

LEBANON MIDDLE SCHOOL

2020 - 2021

Course Description Guide



Dr. Jon Milleman, Superintendent
Mr. Doyle Dunshee, Principal
Mr. Mark Butler, Asst. Principal
Mr. James McCune, Asst. Principal

School Counselors

Mrs. Jackie Taylor (A-L)

Mrs. Nancy Murray (M-Z)

Lebanon Middle School
1800 North Grant Street
Lebanon, IN 46052
(765) 482-3400

Lebanon Community School Corporation
Administration Office
1810 North Grant Street
Lebanon, IN 46052
(765) 482-0380

Table of Contents

Fine Arts: Visual.....	6
Fine Arts: Music.....	6
Health and Wellness.....	9
High Ability.....	3
High School Courses Offered.....	17
Language Arts.....	3
Math.....	10
Science.....	12
Social Studies.....	14
Technology Education.....	15

Grade Placement Policy

Students are awarded a point for each graded class they pass each semester. Students must pass 68% of their classes for the entire year before they are promoted to the next grade level. A student's ISTEP+ and/or NWEA(MAP) testing scores are not used to determine grade level promotion. Those standardized tests will help us identify students that may benefit from remediation services. Any variance from this procedure will be based on the following considerations:

- Previous grade level retentions
- Student's age
- Student's social, emotional & mental development
- Any other consideration deemed relevant by the grade placement committee

A grade placement committee consists of the school's administrator(s), guidance counselor(s), the student's teacher(s), and the student's parent(s) or guardian(s). The grade placement committee will determine the student's placement for the next school year and will make its recommendation to the principal. The principal is ultimately responsible for the final placement of the student.

High Ability

Students who are identified as High Ability through the student selection process in grade 5-7 will be placed in the appropriate Honors Courses in Math, English, Science and Social Studies. Parents or Teachers may choose to nominate prospective students for Honors Courses. Nominations for High Ability are accepted each December for placement the following school year. All students' data is reviewed. Students must meet 3 of the benchmarks for HA identification purposes. Students who are not identified as High Ability but who would like to accept the challenging curriculum, may complete a Course Selection Sheet to be reviewed by the course selection committee.

<<<<<< Language Arts Department >>>>>>

Language Arts Lab

(Grades 6, 7 and 8)

Language Arts Lab is a multidisciplinary course which provides students continuing opportunities to develop the basic skills including: (1) reading, (2) writing, (3) listening, (4) speaking, (5) mathematical computation, (6) note taking, (7) study and organizational skills, and (8) problem-solving skills that are essential for high school course work achievement. Determination of the skills to be emphasized in this course is based on the Indiana State proficiencies, individual school corporation general curriculum plans, and student Individualized Education Programs (IEP). Skills selected for developmental work provide students with the ability to continue to learn in a range of different life situations.

English 6

Middle level language arts provides an integrated study of: (1) literature, (2) media, (3) reading process, (4) oral communication, (5) writing process, and (6) language which includes grammar, usage, mechanics, and spelling as tools of effective communication. Middle level language arts further develops students' use of language as a tool for learning and thinking as well as a source of pleasure. While the core language arts program is an integrated approach, it may be augmented through additional time blocks focused on any of the following components: Reading instruction enables students to continue developing in-dependent reading strategies and adapting them to particular contexts, purposes for reading, and choices of information. Students are given the opportunity to share their reading through verbal, written, and dramatic activities.

Literature instruction focuses on comprehending stated and implied meaning, expanding vocabulary, forming critical judgments, and developing a foundation of literary concepts. Students creatively respond to literature activities in a variety of ways. Students are given ample opportunity to select fiction, nonfiction, and other reading material from classroom libraries or school media centers and to read independently for uninterrupted periods of time. Students should also be read to regularly. Through the study of literature, students continue to develop curiosity and a lifelong interest in a range of reading materials representing a variety of cultures, time periods, literary genres, and subject areas.

Writing and language instruction provides students with the opportunity to write for different purposes and audiences, using a variety of forms of expressive, descriptive, and informative writing. Instruction in all phases of the writing process is given—including prewriting, drafting, peer sharing, revising, editing, and publishing. Students should respond to writing in a variety of formats. Instruction in grammar, usage, spelling, and mechanics is integrated with oral and written language instruction. Research and library information skills are taught in conjunction with writing and reading instruction. Because the emphasis of the writing and language program is on learning to write through writing, students should be given frequent opportunities and uninterrupted time for writing.

