

Intermediate (3-5) Science Essential Skills and Concepts

Science as Inquiry (Inquiry) (pg 10)	Life Science (Life) (pg 68)
# Description	# Description
1 Identify and generate questions that can be answered through scientific investigations	1 Understand and apply knowledge of organisms and their environments, including:
2 Recognize that scientists perform different types of investigations	1a Structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats
3 Plan and conduct scientific investigations	1b How individual organisms are influenced by internal and external factors
4 Use appropriate tools and techniques to gather, process, and analyze data	1c The relationships among living and non-living factors in terrestrial and aquatic ecosystems
5 Incorporate mathematics in scientific inquiry	2 Understand and apply knowledge of environmental stewardship
6 Use evidence to develop reasonable explanations	3 Understand and apply knowledge of basic human body systems and how they work together
7 Communicate scientific procedures and explanations	4 Understand and apply knowledge of personal health and wellness issues
8 Use appropriate safety procedures when conducting investigations	
Earth & Space (Earth) (pg 20)	Physical Science (Physical) (pg 42)
# Description	# Description
1 Understand and apply knowledge of properties and uses of earth materials	1 Understand and apply knowledge of how to describe and identify substances based on characteristic properties
2 Understand and apply knowledge of processes and changes on or in the earth's land, oceans, and atmosphere	2 Understand and apply knowledge of states of matter and changes in states of matter
3 Understand and apply knowledge of fossils and the evidence they provide of past life on earth	3 Understand and apply knowledge of the concept of conservation of mass/matter
4 Understand and apply knowledge of weather and weather patterns	4 Understand and apply knowledge of sound, light, electricity, magnetism, and heat
5 Understand and apply knowledge of the properties, movements, and locations of objects in our solar system	5 Understand and apply knowledge of how forces are related to an object's motion

Intermediate (3-5) Social Studies Essential Skills and Concepts

Behavioral Sciences (Behavior) (pg 9)	Economics (pg 19)
# Description	# Description
1 Understand the changing nature of society.	1 Understand the role of scarcity and economic trade-offs and how economic conditions impact people's lives.
2 Understand the influences on individual and group behavior and group decision making.	2 Understand the functions of economic institutions.
3 Understand how personality and socialization impact the individual.	3 Understand how governments throughout the world influence economic behavior.
4 Understand the process of how humans develop, learn, adapt to their environment, and internalize their culture.	4 Understand factors that create patterns of interdependence in the world economy.
5 Understand current social issues to determine how the individual formulates opinions and responds to issues.	5 Understand that advancing technologies impact the global economy.
6 Understand how to evaluate social research and information.	6 Understand that all economies throughout the world rely upon universal concepts.
Geography (pg 27)	History (pg 37)
# Description	# Description
1 Understand the use of geographic tools to locate and analyze information about people, places, and environments.	1 Understand historical patterns, periods of time and the relationships among these elements.
2 Understand how geographic and human characteristics create culture and define regions.	2 Understand how and why people create, maintain, or change systems of power, authority, and governance.
3 Understand how human factors and the distribution of resources affect the development of society and the movement of populations.	3 Understand the role of culture and cultural diffusion on the development and maintenance of societies.
4 Understand how physical processes and human actions modify the environment and how the environment affects humans.	4 Understand the role of individuals and groups within a society as promoters of change or the status quo.
	5 Understand the effect of economic needs and wants on individual and group decisions.
	6 Understand the effects of geographic factors on historical events.
	7 Understand the role of innovation on the development and interactions of societies.
	8 Understand cause and effect relationships and other historical thinking skills in order to interpret events and issues.
Political Science/Civic Literacy (Poli Sci)** 49	
# Description	
1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.	
2 Understand how the government established by the Constitution embodies values and principles of democracy and republicanism.	
3 Understand the purpose and function of each of the three branches of government established by the US Constitution.	
4 Understand the differences among local, state and national government.	
5 Understand the role of the United States in current world affairs.	
***The essentials concepts and skills listed in social studies - Political Science/Civic Literacy are the same as the essential concepts and skills listed in 21st Century Skills - Civic Literacy.	

Intermediate (3-5) Math Essential Skills and Concepts

Numbers and Operations (pg 23)	Algebra (pg 26)
# Description	# Description
1 Develop an understanding of multiplication and division concepts and strategies for basic multiplication facts and related division facts.	1 Represent and analyze patterns and relationships involving multiplication and division to introduce multiplicative reasoning.
2 Develop fluency and quick recall of multiplication facts and related division facts and fluency with multi-digit multiplication and division.	2 Identify the commutative, associative, and distributive properties and use them to compute with whole numbers.
3 Develop the ability to estimate the results of computation with whole numbers, fractions, or decimals and be able to judge reasonableness.	3 Understand and apply the idea of a variable as an unknown quantity and express mathematical relationships using equations.
4 Extend place value concepts to represent and compare both whole numbers and decimals.	4 Represent and analyze patterns and functions, using words, tables and graphs.
5 Use benchmarks to help develop number sense.	
6 Develop an understanding of commonly used fractions, decimals, and percents including recognizing and generating equivalent representations.	
7 Develop an understanding of and fluency with addition and subtraction of fractions and decimals.	
Geometry and Measurement (pg 27)	Data Analysis and Probability (pg 29)
# Description	# Description
1 Describe, analyze and classify two-dimensional and three-dimensional shapes.	1 Represent and analyze data using tallies, pictographs, tables, line plots, bar graphs, circle graphs and line graphs.
2 Explore congruence and similarity.	2 Describe the distribution of the data using mean, median, mode and range.
3 Predict and describe the results of sliding(translation), flipping (reflection) and turning (rotation) two-dimensional shapes.	3 Propose and justify conclusions and predictions based on data.
4 Use ordered pairs on a coordinate grid to describe points or paths (first quadrant).	4 Predict the probability of simple experiments and test predictions.
5 Use geometric models to solve problems, such as determining the perimeter, area, volume and surface area.	5 Describe events as likely or unlikely and discuss the degree of likelihood using words like certain, equally likely, and impossible.
6 Select and apply appropriate standard (customary and metric) units and tools to measure length, area, volume, weight, time, temperature and the size of angles.	
7 Select and use benchmarks (1/2 inch, 2 liters, etc) to estimate measurements.	

