



Students for Life

Harper Creek Middle School

2020-2021

Course Selection Book

The Harper Creek Board of Education approved for the 2020-21 school year, all courses listed in the course catalogs as traditional/seated courses to be adapted for the delivery in a virtual format, as discussed and reviewed. July 13, 2020

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2020-2021 Course Selection Book

Harper Creek Middle School

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Students and Families:

The Harper Creek Middle School Core Course Description Guide offers a comprehensive listing of our school's core and elective offerings, which have been designed as a varied and challenging academic curriculum.

All students are encouraged to take a variety of electives in middle school to explore many interests. In high school, students will develop a multi-year plan for their courses developed around, and consistent with, their Educational Development Plan (EDP). This plan is first developed in 7th grade and should be reviewed and revised each year.

Harper Creek Middle School's primary goal is to provide our students with the skills and competencies needed to be successful citizens and workers in a technological, multi-cultural and dynamic society. This goal can best be achieved through a collaborative partnership with students and families in rigorous pursuit of high levels of achievement. To do this, students must pass courses in which they are enrolled so that all course options are available to them in each of the following years. Families can support this need by monitoring that students are regularly attending school and completing assigned tasks. Successful passing of courses leads to more elective options in high school, including Advanced Placement (AP) courses, advanced subject area courses, dual-enrollment, the Calhoun Area Career Center (CACC), the Battle Creek Area Mathematics and Science Center (BCAMSC), and more.

The elective courses that are taught each year are ultimately determined by how many students sign up to take them during the scheduling process and staffing availability.

Additionally, it is important for students and families to understand that a middle school student cannot "drop" a class. If a student does not like a class, it is the expectation that they are still required to attend and attempt their best effort.

The middle school staff encourages thoughtful selection of electives that meets not only current interests, but prepares students for unknown opportunities and challenges in the future.

I look forward to the opportunity for the Harper Creek Middle School staff to partner with you in pursuit of your continued success, both individually and as a member of our learning community.

Kim Thayer

High School Principal

Fifth Grade Course Descriptions

English 5

Fifth grade English is made up of reading (literature, informational text, and foundational skills), writing (narratives, opinion pieces and informational/explanatory pieces), speaking and listening, and language skills (conventions and spelling).

Students will read many different genres including fiction, historical fiction and informational text. Students will be able to quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text. Compare and contrast the overall structure(e.g., chronology, comparison, cause/effect,problem/solution) of events, ideas, concepts, or information in two or more texts. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

In writing, students will write opinion pieces on topics or texts, supporting a point of view with reasons and information. Students will write informative/explanatory texts to examine a topic and convey ideas and information clearly. Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. Draw evidence from literary or informational texts to support analysis, reflection, and research. With guidance and support from peers and adults, students will develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

Students will demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. Determine or clarify the meaning of unknown and multiple-meaning words and phrases

Mathematics 5

Students will write and interpret numerical expressions using parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. Understand the place value system by being able to read, write, and compare decimals

to thousandths. Be able to perform operations with multi-digit whole numbers and with decimals to hundredths by fluently multiplying multi-digit whole numbers using the standard algorithm, finding whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models, and add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Students will apply and extend previous understandings of multiplication to multiply fraction or whole number by a fraction. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

Students will be able to convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Students will relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

Students will represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Science 5

Students will be able to describe that matter is made of particles too small to be seen through the development of a model. Students will develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved. Students determine whether the mixing of two or more substances results in new substances.

Through the development of a model using an example, students will describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. Describe and

graph data to provide evidence about the distribution of water on Earth and develop an understanding of the idea that plants get the materials they need for growth chiefly from air and water. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun.

Students will develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. The crosscutting concepts of patterns; cause and effect; scale, proportion, and quantity; energy and matter; and systems and systems models are called out as organizing concepts for these disciplinary core ideas.

Students will demonstrate grade-appropriate proficiency in developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, engaging in argument from evidence, and obtaining, evaluating, and communicating information; and to use these practices to demonstrate understanding of the core ideas.

Social Studies 5

Individually and collaboratively, students will engage in planned inquiries to understand how early European exploration and colonization resulted in cultural and ecological interactions among previously unconnected peoples.