Oral communication instruction provides students with opportunities to continue to develop and to use effective listening and speaking techniques and strategies in both formal and informal situations.

English 6 Honors

Along with the topics covered in sixth grade English, the students will hone their reading proficiency by learning and practicing a variety of reading strategies, expand vocabulary, identify significant literary techniques of the different genres, strengthen research and composition skills and practice critical thinking and writing skills. Basic speech techniques and types of organization are learned and practice. Students demonstrate speech technique in coordination with course assignments such as research and projects. This curriculum helps prepare students for further study in the honors program.

English 7

Seventh grade English is designed to help students improve their reading, research, writing, language study, and presentation skills through materials and activities of student interest. Students will continue developing reading strategies and adapt them to a variety of genres through regular independent and assigned reading. Instruction will focus on improving comprehension, understanding of literary concepts,

and critically evaluating the quality of a given text. Reference and research skills will also be taught and developed.

Writing instruction will focus on the six traits of writing with a particular emphasis on improving sentence fluency and word choice. Language development will focus on spelling instruction, contextualized vocabulary analysis, recognizing and using the parts of speech, and common grammatical errors in those parts of speech. Students will make oral presentations to reinforce English concepts as well as listening and speaking skills.

English 7 Honors

Along with the topics covered in seventh grade English, these students will be challenged through accelerated language study, advanced novel study, formal research projects and presentations, and writing instruction geared towards the use of more sophisticated technique and vocabulary. Students will frequently read, analyze, and critically evaluate novels, often with cross-curricular connections to the Honors Social Studies class.

English 8

Eighth grade English is designed to prepare the students through reading, literature, and writing instruction for the rigors of high school English instruction. Students will read and examine literature with a focus on developing their abilities to make inferences, form critical judgments, and see from other perspectives. Students will receive written and language instruction in many areas including informative, persuasive, and creative writing. They will focus on the "Six Traits of Writing" including Ideas, Organization, Sentence Fluency, Voice, Word Choice, and Conventions. Students will demonstrate mastery of the subject matter through written and oral expression

English 8 Honors

Eighth grade high ability English is designed to challenge students to expand their knowledge of the written word. Students will meet all expectations set forth in eighth grade English and complete self-directed projects that will allow them to examine how literature affects the world and how the world affects literature. Students should be prepared to discuss in depth short stories, novels, poems, and other subgenre with knowledge of historical events surrounding the literary piece. Students will be challenged to explore the social issues in our present-day society by analyzing literature set in the past, present, and future. Students will build their vocabularies by keeping weekly journals and implementing new vocabulary into essays, written projects, and oral presentations.

<<<<<< Fine Arts: Visual Arts >>>>>>

Sixth Grade Art (9-week course)

Sixth grade students look at the elements of art: line, shape, color and texture. They are encouraged to explore and create with various media, tools, and two- and three- dimensional techniques. These experiences allow for personal expression, encourage discovery, and promote creative problem solving. Art history, aesthetics, and art criticism are incorporated so students can develop an appreciation and understanding of various artists, works of art, and artistic styles.

Seventh Grade Art (Semester Course)

Seventh grade students continue studying the language of art by exploring the principles of design-rhythm, balance, proportion, variety, emphasis and unity. These concepts are explored through art history, aesthetics, art criticism, and production to demonstrate that the creation of art is not accidental but a purposeful synthesis of the elements and principles of art.

Eighth Grade Art (Semester Course)

Eighth grade students explore a variety of media using two- and three-dimensional art techniques. Projects involving drawing, painting, printmaking, collage, graphic arts, and crafts allow them to understand how the elements and principles of art interrelate, as well as undertaking the production process. Students also study art history, aesthetics, and art criticism.

