

Agriculture, Food and Natural Resources - Lindsay

K-2	3-5	6-8	9-12
• What are local agricultural products • Where can we buy local foods • Identify animals and their sounds • Fermentation • How plants grow • Food processing and preservation • Cooking hygiene • Cooking measurements • Food groups and food identification • How foods get from farm to table • What do plants need to grow • Food labeling basics • Identifying gardening tools • Plant identification • Invasive species	• What are local agricultural products • Where can we buy local foods • Identify animals and their sounds • Fermentation • How plants grow • Food processing and preservation • Cooking hygiene • Cooking measurements • Food groups and food identification • How foods get from farm to table • What do plants need to grow • Food labeling basics • Identifying gardening tools • Plant identification • Invasive species	• Agricultural marketing • Agricultural animals • Binomial Nomenclature • Biotechnology • Food chemical properties • Biodiversity • Food Processing and packaging • Food Safety • Design a healthy daily food guide • Food additives • Food labels • Food quality • Food units of measurement • Food distribution • Food preservation and storage • Soil makeup • Compost • Plant ID and basic botany • Climate and growing season • GMOs • Sustainable agriculture • Various growing systems	• Agricultural marketing • Anatomy and Physiology of Agricultural animals • Biotechnology • Taxonomy • Animal illness and disease • Sustainable agriculture • Food Processing Industry • Nutritional value and food constituents • Food Additives • Food labels • Perform preservation of foods • Food storage • Physical and Biological soil qualities • Organisms in an ecosystem • Botany • Harvesting and processing of wildlife • Plant taxonomy • Pesticides • GMOs • Various growing systems • Integrated Pest Management

English Language Arts - Michelle

K-2	3-5	6-8	9-12
• Demonstrate understanding of spoken words, syllables, and sounds • Know and apply grade-level phonics and word analysis skills in decoding words • Develop and answer questions about key ideas and details in text • Identify specific words and phrases that express feeling • Discuss story elements or topics • Compose reflective, formal, and creative writing • Use organization, transitions, and variety of word choice in writing • Participate in shared inquiry and writing projects • Participate in collaborative conversations with diverse peers • Describe people, place, things, and events • Demonstrate understanding of how language functions in different cultures • Determine and clarify the meaning of unknown and	• Know and apply grade level phonics and word analysis skills in decoding words • Read with sufficient accuracy and fluency to support comprehension • Locate and refer to key ideas and details in the text • Determine the meaning of words • Explain how text features contribute to literary and information • Compose reflective, formal, and creative writing • Use organization, transitions, and variety of word choices in writing • Produce clear and coherent writing • Conduct short inquiry projects • Engage in a range of collaborative discusses building on other's ideas and expressing one's thoughts • Paraphrase portions of text • Report on a topic or text • Compare and contrast how language is used in different cultures • Use context to determine	• Cite textual evidence to support key ideas and details • Determine meaning of words and phrases • Compare and contrast different formats of text and how they contribute to knowledge and ideas • Compose reflective, formal, and creative writing in a variety of modes • Use organization, transitions, and variety of word choices in writing • Independently and collaboratively produce clear and coherent writing • Conduct short inquiry projects and generate additional questions for further research • Interpret and analyze information presented in text • Present claims and findings while explaining purpose of language choices • Demonstrate understanding of how language functions in different cultures, contexts, and disciplines	• Cite and analyze textual evidence • Determine the meaning of words and phrases • Analyze and explain how the author's background affects the text • Evaluate and develop quality of texts • Compose reflective, formal, and creative writing in a variety of modes • Use organization, transitions, and variety of word choices in writing • Conduct short and sustained research projects • Propel conversations by posing and engaging with probing questions • Understand and evaluate a person's point of view • Develop communicative competences by determining and appropriately responding to language demands of varied situations • Demonstrate understanding of figurative language, word relationships, and nuances in word meaning

known words	or clarify the meaning of unknown words • Demonstrate understanding of figurative language, word relationships, and nuances in word meaning • Demonstrate contextually appropriate use of English grammar and usage in writing	• Use grade appropriate Greek or Latin affixes and roots to determine meaning of words • Appropriately use and explain intended purpose of language choice with phrases and clauses, sentences, and dangling modifiers	• Discern when and where it is appropriate to use standardized English
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Environmental Literacy & Sustainability - Jessie