Individually and collaboratively, students will engage in planned inquiries to understand how European values and institutions transferred to and modified in the colonies, and how slavery reshaped European and African life in the Americas.

Individually and collaboratively, students will engage in planned inquiries to investigate the causes of the American Revolution, the ideas and interests involved in forging the revolutionary movement, and the reasons for the American victory.

Students will be able to clearly state a problem as a public policy issue, analyze various perspectives, and generate and evaluate possible alternative resolutions. Communicate a reasoned position on a public issue and act constructively to further the public good.

Advisory/W.I.N. 5

The purpose of the course is to help the student build the skills in the areas of communication, teamwork, problem solving and any area of academic need. The advisor seeks to assure that every student has one adult on staff (the advisor) who knows him or her well. They serve to be the student's advocate and a contact between home and school. The activities of the program help students develop skills such as critical thinking, problem solving and decision making. They also address service learning, character building and community building. This course is graded on a pass-fail basis.

Spanish 5

Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. *

Physical Education 5

Physical education classes are designed to promote good health through a variety of activities including cardio-vascular, strength, flexibility, and team sports. This class is a combination of team sports, fitness, and games. The goal is to introduce basic skills, while developing strength, endurance, flexibility, and agility. Exhibits responsible personal and social behavior that respects self and others. Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Band 5

Students will demonstrate selected and developed musical ideas for improvisations, arrangements, or compositions to express intent, and explain connection to purpose and context. Present the final version of personal created music to others that demonstrates craftsmanship, and explain connection to expressive intent. When analyzing selected music, read and perform using standard notation. Explain how

context (such as social, cultural, and historical) informs performances. Apply teacher-provided and established criteria and feedback to evaluate the accuracy and expressiveness of ensemble and personal performances. Demonstrate performance decorum and audience etiquette appropriate for the context, venue, genre, and style. Demonstrate and explain, citing evidence, how responses to music are informed by the structure, the use of the elements of music, and context (such as social, cultural, and historical).

Choir 5

Students will demonstrate selected and developed musical ideas for improvisations, arrangements, or compositions to express intent, and explain connection to purpose and context. Present the final version of personal created music to others that demonstrates craftsmanship, and explain connection to expressive intent. When analyzing selected music, read and perform using standard notation. Explain how context (such as social, cultural, and historical) informs performances. Apply teacher-provided and established criteria and feedback to evaluate the accuracy and expressiveness of ensemble and personal performances. Demonstrate performance decorum and audience etiquette appropriate for the context, venue, genre, and style. Demonstrate and explain, citing evidence, how responses to music are informed by the structure, the use of the elements of music, and context (such as social, cultural, and historical).

General Music 5

Students will demonstrate selected and developed musical ideas for improvisations, arrangements, or compositions to express intent, and explain connection to purpose and context. Present the final version of personal created music to others that demonstrates craftsmanship, and explain connection to expressive intent. When analyzing selected music, read and perform using standard notation. Explain how context (such as social, cultural, and historical) informs performances. Apply teacher-provided and established criteria and feedback to evaluate the accuracy and expressiveness of ensemble and personal performances. Demonstrate performance decorum and audience etiquette appropriate for the context, venue, genre, and style. Demonstrate and explain, citing evidence, how responses to music are informed by the

structure, the use of the elements of music, and context (such as social, cultural, and historical).

Art 5

Students will apply the creative process and critical thinking to the creation of personal, and design based artworks using a variety of tools, materials, and techniques. Assignments encourage learning through independent exploration and research as well as in class instruction. The goals of the classes are for students to develop and solve problems as artists and designers, to communicate effectively using visual language, and to understand and critique contemporary and historical works of art and design.

S.T.E.A.M. 5

Students will engage collaboratively to apply their knowledge of Science, Technology, Engineering, Arts and Math through various problem-based learning opportunities. Students will explore to gain new academic knowledge and life skills that are reality-based and personally relevant to the student and their community.

Technology 5

Students will learn a variety of technology skills that build on what they have learned in elementary school.

Sixth Grade Course Descriptions

English 6

In sixth grade English students will have numerous opportunities to better utilize their reading, writing, speaking, listening, and research skills. Students will determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choice on meaning and tone. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

Students will write arguments to support claims with clear reasons and relevant evidence. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

Students will demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Mathematics 6

This course focuses on: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Students will understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. Use ratio and rate

reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

Students will interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

Students will understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. Understand ordering and absolute value of rational numbers.