<<<<<< Fine Arts: Music >>>>>>

Choir 6

Vocal Music provides students with the opportunity to apply knowledge learned in the elementary music curriculum by participating in choral ensemble classes. Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Ensemble classes provide group and solo activities and are designed to develop students' musicianship including, but not limited to: (1) tone production, (2) technical skills, (3) intonation, (4) music reading skills, (5) listening skills, (6) analyzing music, and (7) studying historically significant styles of literature. Activities and experiences include, but are not limited to, listening, analyzing, and studying, as well as performing a wide variety of vocal literature of many styles from selected historical periods and cultures. Experiences in improvisation and sight-singing are included in this course of study. Students also

participate in performance opportunities outside of the school day which support and extend the learning in the classroom.

***** End of year auditions will determine placement in Intermediate or Advanced Choir based upon ability, attitude and work ethic.**

Intermediate Choir (7/8)

Vocal Music provides students with the opportunity to apply knowledge learned in the elementary music curriculum by participating in choral ensemble classes.

Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Ensemble classes provide group and solo activities and are designed to develop students' musicianship including, but not limited to: (1) tone production, (2) technical skills-, (3) intonation, (4) music reading skills, (5) listening skills, (6) analyzing music, and (7) studying historically significant styles of literature. Activities and experiences include, but are not limited to, listening, analyzing, and studying, as well as performing a wide variety of vocal literature of many styles from selected historical periods and cultures. Experiences in improvisation and sight-singing are included in this course of study. Students also participate in performance opportunities outside of the school day which support and extend the learning in the classroom.

***** Placement based upon audition**

Advanced Choir (7/8)

Vocal Music provides students with the opportunity to apply knowledge learned in the elementary music curriculum by participating in choral ensemble classes.

Instruction is designed to enable students to connect, examine, imagine, define, try, extend, refine, and integrate music study into other subject areas. Ensemble classes provide group and solo activities and are designed to develop students' musicianship including, but not limited to: (1) tone production, (2) technical skills, (3) intonation, (4) music reading skills, (5) listening skills, (6) analyzing music, and (7) studying historically significant styles of literature. Activities and experiences include, but are not limited to, listening, analyzing, and studying, as well as performing a wide variety of vocal literature of many styles from selected historical periods and cultures. Experiences in improvisation and sight-singing are included in this course of study. Students also participate in performance opportunities outside of the school day which support and extend the learning in the classroom.

***** Placement based upon audition**

Cadet Band (grade 6)

Students in this class will be introduced to the basics of learning to play a woodwind, brass or percussion instrument and of reading and writing music for their instrument. (Percussion students will learn all of the percussion instruments) Students will also learn about the expressive elements of music and appropriate responses to music vocabulary and symbols. Literature for study and performance will include a broad overview of musical styles and will emphasize traditional Western classical music and American folk music. Three annual performances will give students the opportunity to demonstrate what they have learned, appropriate performance etiquette, and support for the fine arts.

Jazz Band

This class offers opportunities to develop performance, musicianship and creative skills through introduction to and study of the unique styles of jazz music. Students will learn forms for composing and improvising their own original music, while also listening to and learning from masters of the jazz literature. They will be introduced to the history of America's original art form and how American history is woven into the development of the music. Students will give at least two performances each semester as a culminating experience for their class study.

***** Placement based upon audition**

Varsity Band (grade 7)

Students in this class will expand their knowledge of music reading and writing and build proficiency on their instrument. Class will meet as a full ensemble daily and class instruction will focus on ensemble techniques such as balance and blend. Students will also have experience playing in small groups and as soloists. Literature for study and performance will include multicultural sources to integrate with cross curricular World's Fair in the spring. Varsity band will have three performances annually as a culminating activity to demonstrate what they have learned.

Prerequisite: One year instruction on brass, woodwind or percussion instrument

Concert Band (grade 8)

Concert band students will continue to refine instrumental skills, moving toward mastery. The repertoire, which emphasizes music of the Twentieth Century and quality original band music, builds individual independence within the group setting and introduces higher level skills for each instrument. Concert band students have at least five performances, including a small ensemble and participation in a music

festival. Students will explore careers in music and music study opportunities for high school and college, and a lifelong appreciation for the fine arts.