Intermediate (3-5) Literacy Essential Skills and Concepts

Reading (pg 22)	Writing (pg 63)
# Description	# Description
1 Use multiple decoding strategies to read words in texts.	1 Use an effective writing process.
2 Independently read a significant number of books and texts each year. This includes reading both fiction and nonfiction in a variety of genres.	2 Use knowledge of purpose, audience, format, and medium in developing written communication.
3 Read for a variety of purposes and across content areas.	3 Apply writing strategies to communicate in a variety of genres with various audiences.
4 Use a variety of skills and strategies to comprehend nonfiction and informational text.	4 Use writing as a tool for learning.
5 Use a variety of strategies and skills to comprehend and interpret fiction.	5 Engage in the information literacy process: access, evaluate, and communicate information and ideas.
6 Read with fluency silently and aloud to support comprehension.	6 Write on demand.
7 Use a variety of strategies to develop and expand reading vocabulary.	7 Adhere to conventions generally established in spelling, punctuation, grammar, usage, syntax and style appropriate to genre and writing situation.
	8 Incorporate technology as a tool to enhance writing.
Speaking (pg 91)	Listening (pg 107)
# Description	# Description
1 Consider audience and variables in the speaking situation.	1 Listen for information and understanding.
2 Produce a coherent message.	2 Listen for interpretation, analysis, and evaluation.
3 Participate in a variety of communication situations.	3 Listen to establish, maintain, and enhance relationships.
4 Use appropriate content and conventions for purpose, audience, occasion and context.	
5 Demonstrate control of delivery skills.	
6 Participate appropriately in one-on-one situations and group settings	
7 Recognize the role of evaluation in oral communication.	
8 Recognize the role of response in oral communication.	
Viewing (pg 127)	
# Description	
1 Analyze the effects of visual media on society and culture.	
2 Use a range of strategies to interpret visual media.	
3 Apply a variety of criteria to evaluate informational media.	
4 Understand how literacy forms can be represented in visual narratives.	

Basic Alignment of Projects WILD, WILD Aquatic, Learning Tree activities to the Core Intermediate Grade Levels 21st Century Skills Essential Concepts and Skills

Core Essential Concepts & Skills Sets

"Project" Activity

Source

Activity Skill Development

Table with columns for Core Essential Concepts & Skills Sets (Employability 1-5, Financial 1-6, Health 1-5, Technology 1-6), "Project" Activity, Source, Activity Skill Development (analysis, application, cause & effect, classification, comparison, composition, construction, description, discussion, evaluation, generalization, identification, inference, interpretation, observation, organization, prediction, problem solving, reasoning, representation, research, summarization, synthesis, verification), Iowa Supplement, and Notes.

Intermediate (3-5) 21st Century Skills Essential Skills and Concepts

Political Science/Civic Literacy (Poli Sci) (pg 9)	Employability Skills (pg 26)
# Description	# Description
1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.	1 Communicate and work productively with others emphasizing collaboration and cultural awareness to produce quality work.
2 Understand how the government established by the Constitution embodies the enduring values and principles of democracy and republicanism.	2 Adjust to various roles and responsibilities and understand the need to be flexible to change.
3 Understand the purpose and function of each of the three branches of government established by the US Constitution.	3 Practice leadership skills, and demonstrate integrity, ethical behavior, and social responsibility in all activities.
4 Understand the differences among local, state and national government.	4 Demonstrate initiative, creativity, self-direction, and entrepreneurial thinking to produce successful outcomes.
5 Understand the role of the United States in current world affairs.	5 Demonstrate productivity and accountability by producing quality work.
** The essential concepts and skills listed in 21st Century Skills - Civic Literacy are the same as the essential concepts and skills listed in social studies - Political Science/Civic Literacy.	
Financial Literacy (pg 47)	Health Literacy(pg 59)
# Description	# Description
1 Create long and short term goals based on a prioritization of wants and needs.	1 Obtain, interpret, understand and use the basic health concepts to enhance personal, family, and community health.
2 Recognize how one's personal career choice and attitude can impact financial planning decisions.	2 Utilize interactive literacy and social skills to establish personal family, and community health goals.
3 Identify the concept of debt and an individual's responsibility for that debt.	3 Demonstrate critical literacy/thinking skills related to personal, family, and community wellness.
4 Recognize common risks to one's identity and demonstrate the ability to protect that identity.	4 Recognize that media and other influences affect personal, family and community health.
5 Determine the importance of saving/investing in relation to future needs.	5 Demonstrate behaviors that foster healthy, active lifestyles for individuals and the benefit of society.
6 Recognize that spending choices differ between groups of people and settings.	
Technology Literacy (pg 76)	
# Description	
1 Use technology resources to create original projects, identify patterns and problems, make predictions, and propose solutions.	
2 Use interactive technologies in a collaborative group to produce digital presentations or products in a curricular area.	
3 Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.	
4 Use technological resources to develop and refine for investigation.	
5 Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.	
6 Understand technology hardware and software system operations and their application.	