K-2	3-5	6-8	9-12
• What makes a community? • Where food and water come from • How do you feel when you play outside? • Identify species in an environment and what they need to survive • How people can work together to maintain the health of an area • How choices impact natural and cultural systems • How plants and animals adapt to habitats • How humans change the environment • What is sustainability in a community and school?	• Sense of place • Meeting needs and environmental impacts • What promotes wellbeing? • How organisms depend on other organisms • How diversity affects the quality of ecosystems • How energy is converted from one form to another • Renewable and nonrenewable natural resources • How humans have shaped and managed the environment • Brainstorm solutions for sustainability issues in the community and school	• Topics • Put in bullet points • Compare natural and cultural systems • Design a personal wellness plan that includes time in nature • Relationships between biotic and abiotic parts of an ecosystem • Role of government in promoting sustainability • Evaluate sustainability issue from multiple perspectives • Relationship between human health and environmental quality • Geological cycles of the earth • Interconnection and	• Analyze relationships and effects of natural and cultural systems • How does time outside relate to overall health? • Equity in environmental health and sustainability • Worldwide distribution of resources • Global carbon cycle • Sustainable economies • How natural resource use impacts natural and cultural systems • Personal and collective responsibility for the environment and community • Environmental laws • Identify solutions to sustainability issues

Family and Consumer Sciences - Michelle

K-2	3-5	6-8	9-12
• Use concerns, decision making, and information to solve issues and problems • Identify the need for family • Identify how individuals and families make choices to satisfy needs and wants • Introduce career paths in consumer service • Explore careers related to children • Explore the school's building and its grounds • Discuss what makes a family • Identify career paths within families and communities • Identify careers related to food • Develop awareness of food related careers • Explore careers in tourism, recreation, and hospitality • Introduce careers in housing, interiors, and furnishing • Recognize principles and activities that promote growth and development across the lifespan • Introduce positive and	• Use concerns, decision making, information, and observations to solve issues, problems, and draw conclusions • Identify the need and different roles within families • Explore types of decisions to provide nutritious food and satisfy need and wants for individuals and families • Identify career paths in consumer service • Identify careers related to children and how to best support children of all needs in these roles • Identify the importance of caring for facilities and grounds • Discuss the various types of families and identify its members • Discuss individual knowledge of different careers within the community and family • Discuss the importance of jobs within the food system/production	• Differentiate between adequate and in-adequate decisions of information • Recognize local and global policies, issues, and trends in community that affect individuals and families • Discuss and summarize ways career plans affect families • Discuss how individual and families make choices to satisfy needs and wants, nutritious food, shelter, health care, transportation, and time • Discuss the relationship between the environment and family • Examine local community policies that provide consumer protection • Identify and discuss skills employers look for within consumer service industries • Discuss interpersonal skills required for careers in childcare to support developmental stages • Explore opportunities for	• Analyze adequate and in-adequate information and sources in making decisions • Construct consequence for decision making for self, others, culture/society, and global environment • Analyze the effects of local and global policies, trends, and issues in community that affect individuals and families • Analyze potential career choices and their impact on family and community • Evaluate the types of skills necessary for organizing and utilizing resources in homes, families, and the workplace • Analyze the relationship of the environment to family and consumer resources • Analyze policies that support consumer rights and responsibilities • Summarize education and training requirements and opportunities for career paths in consumer services