Prerequisite: Two years instruction on brass, woodwind or percussion instrument or upon audition

<<<<<< Health and Wellness >>>>>>

Health and Wellness (Grades 6-7 Semester Course)

Middle and junior high school health education provides for the continued development of attitudes and behaviors related to becoming a health-literate individual. This course includes the major content areas in a planned, sequential, comprehensive health education curriculum as expressed in the Indiana Health Education Proficiency Guide: (1) Growth and Development; (2) Mental and Emotional Health; (3) Community and Environmental Health; (4) Nutrition; (5) Family Life Education; (6) Consumer Health; (7) Personal Health; (8) Alcohol, Tobacco, and Other Drugs Education; (9) Intentional and Unintentional Injury; and (10) Health Promotion and Disease Prevention.

This course focuses on skills and skill applications which assist students in building competencies for health literacy. These may include decision-making skills, stress management skills, communication skills, social skills, and assertiveness skills. The adolescent student has instructional opportunities to investigate how health behaviors impact health, well-being, and disease prevention and to accept personal responsibility for health-related decisions.

Physical Education (Grades 6, 7, 8 Semester Course)

The Lebanon Middle School Physical Education Program is currently a one semester course for boys and girls in grades 6, 7 and 8. Physical education courses are taught by degreed physical education specialists who are trained to provide a curriculum of same gender and coeducational activities. The curriculum places an emphasis on daily physical fitness and life time fitness through a variety of recreational activities. Participation includes experiences in individual, dual, and team sports, as well as rhythmic activities. During each activity unit the rules, game strategies, sportsmanship and cooperative skills are stressed. By improving health awareness and daily exercise, our students have an opportunity to avoid hypo-kinetic (lack of activity) diseases which are increasing in today's youth and adults, such as obesity, diabetes, early heart disease, and decreased longevity.

<<<<<<< Mathematics >>>>>>>

Math Lab (Grades 6, 7 and 8)

Basic Skills Development is a multidisciplinary course which provides students continuing opportunities to develop the basic skills including: (1) reading, (2) writing, (3) listening, (4) speaking, (5) mathematical computation, (6) note taking, (7) study and organizational skills, and (8) problem-solving skills that are essential for high school course work achievement. Determination of the skills to be emphasized in this course is based on the Indiana State proficiencies, individual school corporation general curriculum plans, and student Individualized Education Programs (IEP). Skills selected for developmental work provide students with the ability to continue to learn in a range of different life situations.

Math 6 (Grade 6)

Students use integers, decimals, fractions, mixed numbers, ratios, proportions, and percentages. They evaluate algebraic expressions and solve simple linear equations. They investigate geometric relationships and describe them algebraically. They identify, describe, and classify the properties of plane and solid geometric shapes and the relationships between them. They analyze statistical measure for data sets and determine theoretically and experimental probabilities. Students also make decisions about how to solve problems and communicate their ideas. This class follows the Indiana academic standards for 6th grade.

Math 6 Honors (Grade 6)

This course is designed for 6th grade students working at an advanced level. Along with the topics covered in 6th grade, students will be covering the 7th grade 1st semester curriculum. Content, process, and/or products are varied appropriately for the student. Acceleration, compacting, and with other methodologies and resources for differentiating for the high ability student are used. Emphasis is placed on problems solving with higher order thinking skills as well as critical thinking skills. This class follows the Indiana academic standards for 6th and 7th grade.

Math 7 (Grade 7)

Students use scientific notation and square roots. They convert between fractions and decimals, express relationships using algebra and identify attributes of geometric shapes, compare units of measure and use similarity to solve problems. They compute the perimeter, area, and volume of irregular geometric objects; as well as, identify relationships among variables within a data set and use probability to make predictions about events. Students also make decisions about how to solve problems

and communicate their ideas. This class follows the Indiana academic standards for 7th grade.

Math 7 Honors (Grade 6 or 7)

This course is designed for 6th and 7th grade students working at an advanced level. Along with the topics covered in 7th grade (semester 2), students will be covering the 8th grade curriculum. Content, process, and/or products are varied appropriately for the student. Acceleration, compacting, and with other methodologies and resources for differentiating for the high ability student are used. Emphasis is placed on problems solving with higher order thinking skills as well as critical thinking skills. This class follows the Indiana academic standards for 7th and 8th grade.

