



Est. 1947

Curriculum Skills Map

WHO KNEW A PLACE SO CLOSE COULD TAKE YOU SO FAR





Scholarship. Citizenship. Leadership.

Strong academic programs are anchored by well-articulated, consistent curricula. In many schools, the curriculum is composed of a body of content that students are expected to learn from year to year. St. Luke's faculty and administration believe that the acquisition of content knowledge is important. We also believe that our curriculum and instruction should equip students with the skills and abilities they will need to drive success in high school, college, and the world beyond.

The map that follows details the set of skills and abilities that your student will gain as the result of the instruction received at St. Luke's. This map provides a clear picture of what your child will be able to do at the conclusion of each academic year.

We are grateful for the confidence you place in St. Luke's to be your partner in forming scholars, citizens, and leaders for the 21st century. Who knew a place so close could take you so far!

Literacy

*Communications
&
Literacy*

Communications & Literacy

Learner as Reader: Reading Comprehension and Fluency

GRADE LEVEL

ESSENTIAL SKILLS

8

Read, interpret, and evaluate both classic and contemporary fiction, non-fiction, drama, and poetry to understand the human experience.

7

Read, interpret, and evaluate both classic and contemporary fiction, non-fiction, drama, and poetry and make connections to the world.

6

Read, interpret, and evaluate both classic and contemporary fiction, non-fiction, drama, and poetry; recognize important text implications and identify relevant supporting details.

5

Read, interpret, and evaluate both classic and contemporary fiction, non-fiction, drama, and poetry and recognize and summarize important themes and supporting detail.

4

Read and interpret both classic and contemporary fiction and non-fiction; explain a significant event or message and give a relevant reason for opinion.

3

Respond to questions about a text accurately; summarize important characters, details, and important events from the beginning, middle, and end of a text.

2

Read an age-appropriate text independently and retell using language from the text.

1

Read an age-appropriate text with sustained attention and recall.

K

Recognize and apply the sounds of the first 26 Spalding phonograms to blend and read pre-primers and books with predictable, repetitive words and picture clues.

Communications & Literacy

Learner as Reader: Literary Analysis

GRADE LEVEL	ESSENTIAL SKILLS
8	Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or the Bible, including describing how the material is retold. Analyze character, motive, diction, and tone in a variety of literary genres; identify an author's purpose and style.
7	Identify stages of plot in a short story or novel: exposition, rising action, climax, falling action, resolution. Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.
6	Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topic. Trace and evaluate the argument and specific claims in a non-fiction text, distinguishing claims that are supported by reasons and evidence from claims that are not.
5	Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text. Explain how an author uses reasons and evidence to support particular points in a non-fiction text.
4	Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text.
3	Identify essential elements of narrative, informative, and informative-narrative writing; identify the author's purpose and evaluate characters in a story.
2	Discuss similarities in characters and events across stories; pose plausible answers to how, why, and what-if questions in interpreting both fiction and non-fiction.
1	Identify the main idea and key details in a text; make predictions and sequence events; distinguish between fiction and non-fiction. Orally discuss character, setting, and plot.
K	Retell a story with a beginning, a middle, and an end. Distinguish between prose and poetry; imaginary and real.

Communications & Literacy

Learner as Communicator: Written Expression

GRADE LEVEL

ESSENTIAL SKILLS

8

Compose a literary analysis essay of 6-8 paragraphs that expresses an original argument and is supported by textual evidence.

7

Compose a literary analysis essay of 5 paragraphs that includes a logical thesis statement and parenthetical citations.

6

Compose a 5 paragraph essay with an introduction, thesis statement, body, and conclusion.

5

Compose a 5 paragraph essay with an introduction, body, and conclusion.

4

Write multiple paragraphs in a variety of modalities (informative, descriptive, process) using transitions between paragraphs.

3

Write a unified paragraph with a clear topic sentence, logical order, precise language, and specific details.

2

Write a five sentence indented paragraph about one topic using complete sentences, proper punctuation, and logical order.

1

Compose multiple complete simple sentences about a given topic with proper punctuation and correct word order; identify declarative, interrogative, exclamatory, and imperative sentences.

K

Write and spell simple words and messages using phonograms; write first and last name.

Communications & Literacy

Learner as Communicator: Language Conventions

GRADE LEVEL

ESSENTIAL SKILLS

8

Identify all types of phrases and clauses and be able to move them properly in a sentence for variety and rhetorical effect.

7

Identify whether a sentence is simple, compound, complex, or compound complex and vary the types in sentences with appropriately punctuated dependent clauses.

6

Master action, linking, and helping verbs with subject complements (direct and indirect objects, predicate nouns and predicate adjectives); identify simple, compound, complex sentences. Exhibit mastery of language usage, punctuation, and spelling in writing.

5

Master the parts of speech (proper, common, irregular, and possessive nouns, subject/object pronouns, comparative adjectives, articles; action, linking, and helping verbs; subject/object, possessive and demonstrative pronouns). Use in sentences with proper punctuation.

4

Identify the parts of speech (nouns, pronouns, action, linking, and helping verbs, adjectives and articles, adverbs, prepositions, conjunctions, interjections) in a sentence. Use specific parts of speech to add detail to writing in correctly punctuated sentences.