Students use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.

Students will represent and analyze quantitative relationships between dependent and independent variables by using variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

Science 6

Students will be able to apply Newton's Law of Motion to relate forces to explain the motion of objects and apply ideas about gravitational, electrical, and magnetic forces to explain a variety of phenomena including beginning ideas about why some materials attract each other while others repel.

Students develop their understanding of important qualitative ideas about energy including that the interactions of objects can be explained and predicted using the concept of transfer of energy from one object or system of objects to another, and the

total change of energy in any system is always equal to the total energy transferred into or out of the system. Students will understand that objects that are moving have kinetic energy and that objects may also contain stored (potential) energy, depending on their relative positions.

Students will explore the cycling of the layers of the earth and how the surface of the earth has changed based on scientific evidence. Students will explore the ways that human activities impact Earth's other systems. Students will use many different practices to understand the significant and complex issues surrounding human uses of land, energy, mineral, and water resources and the resulting impacts of their development. The crosscutting concepts of patterns; cause and effect; scale, proportion and quantity; energy and matter; structure and function; interdependence of science, engineering, and technology; and influence of science, engineering and technology on society and the natural world.

Students will explore the ideas of the interaction of and interdependence between organisms and ecosystems. They will also explore the ideas of the flow of matter and transformation of energy in ecosystems. Students will use the crosscutting concepts of patterns, conservation of matter and energy, and the science and engineering practices of modelling and analyzing and interpreting data to show understanding.

Students will demonstrate proficiency in developing and using models, analyzing and interpreting data, designing solutions, and obtaining, evaluating, and communicating information. Students will use scientific and engineering practices to demonstrate understanding of the disciplinary core ideas.

Social Studies 6

Students will use a variety of geographic tools (maps, globes, and web-based geography technology) to analyze the world at global, regional, and local scales. Apply the skills of geographic inquiry (asking geographic questions, acquiring geographic information, organizing geographic information, analyzing geographic information, and answering geographic questions) to analyze a geographic problem or issue. Use images as the basis for answering geographic questions about the human and physical characteristics of places and major world regions. Use the fundamental themes of

geography (location, place, human-environment interaction, movement, region) to describe regions or places on earth.

Students will be able to describe the human characteristics of the region under study, including languages, religions, economic system, governmental system, cultural traditions.

Students will be able to explain the factors that cause different climate types.

Students will be able to describe cultures of the region being studied, including the major languages and religions. Identify and describe the advantages, disadvantages, and impacts of different technologies used to transport people and products, and spread ideas throughout the world. Explain how people have modified the environment and used technology to make places more suitable for humans, as well as how modifications sometimes have negative/unintended consequences. Explain the patterns, causes, and consequences of major human migrations. Identify factors that contribute to cooperation and conflict between and among cultural groups (control/use of natural resources, power, wealth, and cultural diversity).

Students will be able to describe examples of how humans have impacted and are continuing to impact the environment in different places as a consequence of population size, resource use, level of consumption, and technology.

Students will understand that a global issue is one that has an impact affecting many regions of the world.

Students will compare and contrast different ideas about the purposes of government in different nations, nation-states or governments.

Students will use charts and graphs to compare imports and exports of different countries in the world and propose generalizations about patterns of economic interdependence.

Students will integrate Michigan process and skills standards into a grade-appropriate project. Clearly state a global issue as a question of public policy, trace the origins of the issue, analyze various perspectives, and generate and evaluate alternative resolutions. Identify public policy issues related to global topics and issues studied.

Students will engage in activities intended to contribute to solving the local, national or global issues studied and participate in projects to help or inform others.

Advisory/W.I.N. 6

The purpose of the course is to help the student build the skills in the areas of communication, teamwork, problem solving and any area of academic need. The advisor seeks to assure that every student has one adult on staff (the advisor) who knows him or her well. They serve to be the student's advocate and a contact between home and school. The activities of the program help students develop skills such as critical thinking, problem solving and decision making. They also address service learning, character building and community building. This course is graded on a pass-fail basis.