negative health choices • Recognize parents have different responsibilities • Introduce careers in textiles	• Identify food related careers in the community • Identify differences in careers between tourism, recreation, and hospitality • Identify jobs within the community related to housing • Describe what activities promote growth and development across the lifespan • Identify positive and negative health choices • Distinguish role differences between parents and children • Identify careers in textiles within the community	employment and entrepreneurial endeavors in facility management and maintenance careers • Recognize the role of family in teaching culture and traditions across the lifespan • Explain the roles and functions of individuals engaged in family and community service careers • Explain the roles and functions of individuals engaged in food production and service careers • Identify potential careers in food science, technology, dietetics, and nutrition • Explore skills needed to relate to others who work in hospitality, tourism, and recreation industries • Explain the roles and functions of individuals engaged in housing, interiors, and furnishings • Examine the role of nurturance on human growth and development • Identify and define the areas of wellness • Identify parenting roles across the lifespan • Explain the role and function of individuals engaged in textiles and apparel careers	• Demonstrate interpersonal skills that promote positive and productive relationships with children • Summarize education and training requirements and opportunities for career paths in facility management and maintenance • Analyze the effects of family as a system on individuals and society • Demonstrate and analyze the roles and functions of individuals engaged in family and community service careers • Summarize education and training requirements and opportunities for career paths in food production and services • Analyze the roles and function of individuals engaged in food science, food technology, dietetics, and nutrition careers • Explain the roles and functions of individuals engaged in hospitality, tourism, and recreation careers • Analyze the roles and functions of individuals engaged in housing, interiors, and furnishing careers
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			• Analyze the role of nurturance and strategies that promote growth and development across the lifespan • Explain physical, emotional, social, and psychological, and spiritual components of individuals and family wellness • Analyze parenting expectations across the lifespan • Describe education and training requirements and opportunities for career paths in textiles and apparel services
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Health Education - Michelle

K-2	3-5	6-8	9-12
• Develop healthy habits that will prevent injuries and promote personal health • Explain why it is important to seek healthcare and build healthy habits • What influences healthy behaviors? • Identify individuals who provide valid health information • Identify and apply effective interpersonal	• Describe ways to prevent injuries, communicable and chronic disease • Explain personal and environmental barriers to practicing healthy behaviors • Identify how influences can impact health behaviors • Identify characteristics of valid health information to promote health • Demonstrate interpersonal	• Identify the components of health promotion and disease prevention • Analyze the benefits and barriers to practicing healthy behaviors • Examine how internal and external factors influence personal health behaviors • Demonstrate and apply strategies to access valid sources of health information	• Examine and apply health concepts related to health promotion and disease prevention • Evaluate how influences impact health behaviors • Examine strategies to access valid and reliable sources of health information • Analyze various communication skills that enhance health and avoid

communication skills • Identify when a decision-making process is needed to choose a healthy option • Know the parts of a personal health goal • Demonstrate health-enhancing behaviors • Recognize the differences between health needs and personal wants	communication skills • Apply a decision making process to evaluate health options • Apply goal-setting skills to improve health • Identify and demonstrate health enhancing behaviors • Describe advocacy and health related situations for which it is appropriate	• Examine and demonstrate communication skills that enhance health and avoid health risk • Apply a decision making process in various health related situations • Identify additional steps to setting and achieving realistic health goals • Apply health enhancing behaviors that maintain or improve health of self and others • Develop health promoting strategies that support family or friends to make positive health choices	health risks • Examine the use of a decision making process in various health related situations • Analyze issues that impact setting a goal • Demonstrate age-appropriate health enhancing behaviors to reduce health risks • Apply skills to advocate for a health issue
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Information and Technology Literacy - Michelle

K-2	3-5	6-8	9-12
• Identify the purpose of goal setting • Identify and explore digital tools • Recognize patterns in operations across digital platforms • Recognize information online may not be factual • Recognize digital footprint • Recognize personal data • Identify guidelines for using information, media, and digital resources in a	• Create personal learning goals • Explore and select digital tools to customize learning • Transfer learning between digital tools • Recognize photos can be altered digitally • Demonstrate an understanding of personal data • Recognize guidelines for using information, media, and digital resources	• Create personal goals and utilize digital tools to reflect and revise goals • Identify online networks, collect performance feedback, and manage digital tools • Transfer and apply skills to solve technological problems • Demonstrate safe digital actions • Compare and contrast attitudes towards altering	• Develop strategies to utilize the most effective digital tools to achieve set goals • Build an online professional presence and prioritize digital tools to customize personalized learning • Investigate the creation of new technologies • Manage digital identity • Analyze situations of personal data collection

