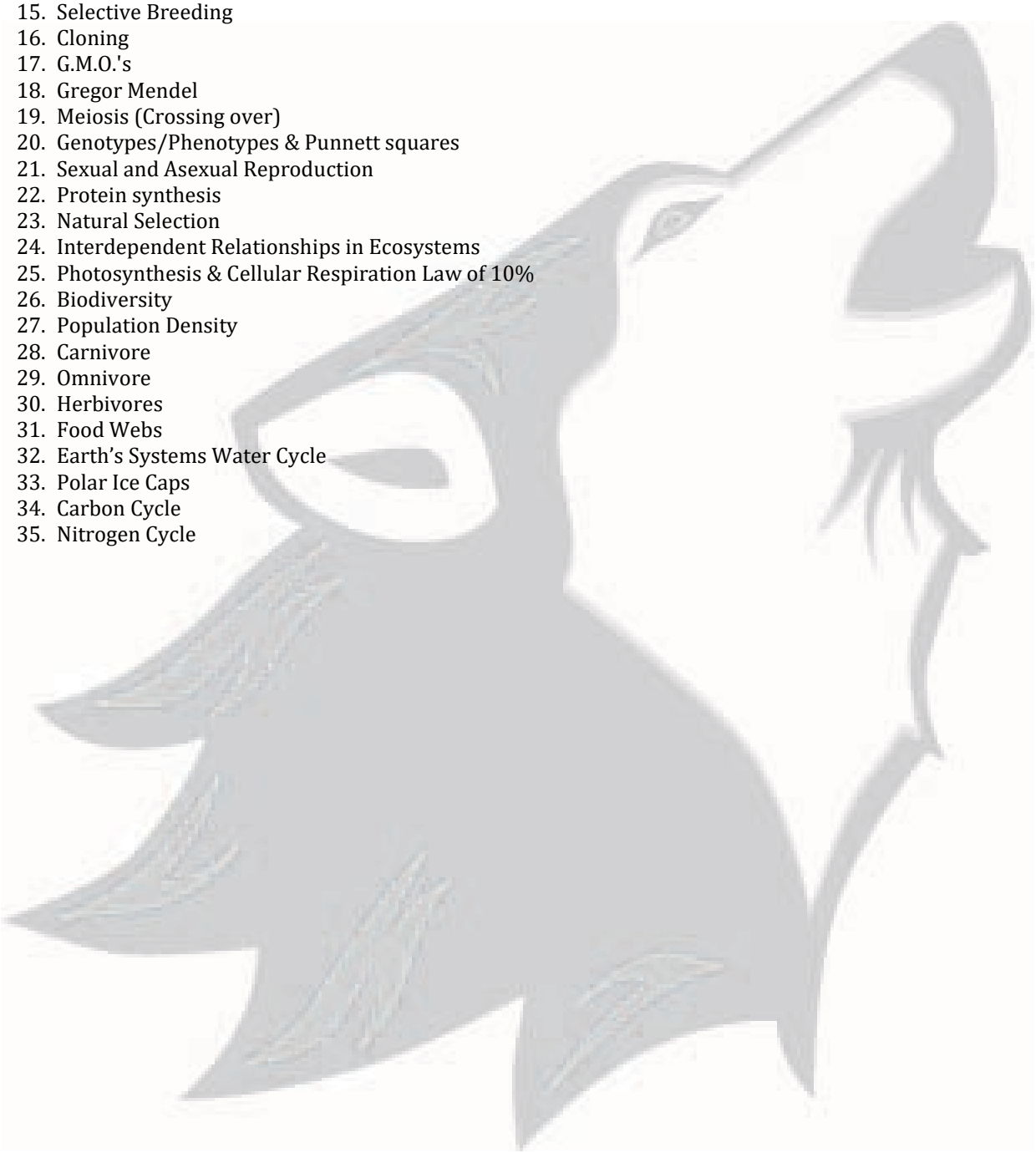
Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

Units:

1. Forces and Motion Unit
2. Balanced and Unbalanced Forces
3. Forces and Motion
4. Newton's Laws of Motion
5. Calculating balanced & Unbalanced forces
6. Force =Mass x Acceleration
7. Kinetic and Potential Energy
8. Ionic and Covalent Bonding
9. Physical and chemical Changes
10. Structure and organization of the Periodic Table of Elements