3

Identify nouns, verbs, pronouns, adjectives, adverbs, conjunctions, prepositions, interjections in a sentence and use correctly in sentences with proper punctuation.

2

Identify nouns as subjects, verbs, pronouns, adjectives, conjunctions, and prepositions in a sentence and use correctly in a sentence with proper punctuation.

1

Identify nouns, verbs, pronouns, and adjectives in a sentence. Recognize the difference between a complete and incomplete sentence. Use capitals at the beginning of sentences and correct end punctuation.

K

Identify nouns and verbs.

Communications & Literacy

Learner as Communicator: Digital Literacy

GRADE LEVEL

ESSENTIAL SKILLS

8

Use a variety of digital tools to produce and publish writing on a global scale, both individually and in collaboration with others. Using technology, develop innovative products that present relationships between information and ideas. Create artifacts that support individual learning and contribute to the learning of others.

7

Use a variety of digital tools to produce and publish writing with the citation of sources. Interact, collaborate, and publish with peers employing a variety of digital media. Create original works as a means of personal and group expression.

6

Communicate information and ideas through multiple digital formats. Utilize technology to independently gather, evaluate, and use information in the production and publication of written artifacts. Properly cite and attribute information to original sources.

5

With the support of instructors, students will locate, research, organize and evaluate information in the creation of written works. Communicate information and ideas to multiple audiences using a variety of media. Demonstrate fluency and mastery of keyboarding skills.

4

With the support of instructors, students will conduct guided research and compose written artifacts through the use of digital tools. Demonstrate sufficient command of keyboarding skills.

3

With guidance and support from instructors, students will use technology to produce and publish writing. Use digital media to research and share learning results through multimedia products both independently and in collaboration with others. Demonstrate intermediate keyboarding skills.

2

With support from instructors, students will use a variety of digital tools to produce and publish writing, both independently and in collaboration with peers. Work with others using technology tools to convey ideas or illustrate simple concepts. Demonstrate introductory keyboarding skills.

1

Students will interact with a variety of technological media that supports classroom curricula. Learners will demonstrate creative thinking to communicate ideas with the help of digital tools.

K

Students will use digital applications to support classroom learning, specifically in the areas of literacy, fluency, and storytelling.

Communications & Literacy

Learner as Communicator: Public Speaker

GRADE LEVEL

ESSENTIAL SKILLS

8

Prepare and deliver a summative personal reflection to a community audience. Memorize and declaim three classic or contemporary poems per year. Lead a small group discussion on a work of literature.

7

Interpret a character from a favorite book and compose a revelatory first person narrative; present to class using dialect or character's "voice." Memorize and declaim classic or contemporary poems. Participate in civil discourse about literature.

6

Write and deliver a book talk analyzing specific passages and making connections to other texts or life situations. Memorize and declaim classic or contemporary poems.

5

Prepare and present a book talk from the author's point of view. Memorize and declaim classic or contemporary poems.

4

Research an important historical figure; prepare and deliver speech to class and adults. Memorize and declaim classic or contemporary poems. Give a book talk to the class about an independently read book.

3

Prepare and deliver a short speech to class on a given subject. Memorize and declaim classic or contemporary poems.

2

Memorize a short classic or contemporary poem and declaim in large chapel.

1

Memorize a Scripture verse and short classic or contemporary poem and recite before parents in small chapel.

K

Research a historical figure and create a portrait; share research and picture with adults and peers.

History



History
&
Social
Studies



History & Social Studies

Learner as Analyst: Information Literacy

GRADE LEVEL	ESSENTIAL SKILLS
8	Investigate multiple topics from a specific time period for comparison, analysis, and interpretation. Create and answer an original question about an overarching theme and produce an annotated bibliography. Communicate findings and conclusions in a written paper, a multi-media presentation, and an oral presentation. Cite sources correctly in a standard format.
7	Investigate a topic from a specific time period for analysis and interpretation. Create and answer an original question about that topic and produce an annotated bibliography. Communicate findings and conclusions in a written paper, a multi-media presentation, and an oral presentation. Cite sources correctly in a standard format.
6	Investigate a topic from a specific time period for analysis and interpretation. Answer a question about that topic, locating and evaluating historical sources. Communicate findings and conclusions in a written paper, a multi-media presentation, and/or an oral presentation. Cite sources correctly in a standard format.
5	Gather and organize information about a given topic from a specific time period, locating and evaluating historical sources. Communicate the findings and conclusions in a written paper, a multi-media presentation, and/or an oral presentation. Cite sources correctly in a standard format.
4	Gather and organize information about a given topic from a specific time period, locating and evaluating historical sources. Communicate the findings and conclusions in a written report, a multi-media presentation, and/or an oral presentation. List the sources in basic bibliographic format.
3	Gather and organize information about a given topic from a specific time period, locating and classifying historical sources. Communicate the findings and conclusions in their own words in a written report, a visual/multi-media presentation, and/or an oral presentation.
2	Gather and organize information about a given topic from a specific time period, locating and identifying the attributes of historical sources. Communicate the findings and conclusions in their own words in writing, a visual presentation, and/or an oral presentation.
1	Organize information about a given topic from a specific time period, distinguishing between fact and opinion. Present the organized information in their own words in writing, a visual presentation, and/or an oral presentation.
K	Listen to and remember information about a given topic from a specific time period. Copy information about the topic in writing and recall the information in a visual presentation and/or an oral presentation.