responsible manner • Demonstrate respect in social situations • Utilize digital tools to find information on topics of interest • Explore a variety of educator-selected tools to organize information • Explore real world issues and problems • Demonstrate perseverance when working on a challenging task • Ask questions to seek understanding • Explore local and global issues • Use digital tools and resources to understand similarities and differences • Identify audiences and appropriate communication strategies • Recognize the differences between original and remixed digital work • Separate a simple problem into smaller parts	• Identify and create positive and constructive feedback • Collaborate with an educator to employ research techniques • Organize information from a variety of sources to make meaningful connections between resources • Connect learning to age-appropriate real world problems • Demonstrate perseverance when working with open ended problems • Explore and practice how a deliberate design process works to generate ideas, considers solutions, and plants to solve problems • Collaborate with others to use digital tools to explore local and global issues • Use digital tools to create connections with an authentic audience • Recognize the impact of the audience, purpose, and task when publishing content • Differentiate between original and remixed digital work • Separate problems into smaller parts, identify patterns and key information	photos • Create and manage personal data • Demonstrate how to use information, media, and digital resources in a responsible manner • Discuss the impact of negative comments • Demonstrate and practice the ability to effectively utilize research strategies • Locate and collect resources from a variety of sources • Explore real world issues • Demonstrate an ability to persevere through open-ended problems • Use deliberate design process to generate ideas, create innovative products, and test theories • Select and use collaborative tools to explore local and global issues and ingestivate solutions • Use digital tools to interact with others to develop a richer understanding • Publish and present content that will effectively convey ideas • Remix digital content responsibility into new, creative content • Separate authentic	• Analyze how to use information, media and digital resources in a responsible manner that respects intellectual property rights • Recognize free speech along with constitutional exceptions of free speech and their impact • Plan and employ effective research strategies • Locate, collect, and evaluate resources to organize it into shareable for multiple audiences • Build knowledge by actively exploring real world problems • Apply abstract concepts to solve authentic open-ended problems • Select and use deliberate design process for generating ideas, testing theories, and creating innovative artifacts • Explore and analyze local and global issues and leverage collaborative digital tools to work with others to investigate and develop solutions • Use digital tools to connect with learners from a variety of backgrounds • Intentionally align message with audience, purpose,
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		problems into component parts, identify patterns, and differences	and task when publishing and presenting content • Create works for an authentic audience that reflect responsible remixing of digital and fair use content • Evaluate the problem and synthesize information to create the most effective way to solve the problem
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Mathematics - Michelle

K-2	3-5	6-8	9-12
• Know number names and count sequence • Tell the number of objects • Compare numbers • Understand addition, subtraction • Identify and describe shapes • Analyze, compare, create, and compose shapes • Measure lengths • Tell and write time • Represent and interpret data	• Represent and solve problems involving multiplication and division • Develop understanding of fractions as numbers • Use place value to perform multi-digit arithmetic • Solve problems involving measurements of time, liquid volumes, masses of objects, and from larger to smaller units • Understand concepts of area, perimeter, angles • Represent and interpret data	• Understand ratio concepts and use ratio reasoning to solve problems • Multiple and divide fractions • Solve algebraic expressions • Represent and analyze quantitative relationships between dependent and independent variables • Solve real world and mathematical problems involving area, surface area, and volume • Draw, construct, and describe geometrical figures and describe relationship between them • Understand statistics and probability to draw	• Make sense of problems and persevere in solving them • Reason abstractly and quantitatively • Construct viable arguments and appreciate and critique reasoning of others • Consider available tools strategically to solve the problem • Discern pattern or structure in mathematical equations and problems • Look for and express regularity in repeated reasoning •

		inferences about population • Define, evaluate, and compare functions • Analyze and solve linear equations	
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Nutrition Education - Jessie