Math 8 (Grade 8)

Students use rational numbers, irrational numbers, exponents, powers, roots, ratios, proportions, and percentages. They solve simple linear equations and inequalities, graph functions and understand the concepts of slope and rate, construct shapes that meet given conditions and apply geometric concepts to solve problems. They convert between units of measure and use rates and scale factors to solve problems; as well as, collect, organize, represent, and interpret relationships in data sets that have one or more variables. Students also make decisions about how to solve problems and communicate their ideas. This class follows the Indiana academic standards for 8th grade. (Pre-Algebra)

Algebra I Honors

Algebra I Honors provides a formal development of the algebraic skills and concepts necessary for students to succeed in advanced courses. This course will expand on the topics from Algebra 1 in both depth and scope. While the topics are similar to those in Algebra 1, this course is taught to meet the needs of High Ability and High Achieving students. Compacting, acceleration and other methodologies and resources for differentiating for the high ability student are used. Emphasis is placed on problem solving with higher order thinking skills, as well as critical thinking skills.

This course is for high school credit and is weighted in alignment with Lebanon High School's weighting system. This course will appear on the student's high school transcript.

<<<<<<< Science >>>>>>>

Science 6

The sixth-grade curriculum is a blend of general science including Physical Science, Earth and Space Science and Life Science. Throughout the development of each of the disciplines mathematical skills will be enhanced and used to further the understanding of scientific concepts. Students will then be encouraged to apply concepts learned in the class-room directly to real life instances. The students will be involved in designing investigations to explain findings and relate how the conduct investigations to how the scientific enterprise functions as a whole. Students use computers and other tools to collect information, calculate, and analyze data. They use this data to identify relationships between physical objects, events, and processes. Students recognize that plants and animals obtain energy in different ways, and they can describe some of the internal structure or organisms related to this function. They use mental and physical models to conceptualize processes. Students gain understanding of how the scientific enterprise operates through examples of historical events.

Science 6 Honors

In addition to the activities listed in sixth grade science, the sixth-grade high ability classes analyze standards-based content designed to create scientifically literate citizens, while designing investigations regarding the nature of science and technology, scientific thinking, the physical setting, the living environment, the mathematical world and the historical perspectives in science. This course will require students to evaluate current understanding in the natural world in a laboratory environment through student-initiated inquiry. The ultimate goal of high ability science class is to ensure that each student has an opportunity to develop his/her full potential.

Science 7

Seventh grade students will focus on expanding their scientific knowledge and process skills through hands on and minds on activities, experiences, and readings. A variety of scientific methodologies will be used by students to design solutions to practical problems. By using tools to measure, calculate, collect, and organize data, students will identify relationships between physical objects, events, and processes. By studying the interactions between environmental factors, students will begin to trace the flow of matter and energy in an ecosystem. They will understand the fundamental differences between plants, animals, and other living things at both the cellular level and as a complete organism. Students will also analyze the relationships

within systems especially in regards to change and constancy. Throughout the entire year, historical events will be presented to help students gain an understanding of the scientific enterprise and how it operates.

Science 7 Honors

Along with the topics covered in science seven, an emphasis on higher level thinking skills and inquiry learning will be emphasized. The content of the curriculum will be more advanced and a greater depth and faster pace will be employed. Specific skills to help students develop personal talent will be addressed.

Science 8

Eighth grade science is a challenging curriculum of sophisticated investigations. Students use computers and other technology to collect and organize data and then analyze their results. Students use their analysis to make connections to real world problems and to identify relationships between physical objects, events and processes. Students examine issues in the use of technology, their constraints, safeguards and tradeoffs. Students trace the flow of matter and energy through various systems. Analysis of the parts and interactions of these systems lead students to a better understanding of the interrelationships between/among the matter and energy within these systems. Students also explore the history of scientific events to gain an understanding that science is constantly changing. Students will review areas about the nature of science and measurement; investigate the basic chemistry of matter and physical interactions (within the areas of motion, thermal energy, magnetism and electricity); and investigate the role of genes in inheritance and adaptations over time. Students will gain a better understanding of how the scientific enterprise operates and how this impacts their everyday lives.

Science 8 Honors

Honors eighth grade science is an intensified study of the same topics included in science eight. The level of coursework is geared to students with a strong ability in science. The course is designed to be enriching and challenging, and will incorporate more advanced math skills. Students begin the year with an in-depth exploration of the scientific method that incorporates a number of hands on activities. Students develop confidence with lab skills and procedures by studying the basic concepts of chemistry and physics. The chemistry unit focuses on the study of matter as it relates to atomic structure, the periodic table, and chemical reactions. The physics unit focuses on the laws of motion, forces, and energy. Throughout the year the emphasis is on lab based, hands on activities. Students also investigate the relationship between electricity and magnetism.