11. Law of Conservation of Mass
12. Chemical Reactions: Synthesis, decomposition or Replacement Reactions
    a. Ionic and Covalent Bonding, Physical/ chemical Changes
13. M.S. Structure, Function, and Information Processing Levels of organization in organisms: Organelles, Photosynthesis Cellular Respiration, Protein Synthesis, Meiosis-Mitosis
14. MS. Growth, Development, & Reproduction of Organisms, Probability, Gregor Mendel, Punnett Squares, Meiosis, Sexual & Asexual Reproduction
15. Selective Breeding
16. Cloning
17. G.M.O.'s
18. Gregor Mendel
19. Meiosis (Crossing over)
20. Genotypes/Phenotypes & Punnett squares
21. Sexual and Asexual Reproduction
22. Protein synthesis
23. Natural Selection
24. Interdependent Relationships in Ecosystems
25. Photosynthesis & Cellular Respiration Law of 10%
26. Biodiversity
27. Population Density
28. Carnivore
29. Omnivore
30. Herbivores
31. Food Webs
32. Earth's Systems Water Cycle
33. Polar Ice Caps
34. Carbon Cycle
35. Nitrogen Cycle



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Essential Learning

Grade/Course: Grade 7 Social Studies

Essential Knowledge:

Students will analyze human movement and population patterns. The role of population and place, reasons people move, impact of movement as well as urbanization.

- Analyze why populations increase or decrease in various regions throughout the world.
- Analyze the distribution of population patterns at various scales (i.e., local, state, country, region).
- Analyze patterns of migration of various types (e.g., age, sex, ethnicity, race) in the community, state, country, and world.
- Use regions in the world to analyze the role of population shifts in why places change over time.
- Evaluate the impact of migration on the place of origin and the place of settlement.
- Investigate the impact of rural decline and the growth of cities on a place.
- Analyze patterns of urbanization around the world.

Students will evaluate the relationship between identity and place. The practice of using characteristics of place.

- Explain how place-based identities can change places over time.
- Investigate how place-based identity results from the characteristics of a place and can sometimes result in stereotypes of people from a specific place.
- Describe students' perceptions of a place that are based on indirect sources (e.g., television, movies), versus on direct sources (e.g., residing in a place, visiting a place).

Students will identify and analyze democratic principles and ideals. The practice of using origins and foundation of the government of the United States.

- Hypothesize and defend why a specific historically significant person's contribution to the development of the political culture of the United States was important.
- Investigate how principles expressed in the Declaration of Independence, Constitution (including the Preamble and the Bill of Rights) have been applied throughout United States history, including how they may have evolved over time.
- Assess specific protections to individuals outlined in the Wisconsin Constitution and what they mean to local communities and regions of the state.

Students will analyze and evaluate the powers and processes of political and civic institutions. Learning using the topic of power in government.

- Analyze the structure, functions, powers, and limitations of government at the local, state, tribal, and federal levels.

Students will gather and evaluate sources.

- Determine credibility and applicability of a source by considering a variety of factors through the lens of a social studies strand.

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Essential Learning

Grade/Course: Grade 7 Band

Essential Knowledge:

Students will analyze, develop, and convey meaning through the presentation of artistic work.

- Rehearse and demonstrate the ability to sing and/or play expressively, on pitch, and in rhythm, while using proper technique and maintaining a steady beat.
- Perform using expressive qualities and techniques.
- Discuss own ideas and feedback of others to develop strategies to address technical challenges
- Illustrate how the setting and music elements contribute to the context of the music
- Demonstrate an understanding of music from aural traditions and through standard and nonstandard notation through performance.
- Perform collaboratively as a part of an ensemble, demonstrating well developed ensemble skills.
- Perform solos and in small ensembles, contributing performance ideas collaboratively to enhance the performance.
- Demonstrate proper concert etiquette collaboratively in a rehearsal for a variety of musical settings.
- Express musical ideas through verbal, movement, written, artistic, or technological means.
- Demonstrate proper concert/audience etiquette for a variety of musical settings.
- Reflect upon and critique performances using grade-appropriate music vocabulary.
- Categorize musical connections, similarities, and differences.

Essential Questions:

1. How do I march 8-to-5 with marching commands?
2. How do I perform in a Parade Routine?
3. How do I perform in a Football Game Half-Time Show?

Woodwinds/Brass:

1. How do I play the Concert B-Flat Scale?
2. How do I play the Concert C Scale?
3. How do I play the Chromatic Scale?
4. How do I apply technical exercises to scales and concert music?
5. How do I play 16th notes (groups of 4 and patterns)?
6. How do I play with Staccato and Legato/Tenuto Articulation?