Spanish 6

Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. *

Physical Education 6

Physical education classes are designed to promote good health through a variety of activities including cardio-vascular, strength, flexibility, and team sports. This class is a combination of team sports, fitness and games. The goal is to further develop the skills introduced in previous grades. Activities focus on building strength, endurance, flexibility, and agility. Exhibits responsible personal and social behavior that respects self and others. Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Band 6

Students will select, organize, construct, and document personal musical ideas for arrangements and compositions within AB or ABA form that demonstrate an effective beginning, middle, and ending, and convey expressive intent. Present the final version of their documented personal composition or arrangement, using craftsmanship and originality to demonstrate an effective beginning, middle, and ending, and convey expressive intent. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch, articulation, and dynamics. Identify how cultural and historical context inform performances. Identify and apply teacher-provided criteria (such as correct interpretation of notation, technical accuracy, originality, and interest) to rehearse, refine, and determine when a piece is ready to perform.

Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue and purpose. Identify the context of music from a variety of genres, cultures, and historical periods. Generate simple rhythmic, melodic, and harmonic phrases within AB and ABA forms that convey expressive intent.

Choir 6

Students will select, organize, construct, and document personal musical ideas for arrangements and compositions within AB or ABA form that demonstrate an effective beginning, middle, and ending, and convey expressive intent. Present the final version of their documented personal composition or arrangement, using craftsmanship and originality to demonstrate an effective beginning, middle, and ending, and convey expressive intent. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch, articulation, and dynamics. Identify how cultural and historical context inform performances. Identify and apply teacher-provided criteria (such as correct interpretation of notation, technical accuracy, originality, and interest) to rehearse, refine, and determine when a piece is ready to perform.

Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue and purpose. Identify the context of music from a variety of genres, cultures, and historical periods. Generate simple rhythmic, melodic, and harmonic phrases within AB and ABA forms that convey expressive intent.

General Music 6

Students will select, organize, construct, and document personal musical ideas for arrangements and compositions within AB or ABA form that demonstrate an effective beginning, middle, and ending, and convey expressive intent. Present the final version of their documented personal composition or arrangement, using craftsmanship and originality to demonstrate an effective beginning, middle, and ending, and convey expressive intent. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch, articulation, and dynamics. Identify how cultural and historical context inform performances. Identify and apply teacher-provided criteria (such as correct interpretation of notation, technical accuracy, originality, and interest) to rehearse, refine, and determine when a piece is ready to perform. Identify the context of music from a variety of genres, cultures, and historical periods. Generate simple rhythmic, melodic, and harmonic phrases within AB and ABA forms that convey expressive intent.

Art 6

Students will apply the creative process and critical thinking to the creation of personal, and design based artworks using a variety of tools, materials, and techniques. Assignments encourage learning through independent exploration and research as well as in class instruction. The goals of the classes are for students to develop and solve problems as artists and designers, to communicate effectively using visual language, and to understand and critique contemporary and historical works of art and design.

S.T.E.A.M. 6

Students will engage collaboratively to apply their knowledge of Science, Technology, Engineering, Arts and Math through various problem-based learning opportunities. Students will explore to gain new academic knowledge and life skills that are reality-based and personally relevant to the student and their community.

Technology 6

The students will learn a variety of technology skills that build on what they have previously learned.

Seventh Grade Course Descriptions

English 7

In this course, students will utilize reading and writing skills. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

Students will write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

Students will demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. Use knowledge of language and its conventions when writing, speaking, reading, or listening. Determine or clarify the meaning of unknown and multiple-meaning words and phrases. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

Mathematics 7

This course focuses on: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

Students will analyze proportional relationships and use them to solve real-world and mathematical problems by computing unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different

units. Be able to recognize and represent proportional relationships between quantities. Use proportional relationships to solve multistep ratio and percent problems.

Students will 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. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Solve real-world and mathematical problems involving the four operations with rational numbers.

Students will 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.

Students will understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.

Students will understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely or likely, and probability near 1 indicates a likely event.

Advanced Math 7

This curriculum is a balanced approach to instruction, which opens doors to abstract thought, reasoning, and inquiry for students. The foundation of the program is the Common Core Standards for Mathematical Content and Standards for Mathematical Practice. The *Big Ideas Math* series is the main resource, as well as other supplementary materials.