History & Social Studies

Learner as Analyst: Argumentation

GRADE LEVEL

ESSENTIAL SKILLS

8

Evaluate controversial issues from multiple perspectives. Assess the strengths and limitations of all sides and form an opinion based on those assessments. Anticipate other arguments and engage in informed debate. Write and speak persuasively to argue that point of view.

7

Evaluate a controversial issue from multiple perspectives. Form an opinion in favor of one side and construct an argument supporting that side. Engage in informed debate, writing and speaking persuasively to argue that point of view.

6

Organize evidence on a controversial issue into differing perspectives. Form an opinion in favor of one side. Write and speak persuasively to argue that point of view.

5

Organize evidence on a controversial issue into differing perspectives. Form an opinion in favor of one side. Present that argument to others using written, oral, multi-media, or visual expression.

4

Organize evidence on a controversial issue into differing perspectives. Present the main arguments for each point of view using written, oral, multi-media, or visual expression. Compare and contrast different accounts of an event and offer possible explanations for the differences.

3

Organize and evaluate information presented on the pros and cons of an issue and describe the main arguments for each side. Compare and contrast different stories about an event.

2

Organize information presented on the pros and cons of an issue or the different perspectives/explanations of an event.

1

Identify and describe two different opinions on an issue or event.

K

Describe someone's thoughts or ideas that are different from their own.

History & Social Studies

Learner as Analyst: Historical Perspective

GRADE LEVEL

ESSENTIAL SKILLS

8

Determine the broader historical context of specific events. Identify and analyze patterns of continuity, change and/or turning points across history, and evaluate their impact on the contemporary world and current events.

7

Analyze periods of history. Make connections between events in a period of history, identifying patterns of continuity, change and/or turning points, and evaluate the effect of this period of history on the contemporary world.

6

Identify periods of history. Create and use a chronological sequence to analyze the events in a period of history, identifying patterns of continuity and change, causes and effects, concurrent events, and/or turning points. Describe the influence of specific developments on the modern world.

5

Identify periods of history and significant developments. Create and use a chronological sequence to interpret events in a period of history, identifying causes, effects, and patterns of continuity and change. Compare life in specific time periods to life today.

4

Identify periods of history. Create and use a chronological sequence of events from a period of history to describe causes, effects, and examples of continuity and change.

3

Describe periods of history. Create a chronological sequence of multiple events using date or time. Identify differences between past, present, and future through oral and written expression, timelines, and other graphic representations.

2

Read and interpret information on a simple timeline, and create a timeline of the chronology of multiple events. Compare life in the past to life today.

1

Measure time and describe a sequence of several events, placing the events in chronological order on a simple timeline. Ask questions about the past.

K

Demonstrate understanding of the concept of chronology by observing and recording time and placing events in sequential order. Distinguish between past and present.

History & Social Studies

Learner as Global Citizen: Civic Literacy and Engagement

GRADE LEVEL

ESSENTIAL SKILLS

8

Complete a written analysis of a Supreme Court case that demonstrates understanding of the purpose, implementation, and consequences of state and/or federal laws and public policies; identifies the relevant Constitutional rights and responsibilities of citizenship involved in the case; shows an understanding of Constitutional principles; and explains the decision of the Court and its impact on the country.

7

Demonstrate understanding of how and why constitutions, laws, and public programs are challenged, changed, or abolished. Analyze the effects of a crisis on government institutions, laws, and civil liberties. Investigate and evaluate the impact of public programs, treaties, and international agreements.

6

Explain the concept of popular sovereignty and evaluate how citizens can effect change in governments or policies. Compare historical and contemporary means of changing societies, identifying specific roles played by citizens. Compare and demonstrate deliberative processes used in various settings.

5

Evaluate the origins, functions, structure, and benefits of different systems of government. Explain how and why citizens participate in government and demonstrate deliberative processes used to make decisions as a group.

4

Explain the purpose and function of a constitution and how it reflects values and beliefs. Compare the roles and structures of different levels and branches of government. Analyze the relationship between different levels of government and distinguish between citizenship at different levels.

3

Identify the purpose and functions of levels and branches of government, and explain how policies are developed to address public problems.

2

Summarize and compare the roles and responsibilities of government institutions, public officials, and citizens. Describe how all people play roles in and can improve a community. Follow agreed-upon rules to make decisions as a group.

1

Show respect for and explain the origins of symbols, customs, holidays, songs, and celebrations that contribute to our state and national identity. Describe what governments are and some of their functions.

K

Identify the contributions of historical figures, patriots, community workers, and good citizens who have shaped the community, the state, or the nation. Explain the purpose of rules.