Percussion:

1. How do I name notes on a Chromatic Keyboard?
2. How do I names notes of and play Major Arpeggios?
3. How do I transfer arpeggios to reading music?
4. How do I play keyboard music by reading music?

Units:

1. Marching Band Camp
2. Marching Band
3. 1st Quarter Lessons
4. 2nd Quarter Lessons
5. 3rd Quarter Lessons

6. 4th Quarter Lessons
7. Winter Concert
8. Band-O-Rama Concert
9. Spring Concert

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Essential Learning

Grade/Course: Grade 7 Agri-Science

Essential Knowledge:

Students will think and work creatively to develop innovative solutions to problems and opportunities.

- Develop original solutions, products and services to meet a given need.
- Work creatively with others to develop solutions, products and services.

Students will use economic principles to establish and manage an AFNR enterprise.

- Apply principles of capitalism in the business environment.
- Apply principles of entrepreneurship in businesses.

Students will examine the components, historical development, global implications and future trends to the animal systems industry.

- Evaluate the development and implications of animal origin, domestication and distribution.

Students will apply knowledge of plant classification, anatomy and physiology to the production and management of plants.

- Classify agricultural plants according to taxonomy systems.
- Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems.
- Apply energy conversion to plant systems.
- Apply knowledge of plant physiology to plant systems.

Students will examine components of the food industry and historical development of food products and processing.

- Evaluate the significance and implications of changes and trends in the food products and processing industry.
- Work effectively with industry organizations, groups and regulatory agencies affecting the food products and processing industry.

Essential Questions:

1. What is agri-science?
2. What are the three components that make up agricultural education?
3. What could be my SAE?
4. What terminology should I know in order to work in the animal systems pathway?
5. What is considered waste when producing livestock?
6. What specific characteristics differentiate animals from one another?
7. What does a seed need to germinate?
8. What does C. HOPKN'S CaFe Mg mean?
9. What is glupe and what does it have to do with corn and soybeans?
10. What science goes into making food?
11. How does ice turn milk into ice cream?

Units:

1. Intro to Agri-science
2. Animal Science
3. Plant Science
4. Food Science

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Essential Learning

Grade/Course: Grade 7 Exercise and Sports Science (ESS)

Essential Knowledge:

Standard 1

- Throw with a mature pattern for distance or power appropriate to the activity in a dynamic environment.
- Catch with a mature pattern from a variety of trajectories using different objects in dynamic environments or modified game play.
- Foot-dribbles or dribbles with an implement combined with passing in a dynamic environment.
- Execute an underhand serve to a predetermined target for net and wall games.
- Strike with a mature overhand pattern in a dynamic environment for net/wall games.
- Strike an object with an implement to open space in a variety of practice tasks in a dynamic environment.
- Two-hand volley with control in a dynamic environment.

Standard 2

- Execute in a practice task at least one of the following offensive tactics to create open space: stay spread on offense; use a variety of passes, pivots, and fakes; give and go.
- Reduce open space on defense by staying close to the opponent as he/she nears the goal.
- Transition from offense to defense or defense to offense by recovering quickly and communicating with teammates.

Standard 3

- Differentiate between health-related and skill-related fitness.
- Engage in a variety of strength and endurance fitness activities.

Standard 4

- Problem-solve with a small group of classmates.
- Implement safety protocols associated with physical activity, exercise, dance and outdoor environments with the teacher's guidance.
- Demonstrate knowledge of rules and etiquette by self-officiating or following parameters within physical activities (e.g., small-sided games, individual performance).
- Exhibit responsible social behaviors by cooperating with classmates, demonstrating inclusive behaviors, and supporting classmates.

Standard 5

- Demonstrate the importance of social interaction by helping and encouraging others and providing support to classmates.

Units:

1. Football
2. Soccer
3. Fitness
4. Adventure/team building
5. Net games
6. Weight training

7. Floorball
8. Basketball
9. Volleyball
10. Ultimate Frisbee
11. Yard games
12. Games of low organization

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Essential Learning

Grade/Course: Grades 6, 7 & 8 Health

Essential Knowledge:

Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

- Examine how external and internal factors can influence health behaviors.
- Provide examples of how factors can interact to influence health behaviors.
- Examine how one's family, culture, and peers influence one's personal health behaviors.
- Examine how media and technology influence one's own personal health behaviors.
- Examine how one's values and beliefs influences one's own personal health behaviors.

Students will demonstrate the ability to access valid information and products and services to enhance health.