The topics in this course include the seventh grade curriculum and part of the eighth grade curriculum: integers, rational numbers, expressions and equations, inequalities, ratios and proportions, percents, constructions and scale drawings, circles and area, surface area and volume, probability and statistics, transformations, angles and triangles, graphing and writing linear equations, real numbers and the pythagorean theorem, volume and similar solids, and exponents and scientific notation.

Life Science 7

Students will explore the ideas around pure substances having characteristic physical and chemical properties and are made from a single type of atom or molecule. They will be able to provide molecular level accounts to explain states of matters and changes between states, that chemical reactions involve regrouping of atoms to form new substances, and that atoms rearrange during chemical reactions. Students will apply an understanding of the design and the process of optimization in engineering to chemical reaction systems. Students will know the difference between energy and temperature, and begin to develop an understanding of the relationship between force and energy. Students are also able to apply an understanding of design to the process of energy transfer. The crosscutting concepts of patterns; cause and effect; scale, proportion and quantity; energy and matter; structure and function; interdependence of science, engineering, and technology; and influence of science, engineering and technology on society and the natural world.

Students will understand how Earth's geosystems operate by modeling the flow of energy and cycling of matter within and among different systems. Students will investigate the controlling properties of important materials and construct explanations based on the analysis of real geoscience data and develop understanding of the factors that control weather. (moved from 6th grade)

Students will explore the structure and functioning of organisms of organisms including how cells compose larger organisms and how the body is a system of interacting subsystems. Students will work to develop the model of cell functions in parts and as a whole. Students will also understand how the sensory receptors communicate with the brain for immediate behavior and storage. Students will use the science and engineering practices of planning and conducting investigations, developing and using models, and using arguments supported by evidence.

Students will demonstrate proficiency in developing and using models, analyzing and interpreting data, designing solutions, and obtaining, evaluating, and communicating information. Students will use scientific and engineering practices to demonstrate understanding of the disciplinary core ideas.

Social Studies 7

Seventh grade students will develop an understanding of World History by exploring Eras 1-4: Beginning of Human Society, Early Civilizations, World Religions and Major Empires, Crisis in the Classical World, Africa to 1500, North America to 1500. Students will analyze the geography, civics/government, and economics of each Era. Students will conduct investigations about past and present global issues.

Advisory/W.I.N. 7

The purpose of the course is to help the student build the skills in the areas of communication, teamwork, problem solving and any area of academic need. The advisor seeks to assure that every student has one adult on staff (the advisor) who knows him or her well. They serve to be the student's advocate and a contact between home and school. The activities of the program help students develop skills such as critical thinking, problem solving and decision making. They also address service learning, character building and community building. This course is graded on a pass-fail basis.

Spanish 7

Seventh grade Spanish is designed to prepare students to travel to a Spanish-speaking country. Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. *

Physical Education 7

Physical education classes are designed to promote good health through a variety of activities including cardio-vascular, strength, flexibility, and team sports. This class is a

combination of team sports, fitness and games. The goal is to further develop the skills introduced in previous grades. Activities focus on building strength, endurance, flexibility, and agility. Exhibits responsible personal and social behavior that respects self and others. Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Life Skills 7

Students will study basic nutrition (with emphasis on kitchen safety and food preparation) and sewing skills (will be required to purchase and construct a project of their choice). Students will explore self discovery on topics like self esteem, self concept, personality and values. Students will learn how to write goals and a Code of Ethics.

The course consists of health issues and healthy lifestyles. Areas to be covered include: wellness, target heart rate, anatomy, systems of the body, as well as first aid and basic emergency care.

Band 7

Students will select, organize, develop and document personal musical ideas for arrangements, songs, and compositions within AB, ABA, or theme and variation forms that demonstrate unity and variety and convey expressive intent. Present the final version of their documented personal composition, song, or arrangement, using craftsmanship and originality to demonstrate unity and variety, and convey expressive intent. When analyzing selected music, read and identify by name or function standard symbols for rhythm, pitch, articulation, dynamics, tempo, and form. Identify how cultural and historical context inform performances and result in different music interpretations. Identify and apply collaboratively-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, and interest) to rehearse, refine, and determine when the music is ready to perform. Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue, purpose, and context. Identify and compare the context of music from a variety of genres, cultures, and historical periods.