K-2	3-5	6-8	9-12
• Eating a diversity of foods • Feeling hungry vs Full • What are nutrient dense foods? • How to make food safe • Different sources of food • What a seed needs to grow • Food choices and health • What is on food packaging? • Enjoying food with others • Healthy eating patterns • Food groups	• How much food to eat? • Balancing food intake with physical activity • Why eating a diversity of foods is important • Food safety in relation to food borne illness • Food supply chain • What do plants need to produce food? • How food choices affect wellbeing • Nutritional information and marketing on food labels • Food cultures and traditions • Categorizing food	• Daily nutrient and energy needs • How nutritional intake affects energy and physical activity • Serving size • Food safety practices and health • Crops grown in WI • Healthy eating patterns • How to read nutritional labels and recognition of media influence on food choices • How culture affects food choices • Meal planning	• Nutritional needs of different life stages • Effects of dehydration and hunger • Listening to bodily cues • Serving size based on nutrient density • Risks of unsafe food handling • Food production systems • What influences food choices? • Appreciation for cultural diversity of foods • How to promote healthy eating habits in the community • Nutrient content of foods

Physical Education - Lindsay

K-2	3-5	6-8	9-12
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• Food provides energy • Healthy and unhealthy food • Good nutrition and hydration in relation to physical activity	• Nutrient dense foods • Hydration • My Plate	• Poor nutrition and health risk factors • Food Groups • Portion sizes • Calories and hydration for physical activity	• Nutrition programs
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Reading - Michelle

K-2	3-5	6-8	9-12
• Demonstrate understanding of spoken words, syllables, sounds, and basic print • Know and apply grade-level phonics and word analysis in decoding words • Read emergent texts with purpose, understanding, and sufficient accuracy • Develop and answer questions about key ideas and details	• Know and apply grade-level phonics and word analysis skills • Read with sufficient accuracy and fluency to support comprehension • Locate and refer to relevant details and evidence to make logical references • Determine meaning of words, phrases, figurative language, academic, and content specific words within a text	• Cite textual evidence to support an analysis of what the text says explicitly/implicitly and make logical references • Analyze the impact of specific words • Analyze how the author develops and contrasts point of view • Compare and contrast a written text with audio, filmed, or digital versions in order to analyze the effects	• Cite relevant textual evidence that strongly supports analysis of what the text says • Accurately summarize a complex text to determine themes • Analyze the impact of the author's choices • Delineate and evaluate an argument and specific claims in a text

Science - Jessie

K-2	3-5	6-8	9-12
• Ask questions and record observations • Construct an argument to support a claim	• Measure and observe changes • Collect and analyze data • Use data to evaluate	• Cause and effect • Conservation of matter • Correlation and causation • Use empirical evidence to	• Inputs and outputs of a system • Statistics and probability • Design solutions to

• How animals and plants survive • What is a species? • Heating and cooling • Pushing and pulling • Light and sound • Seasonal patterns • Whether	- claims • Life cycles • Fossils • What is matter? • Patterns of motion • Earth's orbit and rotation • Geology	- construct an argument • Photosynthesis and decomposition • Genes and sexual reproduction • Atoms and molecules • Speed and velocity • Solar system • Plate tectonics • Global warming	- complex problems • Mitosis and Meiosis • Cellular respiration • Biodiversity and Evolution • Molecular properties • $F=ma$ • Electromagnetism • Radioactive decay • Global climate models
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Social Studies - Michelle

K-2	3-5	6-8	9-12
• Develop closed ended questions • Identify sources related to topic or issue • Use evidence to support their opinions • Identify natural resources of a place • Provide examples of human changes to the environment surrounding the school and community • Categorize characteristics of a place • Analyze how access to resources can impact individuals and families • Identify and explain difference between rural and urban areas • Introduce the idea of	• Recognize differences between open and closed ended questions and identify follow up questions • Identify what constitutes a reliable source in regard to topic or issue being studied • Explore strengths and weaknesses of claims • Identify potential solutions and issues of importance • Compare the positive and negative effects of human actions to the physical environment • Examine how human actions modify the physical environment when using natural resources • Describe how certain places may have meaning	• Construct meaningful questions related to topic being studied • Gather and select reliable sources related to topic or issue • Communicate and critique conclusions of a claim • Identify and discuss how to be civically engaged to recognize issues of importance • Analyze how technology interacts with the environment and unequal distribution of natural resources can result in conflicts • Explain how place based identifies can change places over time	• Construct and develop meaningful questions that initiate an inquiry • Gather and evaluate sources • Communicate and critique conclusions of a claim • Analyze and apply how to be civically engaged to evoke change • Analyze the intentional and unintentional consequences of human actions on the environment at the local, state, trivial, regional, country, and global level • Evaluate the effect of culture on a place over time • Evaluate current and