History & Social Studies

Learner as Global Citizen: Cultural Literacy

GRADE LEVEL	ESSENTIAL SKILLS
8	Examine and analyze issues of conflict or cooperation between cultural groups. Demonstrate understanding of the beliefs and behaviors that influence each group's perspective(s) on/response to the issue, and explain how these beliefs and behaviors contribute to the conflict or cooperation.
7	Examine a culture and its perspective on/response to an issue, then present the issue from that culture's point of view.
6	Describe and give examples of cultural unity and diversity within and across groups. Explain the process of cultural diffusion and identify examples of cultural diffusion in the home, school, community and country.
5	Find, select, organize, analyze, and present information to compare various cultures, examining specific aspects of culture, such as institutions, language, religion, and the arts.
4	Find, select, organize, analyze, and present information on a cultural group, explaining specific aspects of culture, such as institutions, language, religion, and the arts.
3	Select, organize, and present information on a cultural group from the past or present, describing specific aspects of culture, such as institutions, language, religion, and the arts.
2	Describe the many aspects of culture: behavior, belief, values, traditions, institutions, and ways of living together. Identify specific examples.
1	Describe and explain the importance of various beliefs, customs, language, and traditions of families and communities. Explain how folktales and legends reflect these beliefs.
K	Identify similarities and differences among people such as kinship, religion, language, music, clothing, and food. Describe and compare family customs and traditions.

History & Social Studies

Learner as Global Citizen: Geographic Literacy - Global Awareness

GRADE LEVEL

ESSENTIAL SKILLS

8

Use geographic tools, primary sources, and secondary sources to investigate and analyze the causes and effects of a contemporary global issue caused by physical and/or human geographic factors. Present a proposal for solving or abating the issue, constructing and using maps or models to represent both the current issue and the proposed solution.

7

Investigate and explain how physical and/or human geographic features, patterns, relationships, and changes have affected or are affecting particular groups of people, locations, or regions. Make comparisons. Construct and use geographic tools (maps, charts, graphs, models and databases) to collect, interpret, analyze, and present data and findings.

6

Pose geographic questions and use geographic tools to answer them. Use maps, charts, graphs, models, and databases to answer geographic questions, determining absolute location using latitude and longitude. Locate, describe, and compare places and regions around the world as defined by human and environmental features, patterns, relationships, and changes.

5

Locate places and physical features in the world. Construct and use geographic tools to collect, interpret, evaluate, and present data on the human characteristics of specific locations/regions, explaining how these have changed over time. Analyze examples of human interactions and how humans have/are adapting to or modifying their environment.

4

Locate places and physical features in the country. Identify features and patterns of human geography such as population, culture, settlement patterns, economic activity, and political activity. Construct and use geographic tools to collect, analyze, and interpret data on these criteria and describe how these change over time. Explain relationships between places and between people and the physical environment.

History & Social Studies

Learner as Global Citizen: Geographic Literacy - Global Awareness

GRADE LEVEL

ESSENTIAL SKILLS

3

Locate places and physical features in the country and around the world. Construct maps and other geographic representations and use them to interpret location, measure distance, and describe direction. Describe geographic relationships such as how humans adapt to and modify the physical environment.

2

Construct maps with basic map elements (title, cardinal directions, legend/key) to describe places and the interactions between them. Use maps and a globe to interpret geographic information, describe regions using geographic features, and explain the effect of geography on the residents of a region.

1

Construct and use simple maps. Find locations using the four cardinal directions. Identify places and physical features on a map or globe. Describe the physical characteristics of places such as landforms, bodies of water, natural resources, and climate, explaining how these characteristics affect people's lives.

K

Demonstrate an understanding of the concept of location. Describe geographic tools that represent the Earth and aid in determining location (a map, a globe). Distinguish physical characteristics of place such as landforms, bodies of water, natural resources, and climate.

Science



*Science
&
Engineering*



Science & Engineering

Learner Practices Inquiry

GRADE LEVEL

ESSENTIAL SKILLS

8

Mastered

Science:

Ask testable questions from observations and research that challenge data and lead to the formation of original hypotheses. Discern between dependent and independent variables.

Engineering:

Define a design problem within certain criteria and constraints.

7

Reinforced

Science:

Ask testable questions from observations and research that challenge data and lead to the formation of original hypotheses. Discern between dependent and independent variables.

Engineering:

Define a design problem within certain criteria and constraints.

6

Introduced

Science:

Ask testable questions from observations and research that challenge data and lead to the formation of original hypotheses. Discern between dependent and independent variables.

Engineering:

Define a design problem within certain criteria and constraints.

5

Mastered

Science:

Ask questions with the ability to discern between the testable and non-testable. Determine what happens when a variable is changed.

Engineering:

Define a simple design problem within natural limits.

Science & Engineering

Learner Practices Inquiry

GRADE LEVEL

ESSENTIAL SKILLS

4

Reinforced

Science:

Ask questions with the ability to discern between the testable and non-testable. Determine what happens when a variable is changed.

Engineering:

Define a simple design problem within natural limits.

3

Introduced

Science:

Ask questions with the ability to discern between the testable and non-testable. Determine what happens when a variable is changed.

Engineering:

Define a simple design problem within natural limits.

2

Mastered

Science:

Ask questions based on observations to gain information and be answered for investigation.

Engineering:

Define a simple design problem that needs solving.

1

Reinforced

Science:

Ask questions based on observations to gain information and be answered for investigation.

Engineering:

Define a simple design problem that needs solving.

K

Introduced

Science:

Ask questions based on observations to gain information and be answered for investigation.

Engineering:

Define a simple design problem that needs solving.

Science & Engineering

Learner Develops Models

GRADE LEVEL

ESSENTIAL SKILLS

8

Mastered

Science:

Develop and modify scientific models to represent and/or generate data of unobservable mechanisms, systems, and phenomena.