<<<<<<< Social Studies >>>>>>>

Social Studies 6

In grade six, students will study the regions and nations of Europe and the Americas, including historical, geographical, political, economic, and cultural relationships. The areas emphasized are: Europe and North America, including Central America and the Caribbean, and South America. Students will examine key historic movements, events, and figures in these regions from early civilizations to early modern times and explore the interconnections of people, places and events, and developments. They will compare and contrast different forms of government and the rights and responsibilities of individuals in different political systems. Students will identify different climate regions, locate major physical features, countries and cities of Europe and the Americas, and describe the influence of physical and cultural factors upon economic systems. They will trace the influence of cultures of the past on present societies and analyze the impact of artistic, scientific, and technological innovations on the cultures of Europe and the Americas. Students will form research questions as they use, interpret, and evaluate a variety of information resources, such as maps, globes, locational technology, Geographic Information Systems, atlases, databases, and web sites. They examine literature, such as legends, myths, and folklore, artifacts, works of art, music, and architecture to gain understanding of the societies of Europe and the Americas. They will use communication skills, charts, graphs, and other organizers to compare data and report their findings.

Social Studies 6 Honors

In addition to the topics listed in grade six social studies this course will provide a more in-depth study of the curriculum. The class will be based on higher level thinking skills which will be supported throughout the year by simulations, projects, written expression, analysis/interpretation of data and on-line collaboration.

Social Studies 7

Students in seventh grade study the regions and countries of the continents of Africa, Asia and Australia. While the primary focus is on geography- historical events, economic and political systems as well as cultural relationships and current events are also investigated. Considerable attention is given to both historical characters who have changed the world and the exploration of political relationships and interests the United States maintains in these regions. All students in this course participate in a large interdisciplinary unit known as the World's Fair which is designed to increase their knowledge base of nations around the world while developing valuable small group skills.

Social Studies 7 Honors

Students in this class can expect a challenging curriculum. In addition to studying similar aspects of that material covered in the regular 7th grade social studies classes, students in the advanced class will do many alternate activities and projects designed to challenge their minds and stimulate their growth academically. These include, but are not limited to, many problem-based units such as a mock United Nations

General Assembly, design and construction of the World's Fair Website, the Famous Faces Mystery Dinner and literature journeys involving three books: *Waiting for the Rain*, *Red Scarf Girl*, and *Around the World in 80 Days*

Social Studies 8

Students in eighth grade social studies will focus on U.S. History from the mid 18th century to the late 19th century. Areas of emphasis will include the American Revolution, the constitutional period, national development, westward expansion, and the Civil War. Additional units of instruction will include 9-11, Veterans Day, Pearl Harbor Day and the election process. Student will read at least one historical novel during the course.

Students will examine key documents, people, and events from these time periods and their impact on the birth and development of the United States as well as subsequent periods in our history. Additional emphasis will be given to the study of current events and the possible impact they might have on present day life and future events. This course will stress key skills such as note taking, how to do research, oral presentation, essay writing, interpreting photos, and other forms of data.

Social Studies 8 Honors

In addition to topics listed in eighth grade social studies, the students in Honors social studies will examine, in depth, key issues and decisions that affected the birth and development of the United States. The study of current events will be stressed throughout this course. The class will be based on higher level thinking skills which will be supported by various activities that may include the following: role playing, simulations, analysis of information both orally and in written form and independent study. Students will read one or more historical novels during the course.

<<<<<<< Technology Education >>>>>>>

Gateway to Technology (GTT)

Gateway to Technology's cutting-edge program addresses the interest and energy of middle school students, while incorporating national standards in math, science, and technology. GTT is activity oriented to show students how technology is used in engineering to solve everyday problems. The four instructional units excite and motivate students to use their imaginations and teach them to be creative and innovative, while gaining the skills they need to develop, produce, and use products and services. The math, science, and technology integrated GTT program helps students develop and hone skills in middle school that enable them to enter the high school program with foundation knowledge and skills for success in pre-engineering. This course is not intended as an introduction to the Project Lead the Way, PLTW, pre-engineering high school program.

