

LCSS

LAWRENCE COUNTY SCHOOLS SUMMER SCHOLARS GUIDE EIGHTH GRADE



Letter: Scholars Guide

Dear LCSS Families,

As the school year concludes, it is important to our educators and families that we provide opportunities for children to stay engaged with learning during the summer. LCSS has created a Summer Scholars Guide for grades K-8 that serves as a resource for families and aims to minimize summer learning loss and promote preparation for the upcoming school year. Suggestions in the Scholars Guide are optional activities to help students maintain and expand their academic growth over the summer.

In the Scholars Guide, you'll find a list of academic standards from the grade level that your child recently completed, with practice tips on subjects that are already familiar. You'll also find a list of academic standards related to your child's next grade level, allowing them to prepare for the upcoming school year. In both cases, you may need to adapt the suggested activities to meet your child's specific needs. Reading is one of the best things your child can do over the summer, and your local branch library has books for students of all ages. The Scholars Guide includes a list of reading topics and suggested educational websites. We wish your family a fun and safe break and look forward to seeing your child back in school next fall!

Glossary

Compass Rose – A circle showing the four directions printed on a map or chart.

Expression – Numbers and symbols grouped together to show the value of something (Ex., $2 + y$).

Function – A rule or formula where each input value gives exactly one output value.

Linear equation – An equation that gives a straight line when it is graphed.

Polynomial – A polynomial can have constants (like 4), variables (like x or y) and exponents (like the 2 in y^2), that can be combined using addition, subtraction, multiplication and division.

Primary Sources – Immediate, first-hand accounts of a topic from people who had a direct connection with an event. Primary sources can include: texts of laws and other original documents; newspaper reports by reporters who witnessed an event or who quote people who did; speeches, diaries, letters and interviews - what the people involved said or wrote; original research; datasets or survey data, such as census or economic statistics; photographs, video, or audio that capture an event.

Secondary Sources – One step removed from primary sources, a secondary source is created by someone who did not directly witness an event, though they often quote or otherwise use primary sources. Secondary sources can cover the same topic as a primary source but add a layer of interpretation and analysis. Secondary sources can include: most books about a topic; analysis or interpretation of data; scholarly or other articles about a topic, especially by people not directly involved; documentaries (though they often include photos or video portions that can be considered primary sources).

What you learned **this** year and need to keep practicing

ENGLISH LANGUAGE ARTS

- Determine how characters interact over the course of a story to develop a theme
- Analyze how word choices impact meaning and tone • Determine how particular sentences and paragraphs add meaning to an article or story
- Notice how modern stories include allusions • When writing or speaking, produce compound, complex, and compound-complex sentences

MATH

- Understand exponents, square/cube roots, and scientific notation
- Graph proportional relationships and interpret the slope as unit rate
- Understand, compare, construct, and describe functions, and know $y = mx + b$
- Understand and apply the Pythagorean Theorem

SCIENCE

- Use scientific reasoning to see if data supports claim
- Describe use of electromagnets/motors in industry
- Model how forces combine to create movement of an object
- Gather evidence of the impact of forces on objects in everyday life

SOCIAL STUDIES

- Gather, examine, synthesize, and communicate information from primary/secondary sources
- Learn about colonization, Civil War, Reconstruction
- Learn geography awareness/mapping skills: using keys, legends, compass rose, intermediate directions

What is ahead **next** year that you can prepare for

ENGLISH LANGUAGE ARTS

- Determine a central idea or theme and write a summary
- Determine impact of word choices on meaning/tone of text and how language evokes a sense of time/place
- Analyze how an author creates mystery, tension in stories
- Determine an author's point of view/perspective and how rhetoric is used to prove the author's point
- Read a variety of texts and consider how they provide a better understanding of a related topic

MATH

- Interpret and rewrite equivalent expressions
- Add, subtract, multiply, and divide polynomials
- Create equations to describe numbers or relationships
- Represent and solve equations and inequalities
- Understand and interpret functions
- Interpret linear models

SCIENCE

- Compare and critique two arguments on the same science topic
- Read information from multiple publications to determine possible bias
- Decide when to use qualitative vs. quantitative data
- Read and analyze lab findings

SOCIAL STUDIES

- Learn about world history: Age of Revolution (including Enlightenment philosophers), Industrial Revolution, Unification and Imperialism, World Wars, Cold War, Contemporary World

Things to do and places to go during the summer

ENGLISH LANGUAGE ARTS

Write down interesting quotes and explain why they are important to you • Increase typing speed by practicing online at typing.com • Watch presentations on TED.com and take notes on important details

MATH

Help your child find some appropriate number and problem-solving games to play online • Track or graph scores/stats for a favorite sports team including winning percentages • Help calculate gas mileage, best buys, and family budgets or vacation planning

SCIENCE

Visit area science museums, botanical gardens, or the zoo • Create a birding journal that identifies where and when each species was spotted • Use Khan Academy to learn about science topics online

SOCIAL STUDIES

Create your own Google Map and share with friends • Go on a high-tech treasure hunt for a geocache • Visit local museums • Take a trip to the Lawrence County Archives

Keep reading all year long!

Visit these websites for free reading materials and other important information about why literacy matters.

- [Lawrence County Public Library](#)
- [The Library Box](#)

Reading List and Resource Guide



ENGLISH LANGUAGE ARTS

- *Ghost* by Jason Reynolds
- *Ghost Boys* by Jewell Parker Rhodes
- *Refugee* by Alan Gratz
- *The Maze Runner* by James Dashner
- *Monkey Town: The Summer of the Scopes Trial* by Ronald Kidd
- *The Green Glass Sea* by Ellen Klages

MATH

- *Hot X: Algebra Exposed* by Danica McKellar
- *Painless Algebra (Barron's Painless series)* by Lynette Long
- *Do the Math: Secrets, Lies, and Algebra* by Wendy Lichtman
- *Do the Math: The Writing on the Wall* by Wendy Lichtman

SCIENCE

- *The Wright Brothers: How they Invented the Airplane* by Russell Freedman
- *The Boy Who Harnessed the Wind* by William Kamkwamba
- *Airborn, Skybreaker, Starclimber trilogy* by Kenneth Oppel
- *Life As We Knew It* by Susan Beth Pfeffer
- *The Martian (Young Readers Edition)* by Andy Weir
- *The Reinvention of Edison Thomas* by Jacqueline Houtman

SOCIAL STUDIES

- *Come On In, America: The United States in World War I* by Linda Barrett Osborne
- *Emancipation Proclamation: Lincoln and the Dawn of Liberty* by Tonya Bolden
- *Truce* by Jim Murphy
- *Immigrant Kids* by Russell Freedman
- *Painless American History (Barron's Painless series)* by Curt Lader
- *Seeds of America trilogy (Chains, Forge, Ashes)* by Laurie Halse Anderson
- *Ashes of Roses* by M.J. Auch
- *The Astonishing Life of Octavian Nothing, Traitor to the Nation, volumes 1 and 2* by M.T. Anderson