Engineering:

Solve a design problem through the development of an object, tool, process or system that includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions.

7

Reinforced

Science:

Develop and modify scientific models to represent and/or generate data of unobservable mechanisms, systems, and phenomena.

Engineering:

Solve a design problem through the development of an object, tool, process or system that includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions.

6

Introduced

Science:

Develop and modify scientific models to represent and/or generate data of unobservable mechanisms, systems, and phenomena.

Engineering:

Solve a design problem through the development of an object, tool, process or system that includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions.

5

Mastered

Science:

Develop and evaluate a model using analogies, examples, or abstract representations to predict outcomes, describe patterns, and interpret scientific principles.

Engineering:

Develop a diagram or simple physical prototype to convey a proposed object, tool, or process.

Science & Engineering

Learner Develops Models

GRADE LEVEL

ESSENTIAL SKILLS

4

Reinforced

Science:

Develop a model using analogies, examples, or abstract representations to predict outcomes, describe patterns, interpret scientific principles, while understanding the limitations of the model.

Engineering:

Develop a diagram or simple physical prototype to convey a proposed object, tool, or process.

3

Introduced

Science:

Develop a model using analogies, examples, or abstract representations to predict outcomes, describe patterns, interpret scientific principles, while understanding the limitations of the model.

Engineering:

Develop a diagram or simple physical prototype to convey a proposed object, tool, or process.

2

Mastered

Science:

Develop models to represent amounts, relationship, scale, and patterns. Additionally, students will be able to distinguish between a model and an actual object.

Engineering:

Develop a simple model based on evidence to represent a proposed object or tool.

1

Reinforced

Science:

While distinguishing between a model and the actual object, students will develop models to represent amounts, relationship, scale, and patterns.

Engineering:

Develop a simple model based on evidence to represent a proposed object or tool.

K

Introduced

Science:

While distinguishing between a model and the actual object, students will develop models to represent amounts, relationship, scale, and patterns.

Engineering:

Develop a simple model based on evidence to represent a proposed object or tool.

Science & Engineering

Learner as Investigator

GRADE LEVEL

ESSENTIAL SKILLS

8

Mastered

Science:

Plan and conduct individual investigations showing mastery of the scientific method.

Engineering:

Use the engineering design process to collect data about the performance of a proposed object, tool, process, or system under a range of conditions.

7

Reinforced

Science:

Plan and conduct investigations individually and collaboratively, and in the designs, show implementation of the scientific method.

Engineering:

Use the engineering design process to collect data about the performance of a proposed object, tool, process, or system under a range of conditions.

6

Introduced

Science:

Plan and conduct investigations individually and collaboratively, and in the designs, show use of the scientific method.

Engineering:

Use the engineering design process to collect data about the performance of a proposed object, tool, process, or system under a range of conditions.

5

Mastered

Science:

Plan and conduct an investigation collaboratively, implementing the scientific method.

Engineering:

Test two different models of the same proposed object, tool, or process to determine which better meets criteria for success.

Science & Engineering

Learner as Investigator

GRADE LEVEL

ESSENTIAL SKILLS

4

Reinforced

Science:

Plan and conduct an investigation collaboratively, using the scientific method.

Engineering:

Test two different models of the same proposed object, tool, or process to determine which better meets criteria for success.

3

Introduced

Science:

Plan and conduct an investigation collaboratively, exploring the scientific method.

Engineering:

Test two different models of the same proposed object, tool, or process to determine which better meets criteria for success.

2

Mastered

Science:

With guidance, plan and conduct an investigation in collaboration with peers, introducing the scientific method.

Engineering:

Make observations (firsthand or from media) and/or measurements of a proposed object or tool or solution to determine if it solves a problem or meets a goal.

1

Reinforced

Science:

With guidance, plan and conduct an investigation in collaboration with peers, introducing the scientific method.

Engineering:

Make observations (firsthand or from media) and/or measurements of a proposed object or tool or solution to determine if it solves a problem or meets a goal.

K

Introduced

Science:

With guidance, plan and conduct an investigation in collaboration with peers, introducing the scientific method.

Engineering:

Make observations (firsthand or from media) and/or measurements of a proposed object or tool or solution to determine if it solves a problem or meets a goal.

Science & Engineering

Learner Practices Inquiry

GRADE LEVEL

ESSENTIAL SKILLS

8

Mastered

Science:

Use digital tools to construct graphs as to analyze and interpret data. Distinguish between direct and inverse relationships, and identify both human and procedural error and ways to improve accuracy.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

7

Reinforced

Science:

Use digital tools when possible, to construct graphs as to analyze and interpret data distinguishing direct and inverse relationships, while identifying both human and procedural error and ways to improve accuracy.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

6

Introduced

Science:

Use digital tools when possible, to construct graphs as to analyze and interpret data distinguishing direct and inverse relationships, while identifying both human and procedural error and ways to improve accuracy.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

5

Mastered

Science:

Represent data in tables and/or various graphs as to analyze and interpret patterns and relationships. Confirm the validity of obtained data.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

Science & Engineering

Learner Practices Analysis

GRADE LEVEL

ESSENTIAL SKILLS

4

Reinforced

Science:

Represent data in tables and/or various graphs as to analyze and interpret patterns and relationships, while seeking the validity of the data.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

3

Introduced

Science:

Represent data in tables and/or various graphs as to analyze and interpret patterns and relationships, while seeking the validity of the data.