population, place, reasons for moving, and impact of movement • Recognize the difference between maps and globes • Summarize goods and services the government provides • Hypothesize how a good gets to the local community • Identify the cost of everyday goods • Differentiate between buyers and sellers • Describes types of technologies used daily • Describe relationship of people and groups	• Classify resources as renewable or nonrenewable • Summarize positive and negative factors of suburban and urban areas • Categorize populations and places based on location and describe changes over time • Summarize how location affects people, place, and environment • Discuss reasons the government taxes people and goods • Trace the chain of supply for a needed product • Investigate how the cost of things change over time • Compare product markets and differentiate between goods and services • Classify technologies based on intended use, access, and design • Compare cultures of people and groups	• Analyze the relationship between distribution of resources at the local to global level • Investigate the impact or rural decline and growth of cities • Analyze patterns of population migration and impact it has on places • Analyze how various map resources can answer geographical questions • Analyze the impact of different government policies • Compare and contrast how different economic systems choose to allocate resources • Analyze how inflation, deflation, and unemployment affect different groups • Analyze the role of consumers and producers • Differentiate between intended and unintended consequences of technologies • Summarize the role of culture in people and groups	historic context of access to resources • Evaluate the impact of spatial inequality as a result of urbanization and develop various solutions to address those problems • Evaluate population composition, policies, and social structure on places • Explain how current geospatial technologies are used • Evaluate types of taxes • Evaluate how values and beliefs help form different types of systems and influence allocation of resources • Analyze spending patterns of households, unemployment rates, and economic indicators • Connect the roles of consumers and producers in product, labor, and markets • Evaluate the purpose of technologies for different cultures • Investigate how culture can unify people and groups
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Technology and Engineering- Michelle

K-2	3-5	6-8	9-12
• Introduce that systems have parts that work together to accomplish a goal • Introduce different types of materials • Introduce the types of functions and applications of simple mechanical components • Introduce an open loop system • Identify and correlate human made structures inspired by structures in nature • Introduce construction requirements, materials, structures, techniques, and maintenance • Identify measurement systems • Explain the importance of safe and appropriate use of hand tools • Recognize the value and necessity of practicing occupational safety • Introduce the variety of building phases and techniques used in architecture and construction • Introduce the different forms of energy • Introduce the idea of	• Explain how systems have parts that work together to accomplish a goal • Recognize that materials have many different properties • Identify the types, functions, and applications of simple mechanical components • Discuss an open loop system and intervention required • Identify and correlate human made structures inspired by structures in nature • Discuss construction requirements, materials, structures, techniques, and maintenance • Discuss measurement systems in planning and layout process used in construction • Explain the importance of safe and appropriate use of hand tools • Discuss the value and necessity of practicing occupational safety • Discuss the variety of building phases and techniques • Explain the different forms of energy and their	• Identify inputs, processes, outputs, and feedback components for technological systems • Use appropriate tools to measure and layout pieces of material • Explain the relationship between the inputs and outputs of linear, rotary, and compound motion mechanics • Define basic electrical concepts • Explain how control systems sense the status of the situation • Identify and describe basic types of structures • Explain the construction requirements, materials, structures, techniques, and maintenance • Analyze what measurement systems to use in planning and layout process used in construction • Discuss the importance of safe and appropriate use of hand tools • Explain the value and necessity of practicing occupational safety • Identify the common steps in each building phase and	• Describe how systems can fail • Choose and perform the material processing operations of forming, bonding, gluing, soldering, spot welding, fastening, and finishing • Build, test, and troubleshoot simple linear, rotary, and compound mechanisms • Describe the role of thermal, optical, and mechanical transducers • Identify the multiple controls that sense information • Calculate and define the different loads acting on structures • Analyze the construction requirements, materials, structures, techniques, and maintenance • Analyze and utilize measurement systems in planning and layout process used in construction • Analyze the importance of safe and appropriate use of hand tools • Explain and demonstrate the necessity of practicing occupational safety