Choir 7

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Art 7

Students will apply the creative process and critical thinking to the creation of personal, and design based artworks using a variety of tools, materials, and techniques.

Assignments encourage learning through independent exploration and research as well as in class instruction. The goals of the classes are for students to develop and solve problems as artists and designers, to communicate effectively using visual language, and to understand and critique contemporary and historical works of art and design.

S.T.E.A.M. 7

Students will engage collaboratively to apply their knowledge of Science, Technology, Engineering, Arts and Math through various problem-based learning opportunities. Students will explore to gain new academic knowledge and life skills that are reality-based and personally relevant to the student and their community.

Small Engine Repair 7

This course familiarizes students with safety in a workshop/garage environment, the use of hand tools and small engines. Units of study include engine parts, the operation of the small engine. Labs emphasize safety, maintenance, and organization while students explore disassembling and reassembling small engines.

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Technology Education 7

This class consists of the study of industrial processes and their importance in today's work through the proper use of hand and machine tools. This is accomplished by project construction in the area of woodworking and involves elements of planning, design, obtaining rough stock, cutting material to finish size, joint construction, gluing and assembly, preparation for finishing, and final application.

Language Arts Lab 7

In this course, students will build on language arts knowledge through studying a variety of real world applications for reading, writing, listening, and speaking skills. The students will explore a sample of media including editorial cartoons, advertisements, reviews, professional writings, and websites while also addressing the critical thinking and analytical skills needed when using these different types of media in daily life situations.

8th Grade Course Descriptions

English 8

Students will be able to determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories). Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.

Students will write arguments to support claims with clear reasons and relevant evidence. Use technology, including the Internet, to produce and publish writing and present the relationship between information and ideas efficiently as well as to interact and collaborate with others. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. Determine or clarify the meaning of unknown and multiple-meaning words or phrases.

English 1

This is a high school, freshman level course. Students in this class will cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme. Determine the meaning of words and phrases as they are used

in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone). By the end of this class, students will be able to read and comprehend literature, including stories, dramas, and poems and be able to delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

Students will write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9 reading and content, choosing flexibly from a range of strategies.

Students will initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade level topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

Mathematics 8

This course focuses on: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Students will understand informally that every number has decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

Students will understand the connections between proportional relationships, lines, and linear equations by graphing proportional relationships, interpreting the unit rate as the slope of the graph and comparing different proportional relationships represented in different ways.

Students will be able to solve linear equations in one variable. Analyze and solve pairs of simultaneous linear equations.

Students will compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

Students will understand congruence and similarity using physical models, transparencies, or geometry software by verifying experimentally the properties of rotations, reflections, and translations, and describing the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

Students will be able to apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Students will construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

Algebra 1

This is a high school, freshman level course that provides a formal development of the algebraic skills and concepts necessary for students to succeed in advanced courses. In particular, the instructional program in this course provides for the use of algebraic skills in a wide range of problem-solving situations. The concept of function is

emphasized throughout the course. Topics: (1) operations with real numbers, (2) linear equations and inequalities, (3) relations and functions, (4) polynomials, (5) algebraic fractions, and (6) nonlinear equations.

Earth Science 8

Students are able to describe and predict characteristic properties and behaviors of waves when the waves interact with matter. Students can apply an understanding of waves as a means to send digital information. The crosscutting concepts of patterns and structure and function are used as organizing concepts for these disciplinary core ideas. Students will demonstrate proficiency in developing and using models, using mathematical thinking, and obtaining, evaluating and communicating information; and to use these practices to demonstrate understanding of the core ideas.

Students will work to explore the patterns of the solar system and interactions between objects in space. Students will understand the cycling of matter and uneven distribution of resources of Earth's mineral, energy, and groundwater resources because of past and current geoscience processes. Students will work to understand the impacts by and on humans on the Earth's systems.