Engineering:

Analyze data to evaluate and refine design solutions of a proposed object, tool or process.

2

Mastered

Science:

Record information from observations to describe patterns and relationships, and compare actual outcomes of investigations to predictions.

Engineering:

Analyze data from tests of an object or tool to determine if it works as intended.

1

Reinforced

Science:

Record information from observations to describe patterns and relationships, and compare actual outcomes of investigations to predictions.

Engineering:

Analyze data from tests of an object or tool to determine if it works as intended.

K

Introduced

Science:

Record information from observations to describe patterns and relationships, and compare actual outcomes of investigations to predictions.

Engineering:

Analyze data from tests of an object or tool to determine if it works as intended.

Science & Engineering

Learner Practices Quantitative Reasoning

GRADE LEVEL

ESSENTIAL SKILLS

8

Mastered

Science:

Use mathematical formulas and simple algebra to describe and support scientific conclusions and relationships.

Engineering:

Use mathematical reasoning to test and compare proposed solutions to an engineering design problem.

7

Reinforced

Science:

Use mathematical formulas and simple algebra to describe and support scientific conclusions and relationships.

Engineering:

Use mathematical reasoning to test and compare proposed solutions to an engineering design problem.

6

Introduced

Science:

Use mathematical formulas and simple algebra to describe and support scientific conclusions and relationships.

Engineering:

Use mathematical reasoning to test and compare proposed solutions to an engineering design problem.

5

Mastered

Science:

Describe, measure, estimate, and/or graph quantities (e.g., area, volume, weight, time) to address scientific questions and problems.

Engineering:

Use measurement data to determine whether a proposed object or tool meets criteria for success.

Science & Engineering

Learner Practices Quantitative Reasoning

GRADE LEVEL

ESSENTIAL SKILLS

4

Reinforced

Science:

Describe, measure, estimate, and/or graph quantities (e.g., area, volume, weight, time) to address scientific questions and problems.

Engineering:

Use measurement data to determine whether a proposed object or tool meets criteria for success.

3

Introduced

Science:

Describe, measure, estimate, and/or graph quantities (e.g., area, volume, weight, time) to address scientific questions and problems.

Engineering:

Use measurement data to determine whether a proposed object or tool meets criteria for success.

2

Mastered

Science:

Describe, measure, and/or compare measurable properties of different objects and display the data using simple graphs.

Engineering:

Use measurable data to compare two alternative solutions to a problem.

1

Reinforced

Science:

Describe, measure, and/or compare measurable properties of different objects and display the data using simple graphs.

Engineering:

Use measurable data to compare two alternative solutions to a problem.

K

Introduced

Science:

Describe, measure, and/or compare measurable properties of different objects and display the data using simple graphs.

Engineering:

Use measurable data to compare two alternative solutions to a problem.

Math



Mathematics



Mathematics

Number Sense and Operations

GRADE LEVEL

ESSENTIAL SKILLS

8

- Compare, order, estimate, and translate among rational numbers
- Extend order of operations to include powers and roots
- Select and use appropriate operations to solve problems with rational numbers
- Use proportional reasoning to solve problems

7

- Estimate and compute with integers, fractions, decimals, and percents
- Compare, order, estimate, and translate among integers, fractions, mixed numbers, decimals, and percents
- Extend the Order of Operations to include exponents
- Select appropriate situations to utilize estimation or rounding
- Use ratios and proportions to solve problems and identify scale factors
- Use properties of arithmetic operations on rational numbers (commutative, associative, distributive, identities, inverses)

6

- Efficiently add, subtract, multiply, and divide whole numbers and decimals, fractions and mixed numbers
- Add and subtract integers, except for subtraction of negative integers
- Demonstrate an understanding of place value from billions to thousandths
- Compare and order integers, positive fractions, mixed numbers, decimals, and percents.
- Apply number theory concepts including prime and composite numbers, LCM, GCF, and divisibility by 2, 3, 5, 6, 9, 10
- Demonstrate an understanding of exponential notation
- Apply the Order of Operations for expressions with grouping symbols
- Estimate computations and judge the reasonableness of the estimate
- Identify common equivalent fractions, decimals, and percents (including simplifying) • Convert fractions to both decimals and percents
- Use the inverse relationship (\div by 2 is the same as $\times \frac{1}{2}$)

5

- Add and subtract whole numbers and decimals
- Multiply whole numbers and decimals
- Divide whole numbers with two digit divisor
- Add and subtract mixed numbers and fractions (like/unlike denominators)
- Multiply fractions with whole numbers
- Accurately read and understand place value chart from millions to thousandths
- Recognize and place whole numbers, fractions, decimals, and mixed numbers on a number line
- Apply number theory concepts including prime and composite numbers, common multiple, common factor, and divisibility by 2, 3, 5, 10
- Apply the Order of Operations for expressions with grouping symbols compare, order, and identify common equivalents (including simplifying) to simple fractions, decimals, and percents