basics circuits using electronic components • Identify there are different numbering systems used in different applications • Discuss where energy comes from and how to reduce consumption • Discuss the importance of laboratory safety rules and procedures • Introduce the topics innovation and invention • Introduce the design process • Collect information about everyday products and systems by asking questions • Recognize that some waste materials can be recycled or reused and some cannot • Illustrate why humans, tools, and machines need energy to do things • Categorize resources into land, air, and water • Introduce how communication happens • Discuss technologies to produce graphic communication products • Identify different types of media • Discuss the selection process and safe use of tools, machines, products,	application • Construct and demonstrate basic circuits • Explain the properties of magnetism • Identify there are different numbering systems used in different applications • Introduce sequential logic circuit that satisfies a need to design constraints • Identify where energy comes from and come up with practical ways to reduce individual consumption • Follow laboratory safety rules and procedures • Discuss how design is a creative process • Discuss innovation and inventions • Discuss the background information of a proposed design • Collect information about everyday products and systems by asking questions • Recognize that some waste materials can be recycled or reused and some cannot • Illustrate why humans, tools, and machines need energy to do things • Categorize resources into land, air, and water	techniques used in construction • Identify the fundamental and supplementary units that are bases of the international system of units • Identify electrical generation including mechanical, solar, chemical, thermocouple and fuel cells • Identify differences in binary and hexadecimal numbering systems • Explain the design and building process of a logic circuit • Analyze where energy comes from and impact • Select appropriate tools, procedures, and/or equipment • Design a creative planning process that leads to useful products and systems • Explain the procedures for innovation and invention • Explain and research the background information of a proposed design • Design and use instruments and technology to gather data • Examine the materials a product is made out of and impact of its disposal	• Demonstrate the variety of building phase, systems, and techniques used in architecture and construction • Describe Watts law • Demonstrate multimeter usage • Explain how a series of circuits is used in DC electronic equipment • Convert, add, subtract, multiply, and divide binary, hexadecimal, and octo numbers • Design and build a sequential logic circuit that satisfies a need to design constraints • Analyze and assess alternative energy systems to reduce energy consumption • Demonstrate the safe usage of appropriate tools, procedures, and operation of equipment • Examine how the design needs to be evaluated and refined for improvement • Analyze the procedures for innovation and invention • Analyze the background information of a proposed design and all the information required • Collect information and evaluate its quality
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and system for specific tasks • Discuss manufacturing and resources used • Discuss that energy comes in many forms • Identify problem solving steps used to solve real world problems • Identify transportations systems • Discuss how transportation systems require repair	• Discuss the different forms of communication • Discuss technologies to produce graphic communication products • Discuss different types of media and what multimedia means • Discuss the selection process and safe use of tools, machines, products, and system for specific tasks • Discuss manufacturing and resources used • Discuss that energy comes in many forms • Identify problem solving steps used to solve real world problems • Identify transportations systems • Explain malfunctioning components must be repaired or replaced	• Illustrate and make basic models of sustainable energy technologies • Investigate and model environmental air, water, and land quality technologies • Explain how communication and different forms impact society • Use technology to create graphic communication products • Identify devices or programs used to create multimedia • Identify, select, and safety use tools, machines, products, and systems for specific tasks • Select and use manufacturing technologies • Define how energy is the ability to do work • Describe problem solving as the application of math and science to solve a problem through invention or innovation • Explain what is involved in transportation systems • Identify transportation systems may lose efficiency or fail if one part is not functioning	• Explain a product's life cycle • Compare advanced models of sustainable energy technologies • Design or redesign a product following sustainable design principles • Analyze how communication impacts society in real world examples • Analyze graphic communication products for improvement • Demonstrate knowledge of technology to create a type of media utilizing different technologies • Identify, select, and safety use tools, machines, products, and systems for specific tasks • Analyze manufacturing technologies, impact, and purpose • Analyze how energy cannot be created nor destroyed • Demonstrate the application of the design process to solve problems • Summarize how transportation plays a vital role in manufacturing, construction, communication, health,
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			and agriculture • Explain that all systems demand specific repair procedures to achieve highest performance and efficiency
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