Students will gather information and use this information to support explanations of the structure and function relationship of cells. They will communicate understanding of cell theory. They will have a basic understanding of the role of cells in body systems and how those systems work to support the life functions of the organism. Students will develop an understanding of cells providing a context for the plant process of photosynthesis and the movement of matter and energy needed for the cell. Students will construct an explanation for how environmental and genetic factors affect growth of organisms. They will connect this to the role of animal behaviors in reproduction of animals as well as the dependence of some plants on animal behaviors for their reproduction. Students will construct explanations based on evidence to support fundamental understandings of natural selection and evolution. They will use ideas of genetic variation in a population to make sense of organisms surviving and reproducing, hence passing on the traits of the species and will use fossil records and anatomical similarities of the relationships among organisms and species to support their understanding. Crosscutting concepts of cause and effect, structure and function,

and matter and energy are called out as organizing concepts for the core ideas about processes of living organisms.

U.S. History 8

Students will continue their study of U.S. history from the development of the Constitution through Reconstruction. Geographic, civics/government, and economics content is integrated within the historical context under study. Students will understand the relevancy and connections of this history to their lives through an inquiry process. Students will use significant content knowledge, research skills, and inquiry practices to analyze issues and communicate conclusions.

Advisory/W.I.N. 8

The purpose of the course is to help the student build the skills in the areas of communication, teamwork, problem solving and any area of academic need. The advisor seeks to assure that every student has one adult on staff (the advisor) who knows him or her well. They serve to be the student's advocate and a contact between home and school. The activities of the program help students develop skills such as critical thinking, problem solving and decision making. They also address service learning, character building and community building. This course is graded on a pass-fail basis.

Spanish 8

Students will explore the culture and vocabulary of Spanish speaking countries. Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. *

Spanish 1

Students should have an interest in understanding, speaking, reading and writing Spanish, and learning about Hispanic cultures. Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange

opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Homework and practice outside of class are required every day. Some projects may be done in Spanish.

French 1

Students should have an interest in understanding, speaking, reading, and writing French, and learning about francophone cultures. Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions. Students understand and interpret written and spoken language on a variety of topics. Students reinforce and further their knowledge of other disciplines through the world language. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Students demonstrate understanding of the nature of language through comparisons of the language studies and their own. Homework and practice outside of class are required every day. Some projects may be done in French.

Physical Education 8

Physical education classes are designed to promote good health through a variety of activities including cardio-vascular, strength, flexibility, and team sports. This class is a combination of team sports, fitness and games. The goal is to further develop the skills introduced in previous grades. Activities focus on building strength, endurance, flexibility, and agility. Exhibits responsible personal and social behavior that respects self and others. Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Advanced Physical Education 8

The focus of this course is to improve overall health and muscle through weight lifting and conditioning. Exhibits responsible personal and social behavior that respects self and others. Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Life Management 8

Life Management is divided into three study areas, basic nutrition and food preparation, sewing skills, and family structure and life skills. Students will keep a portfolio of their work and will have a wide variety of hands-on opportunities for learning. Problem solving and writing skills will be consistently used throughout the semester. Students will explore topics like self esteem, decision making, communication skills, and healthy living.

Band 8

Students will use standard and/or iconic notation and/or audio/ video recording to document personal rhythmic phrases, melodic phrases, and harmonic sequences. Present the final version of their documented personal composition, song, or arrangement, using craftsmanship and originality to demonstrate the application of compositional techniques for creating unity and variety, tension and release, and balance to convey expressive intent. When analyzing selected music, sight-read in treble or bass clef simple rhythmic, melodic, and/or harmonic notation. Identify how cultural and historical context inform performances and result in different musical effects. Identify and apply personally-developed criteria (such as demonstrating correct interpretation of notation, technical skill of performer, originality, emotional impact, variety, and interest) to rehearse, refine, and determine when the music is ready to perform. Demonstrate performance decorum (such as stage presence, attire, and behavior) and audience etiquette appropriate for venue, purpose, context, and style. Identify and compare the context of programs of music from a variety of genres, cultures, and historical periods.

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Elective courses and supplementary core classes that are offered each year are ultimately determined by how many students sign up to take them during the scheduling process and staffing availability.

*Harper Creek Community Schools offers the opportunity for World Language Experience units beginning in elementary school. Most students that attended a Harper Creek elementary building will come to the middle school with one unit completed. HCMS attempts to have all students complete their two units of World Language Experience by the end of 6th grade. Two units are currently required for high school graduation. These units do not equate to high school credits.