Gateway to Technology consists of five independent units:

Design and Modeling (6-8): This unit uses solid modeling, a very sophisticated mathematical technique for representing solid objects, to introduce students to the design process. Utilizing this design approach, students understand how solid modeling has influenced their lives. Students also learn sketching techniques, and use descriptive geometry as a component of design, measurement, and computer modeling. Using design briefs or abstracts, students create models and documentation to solve problems.

The Magic of Electrons (6-8): Through hands-on projects, students explore the science of electricity, the movement of atoms, circuit design, and sensing devices. Students acquire knowledge and skills in basic circuitry design and explore the impact of electricity on our lives.

The Science of Technology (6-8): This unit traces how science has affected technology throughout history. Students learn about the mechanics of motion, the conversion of energy, and the use of science to improve communication.

Automation and Robotics (7-8): Students trace the history and development of automation and robotics. They learn about structures, energy transfer, machine automation, and computer control systems. Students acquire knowledge and skills in engineering problem solving and explore requirements for careers in engineering.

Flight and Space (8): The purpose of this unit is to introduce the student to aeronautics, space, and aerospace engineering. They learn about Newton's Laws of Motion, forces, rockets, propulsion, and what makes things fly. Students acquire and apply knowledge and skills in engineering problem solving and explore the many aspects of aerospace engineering.

Prerequisites: *7th and 8th grade students need to earn an A or B in math during the previous year. All 6th graders who are enrolled in this course*

have a 9-week introductory course where students will complete projects in 3 of the units. 7th grade is a semester long course where students will complete projects in 4 of the 5 units. 8th grade is a semester long course where students will complete projects in all 5 units

Digital Citizenship (6th grade semester course)

Digital Citizenship prepares students to use computer technology in an effective and appropriate manner. Students develop knowledge of word processing, spreadsheets, presentation and communications software. Students establish what it means to be a good digital citizen and how to use technology appropriately. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.

<<<<<< High School Credit Courses >>>>>>

The courses below are all high school credited courses. They will be counted on the students' permanent high school transcript. Algebra 1 Honors is also a grade weighted course and will follow the Lebanon High School grade weighting schedule.

Algebra 1 Honors

Algebra I Honors provides a formal development of the algebraic skills and concepts necessary for students to succeed in advanced courses. This course will expand on the topics from Algebra 1 in both depth and scope. While the topics are similar to those in Algebra 1, this course is taught to meet the needs of High Ability and High Achieving students. Compacting, acceleration and other methodologies and resources for differentiating for the high ability student are used. Emphasis is placed on problem solving with higher order thinking skills, as well as critical thinking skills.

Preparing for College and Careers (Grade 8) 1 Semester

Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. The focus of the course is the impact of today's choices on tomorrow's possibilities. Topics to be addressed include twenty-first century life and career skills; higher order thinking, communication, leadership, and management processes; exploration of personal aptitudes, interests, values, and goals; examining multiple life roles and responsibilities as individuals and family members; planning and building employability skills; transferring school skills to life and work; and managing personal resources. This

course includes reviewing the 16 national career clusters and Indiana's College and Career Pathways, in-depth investigation of one or more pathways, reviewing graduation plans, developing career plans, and developing personal and career portfolios. A project-based approach, including computer and technology applications, cooperative ventures between school and community, simulations, and real-life experiences, is recommended.

Introduction to Agriculture, Food and Natural Resources (Grade 8)

Introduction to Agriculture, Food and Natural Resources is a year-long course that is highly recommended as a prerequisite and foundation for all other agricultural classes. The nature of this course is to provide students with an introduction to careers and the fundamentals of agricultural science and business. Areas to be examined include: agricultural literacy, its importance and career opportunities, plant and soil science, environmental science, horticulture and landscape management, agricultural biotechnology, agricultural science and business tools and equipment, basic principles of and employability in the agricultural/horticultural industry, basic agribusiness principles and skills, developing leadership skills in agriculture, and supervised experience in agriculture/horticulture purposes and procedures. Student learning objectives are defined. Instruction includes not only agriculture education standards but many academic standards are included through the use of "hands-on" problem-solving individual and team activities.