- Describe situations that require accurate health information.
- Locate sources of valid health information from home, school, and community.
- Describe criteria for evaluating resources.

Students will demonstrate the ability to use decision-making skills to enhance health.

- Determine when individual or collaborative decision making is appropriate.
- Demonstrate decision making in health-related situations.
- Predict the impact of each decision on self and others.
- Analyze the outcome of a health-related decision.

Essential Questions:

1. How does my family medical history affect my health?
2. How does my family culture affect my health?
3. How do my peers affect my health?
4. How do media messages affect my health?
5. How does the use of technology affect my health?
6. How do I access valid health information?
7. How do I identify whether the health information is accurate or credible?
8. How do I identify situations where effective decision-making skills are implemented?
9. How do I assess the impact of a decision-making process on health related situations?

Units:

6th Grade:

Mental Health

- Parts of health – Mental/Emotional, Physical, Social.
- Influences on health
- G.R.E.A.T. Program - decision making model

Nutrition

- How the foods I eat affect my health
- What foods I eat compared to the foods I should eat
- How the decisions I make in food choices affect my health

Fitness

- What exercise does for my overall health
- Why is exercise important for my mental, physical, and social health
- How the decision I make about exercising affects my overall health

Human Growth and Development

- How communications skills with others can affect my health
- How the media and what I see and hear affects my health

7th Grade:

Mental Health

- The affect mental health has on my overall health
- Research on mental health diseases/disorders
- Presentation of the disease and disorders

Drugs

- Basic knowledge of drugs
- How media affects my use of drugs
- Research on specific drugs to share with the class

First -Aid

- How the decisions I make in emergency situations can affect myself or others
- What are my responsibilities when confronted with an emergency situation

8th Grade:

Investigative Health

- Finding and using valid health information
- Determining whether resources are credible
- Using media to research valid health information and share with the class

Life Skills

- Finding and using valid consumer health information for real life situations
- Using a decision making model to make real life decisions
- Planning a real life vacation using knowledge of credible web sites, and decision making models.

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Essential Learning

Grade/Course: MS Science of Technology PLTW- GTT

Essential Knowledge:

Students will develop an understanding of the characteristics and scope of technology.

- New products and systems can be developed to solve problems or to help do things that could not be done without the help of technology.
- The development of technology is a human activity and is the result of individual and collective needs and the ability to be creative.
- Technology is closely linked to creativity, which has resulted in innovation.

Students will develop an understanding of the role of society in the development and use of technology.

- Throughout history, new technologies have resulted from the demands, values, and interests of individuals, businesses, industries, and societies.
- The use of inventions and innovations has led to changes in society and the creation of new needs and wants.
- Social and cultural priorities and values are reflected in technological devices.
- Meeting societal expectations is the driving force behind the acceptance and use of products and systems.

Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.

- Technological systems often interact with one another. A product, system, or environment developed for one setting may be applied to another setting.
- Knowledge gained from other fields of study has a direct effect on the development of technological products and systems.

Essential Questions:

1. What does a chemical engineer do?
2. What is the difference between a chemical engineer and a chemist?
3. Where would a chemical engineer work?

1. What is nanotechnology?
2. How many meters are in a nanometer?
3. Why do we want to make or study such small things?
4. How will nanotechnology affect my life?
5. What tools are necessary to “see” and manipulate at the nanoscale?

1. What is the purpose of using a simple or compound machine?
2. What is the difference between a simple and compound machine?
3. If energy cannot be created or destroyed, why do we need to be concerned about our energy sources?
4. What is the relationship between potential energy and kinetic energy?
5. How do subsystems interact to create a system?
6. Why is the design process used when creating new products?

Units:

1. Applied Chemistry
2. Nanotechnology
3. Applied Physics

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Essential Learning

Grade/Course: MS Automation and Robotics PLTW- GTT

Essential Knowledge:

Students will develop an understanding of the cultural, social, economic, and political effects of technology.

- The use of technology affects humans in various ways, including their safety, comfort, choices, and attitudes about technology's development and use.
- Technology, by itself, is neither good nor bad, but decisions about the use of products and systems can result in desirable or undesirable consequences.
- The development and use of technology poses ethical issues.
- Economic, political, and cultural issues are influenced by the development and use of technology.

Students will develop an understanding of and be able to select and use energy and power technologies.

- Energy is the capacity to do work.
- Energy can be used to do work, using many processes.
- Power is the rate at which energy is converted from one form to another or transferred from one place to another, or the rate at which work is done.

Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

- Troubleshooting is a problem-solving method used to identify the cause of a malfunction in a technological system.
- Invention is a process of turning ideas and imagination into devices and systems. Innovation is the process of modifying an existing product or system to improve it.
- Some technological problems are best solved through experimentation.

Essential Questions:

1. What limitations do you think should be placed on the use of robots?
2. What type of robot do you think makes the most significant contribution to our lives today and why?
3. What is the greatest concern that should be considered before converting a factory from a human workforce to a robotic workforce?
4. What impact do you think robots will have on your life in 10 years and in 50 years?

1. Why is it important for you to learn about mechanisms?
2. What is the purpose of being able to change speed, force, torque, direction, and types of motion with a mechanism?
3. Describe where you see mechanisms used in three real-life applications and explain the purpose of using a mechanism for that application.

1. How does automation enhance our daily lives?
2. How can you apply troubleshooting skills that you developed in this lesson to your daily life?
3. How do comments improve a computer program?
4. Why is good communication and teamwork important when solving technological problems?

Units:

1. What is Automation and Robotics?
2. Mechanical Systems
3. Automated Systems

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Essential Learning

Grade/Course: MS Medical Detectives PLTW- GTT

Essential Knowledge:

Students will develop an understanding of and be able to select and use medical technologies.

- Advances and innovations in medical technologies are used to improve healthcare.
- Sanitation processes used in the disposal of medical products help to protect people from harmful organisms and disease, and shape the ethics of medical safety.
- The vaccines developed for use in immunization require specialized technologies to support environments in which a sufficient amount of vaccines is produced.

Students will develop the abilities to use and maintain technological products and systems. Students will develop an understanding of and be able to select and use medical technologies.

- Use computers and calculators in various applications.
- Advances and innovations in medical technologies are used to improve healthcare.

Students will develop an understanding of the characteristics and scope of technology. Students will develop an understanding of and be able to select and use medical technologies. Students will develop an understanding of and be able to select and use agricultural and related biotechnologies.

- New products and systems can be developed to solve problems or to help do things that could not be done without the help of technology.
- Advances and innovations in medical technologies are used to improve healthcare.
- Biotechnology applies the principles of biology to create commercial products or processes.

Essential Questions:

1. What can patient signs and symptoms tell us about what's happening in the human body?
2. How do medical detectives investigate their cases?
3. What does effective teamwork look like?

Units:

1. What is a Medical Detective?
2. Mysteries of the Human Body Systems
3. Murder Mystery

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Essential Learning

Grade/Course: MS Magic of Electrons PLTW- GTT

Essential Knowledge:

Students will develop an understanding of the characteristics and scope of technology. Students will develop an understanding of the core concepts of technology.

- Technology is closely linked to creativity, which has resulted in innovation.
- Technological systems can be connected to one another.

Students will develop an understanding of and be able to select and use energy and power technologies.

- Power systems must have a source of energy, a process, and loads.

Students will develop an understanding of and be able to select and use information and communication technologies.

- The use of symbols, measurements, and drawings promotes a clear communication by providing a common language to express ideas.

Essential Questions:

1. Why are the safety considerations and best practices associated with working in electronics important?
2. How can the periodic table be used to help predict whether a material will be a good conductor?
3. Why do electricians need to measure current, voltage, and resistance when creating a circuit?

1. How are series and parallel electrical circuits similar? Different?
2. Why is it important that those who create and use circuit diagrams use common symbols or conventions?
3. Why is the mathematical relationship expressed through Ohm's Law so important for designing and evaluating electrical circuits?

1. What is the difference between how humans and computers think and make decisions?
2. Why is the understanding of binary and decimal number systems essential to your ability to design combinational logic circuits?
3. What might a design process look like for creating an analog or digital circuit?

Units:

1. What Is Electricity?
2. Electronics
3. Digital Electronics

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Essential Learning

Grade/Course: Grade 7 German/Spanish

Essential Knowledge:

Students can state where they are from.

Students can state where they live.

Students can identify regions/countries where the language is spoken.

Students can identify basic hobbies/free time activities.

Students can state basic likes and dislikes.

Students can identify days, months, and seasons.

Students can identify basic animals.

Students can state my favorite animal.

Students can describe my favorite animal.

Students can identify important holidays.

Students can give simple details about a specific holiday.

Students can compare traditions between cultures.

Essential Questions:

- Where do people live?
- What do you like to do?
- What animals do you like?
- How do people celebrate holidays?

Units:

- German/Spanish Speaking Countries
- Likes and Dislikes
- Animals
- Culture/Holidays