4

- Accurately and efficiently add and subtract up to 5 digits
- Accurately and efficiently multiply up to 3 x 2 digits
- Accurately and efficiently divide up to 3 digits divided by 1 digit with and without remainders
- Add and subtract decimals, fractions and mixed numbers with like denominators
- Read, write, order, and compare numbers from hundred thousands to hundredths
- Estimate quantities and computations up to 3 digits, including money up to \$1000
- Demonstrate an understanding of fractions as parts of whole, parts of collection, and locations on number line
- Select, use, and explain models for common fractions and mixed numbers
- Find equivalent fractions, mixed numbers, and decimals; order fractions

Mathematics

Number Sense and Operations

GRADE LEVEL

ESSENTIAL SKILLS

3

- Know and use addition and subtraction facts
- Memorize and use multiplication facts through 12
- Memorize and use division facts through 12
- Accurately and efficiently add and subtract up to 4 digits
- Accurately and efficiently multiply up to 2 by 2 digits
- Accurately and efficiently divide up to 3-4 digits divided by 1 digit with and without remainders • Compare whole numbers to 9,999 including expanded notation
- Identify and represent fractions with denominators through 12 as parts of wholes and parts of groups; compare fractions with denominators of 2, 3, 4
- Recognize multiples of numbers 1-10 (skip counting)
- Select, use, and explain models of multiplication and division through 10×10
- Use rounding to estimate quantities and judge the reasonableness of answer
- Identify the value of all coins and bills up to \$100 and find value of a collection of coins and bills; use appropriate notation

2

- Know and use addition and subtraction facts from 0 – 20
- Accurately and efficiently add and subtract 3-digit numbers using different strategies (including re-grouping)
- Name and write whole numbers to 1000; identify the place value and use expanded notation
- Identify, compare and use cardinal (1-1000) and ordinal numbers
- Identify and represent common fractions as parts of wholes, parts of groups, and numbers on the number line
- Identify the value of all coins and bills up to \$20 and find value of a collection of coins and bills, use appropriate notation

1

- Know and use addition and subtraction facts from 0 - 20
- Name and write numerals to 200, identify place values; group tens and ones; order numbers
- Identify and represent common fractions as parts of wholes on number line
- Identify odd and even numbers; determine whether set has odd/even number of elements
- Identify the value of coins and bills; find the value of a collection of coins and bills; use correct notation

K

- Know and use addition facts 0 - 10 with manipulatives
- Know and use subtraction facts 0 - 10 with manipulatives
- Recognize and write numbers 1-20, recognize up to 100
- Count by ones to at least 20 and back
- Create sets of objects with 0-10 objects
- Use ordinal numbers 1st to 5th and order numbers
- Compare sets of objects (up to 10) using appropriate language
- Identify coins by name; match coins to their value
- Use objects and pictures to model and solve simple addition and subtraction problems to ten
- Estimate and verify the number of objects in a group

Mathematics

Algebra and Patterns

GRADE LEVEL

ESSENTIAL SKILLS

8

- Set up and solve linear equations and inequalities with one or two variables
- Extend, represent, analyze and generalize patterns in tables, graphs, words, and symbols
- Identify the role of variables in an equation, e.g. $y=mx+b$
- Solve problems involving linear equations, parallel and perpendicular lines, and systems of equations
- Apply nonlinear concepts and rules to evaluate problems with polynomials and quadratic functions

7

- Extend, represent, analyze, and generalize a variety of patterns, with tables, graphs, words, or symbolic expressions
- Evaluate algebraic expressions
- Solve linear equations using tables, graphs, models, and algebraic methods
- Identify the slope of a line as a constant rate of change

6

- Solve linear equations using concrete models
- Replace variables with given values to evaluate expressions or formulas
- Analyze and find rules for symbolic, arithmetic, and geometric patterns and progressions
- Represent situations and relationships with models, tables, graphs, and rules in words and symbols
- Create and interpret graphs representing the relationship between two variables

5

- Represent real situations and mathematical relations using symbols
- Replace variable with given values and evaluate

4

- Determine how a change in one variable relates to a change in a second variable (input/output table)
- Solve problems involving proportional relationships including unit pricing and map interpretation

3

- Create, describe, extend, and explain patterns
- Determine which symbol ($>$, $<$, or $=$) is appropriate for a given number sentence

2

- Identify number patterns on the two hundreds chart; shape, size, color, letter, and visual patterns
- Skip count by 2's, 3's, 5's, and 10's with different starting points
- Construct and solve addition and subtraction open sentences

1

- Identify, reproduce, describe, extend, and create simple patterns
- Identify different patterns on the hundreds chart
- Skip count by twos up to 50, by fives and tens to 100

K

- Skip count by 5's and 10's to 100
- Sort and classify objects by attributes
- Identify, reproduce, describe, extend, and create patterns (color, shape, number, and letter repeating)

Mathematics

Geometry

GRADE LEVEL

ESSENTIAL SKILLS

8

- Evaluate geometric problems like perimeter and area using polynomial expressions
- Solve systems of equations and inequalities by graphing on a coordinate plane

7

- Use the Pythagorean theorem to identify right triangles and solve problems
- Classify geometric figures in terms of congruence and similarity
- Understand the relationships between angles formed by parallel lines and intersecting lines (complementary, supplementary, etc.)
- Identify and perform transformations of figures on a coordinate plane

6

- Graph and label points on the four quadrants of a coordinate plane
- Identify types of symmetry
- Identify polygons based on sides and angles
- Use formulas to calculate perimeter, circumference, area, and volume

5

- Identify, describe, and compare triangles, quadrilaterals and three-dimensional shapes based on properties
- Locate and plot points on a coordinate grid

4

- Describe attributes; model, draw, compare, and classify two- and three-dimensional shapes (circles, triangles, quadrilaterals, other polygons, cubes, spheres, pyramids)
- Using ordered pairs of numbers or letters, graph, locate, and identify points and describe paths (1st quadrant)

3

- Model, compare, and classify two-dimensional shapes (circles, triangles, and quadrilaterals)
- Identify and describe simple three-dimensional shapes (cubes, spheres, pyramids)
- Identify angles as right, less than right, or greater than right angles

2

- Identify, draw, describe, and compare two-dimensional shapes
- Identify and describe congruent shapes

1

- Describe attributes and parts of two-dimensional shapes
- Identify, describe, draw, and compare two-dimensional shapes
- Recognize congruent shapes
- Identify symmetry in two dimensional shapes

K

- Name, describe, sort, and draw circle, square, triangle, rectangle, oval, rhombus (diamond)
- Describe the attributes of two dimensional shapes
- Using appropriate language, identify and compare positions of objects in space
- Use simple shapes to create pictures and designs

Mathematics

Measurement

GRADE LEVEL

ESSENTIAL SKILLS

8

- Use proportional reasoning to solve problems, including indirect measurement problems
- Identify parts of a parabola (axis of symmetry, vertex, minimum/maximum, x and y-intercepts) using a graph and an equation

7

- Recognize and apply correct formulas for calculating area, perimeter (circumference), volume, and surface area
- Select, convert, and use appropriate units of measurement and scale

6

- Recognize and apply correct formulas for calculating area, perimeter (circumference), volume, and surface area
- Identify, measure, and construct angles, triangles, quadrilaterals, circles, diameter, radius, and circumference

5

- Find perimeter and area of triangles and rectangles
- Find volume and surface area of rectangular prisms
- Identify, measure, describe, classify, and draw angles
- Find sum of interior angles of a triangle
- Use simple conversions to solve problems

4

- Identify time to minute on analog and digital clock; and compute elapsed time using a clock
- Find perimeter and area of rectangles, triangles, and irregular shapes
- Identify and use appropriate tools of measurement to estimate and solve problems involving length, area, volume, weight, time, and temperature; include conversions

3

- Find perimeter and area of a rectangle
- Use a ruler to measure to the nearest half-inch or centimeter
- Carry out simple conversions within systems of measurement (hours to minutes, etc.)
- Identify time to the minute on analog and digital clocks; compute elapsed time using a clock and a calendar

2

- Identify dates using a calendar
- Compare the length, weight, area, and volume of two or more objects
- Measure and compare objects using metric and customary units of measurement (length to nearest half inch)
- Tell time to nearest 10 minute interval using analog and digital clocks; a.m. and p.m. • Construct and solve addition and subtraction open sentences

1

- Identify parts of the day, days of the week, and months of the year; identify dates using the calendar
- Tell time, to the quarter hour, on analog and digital clocks; use a.m. and p.m.
- Compare length (inches and centimeters only), capacity, and weight of two objects using direct comparison

K

- Recognize and compare the attributes of length, volume, weight, area, time and temperature
- Understands concepts of time: calendar, hour compared to minute, morning, afternoon, night

Mathematics

Data Analysis and Probability

GRADE LEVEL

ESSENTIAL SKILLS

8

- Select, create, interpret, and use various tabular and graphical representations of data
- Find, describe, and interpret mean, median, mode and range to compare sets of data
- Use models to compute probabilities

7

- Construct and interpret scatter plots, circle graphs, Venn diagrams, and charts
- Construct and interpret tables and line graphs
- Find, describe, and interpret mean, median, mode, and range to compare sets of data
- Use diagrams, tables and lists to compute probabilities for simple compound events

6

- Construct and interpret scatter plots, line plots, bar graphs, and circle graphs
- Calculate the mean, median, mode, and range as it pertains to data
- Predict and display the probability of outcomes of simple experiments

5

- Predict the probability of outcomes of simple experiments
- Given a set of data, find the mean, median, mode, and range
- Construct and interpret appropriate graphs pertaining to a given set of data

4

- Collect and organize data sets; construct, interpret and make predictions from data sets including tables, bar graphs, pictographs, circle graphs, line graphs, line plots, and tallies
- Represent the possible outcomes for a simple probability situation; classify outcomes as likely, unlikely, certain, impossible
- List and count the number of possible combinations of objects given three sets

3

- List and count the number of possible combinations of objects from two sets
- Match representations of a data set (tables, line plots, graphs, tallies) with the actual data set

2

- Organize, classify, represent, and interpret data using tallies, charts, tables, bar graphs, pictographs, and Venn diagram

1

- Interpret data using tallies, pictographs, and bar graphs

K

- Interpret data using pictographs and bar graphs

Mission



Mission Statement

St. Luke's Episcopal School is a Christian community dedicated to academic and personal excellence, lifelong learning, and service to others. As members of a Christian community, our conduct is guided by love and respect for God, our School, or neighbors, and ourselves. We demonstrate the St. Luke's Way through behavior that is courteous and cooperative.

