

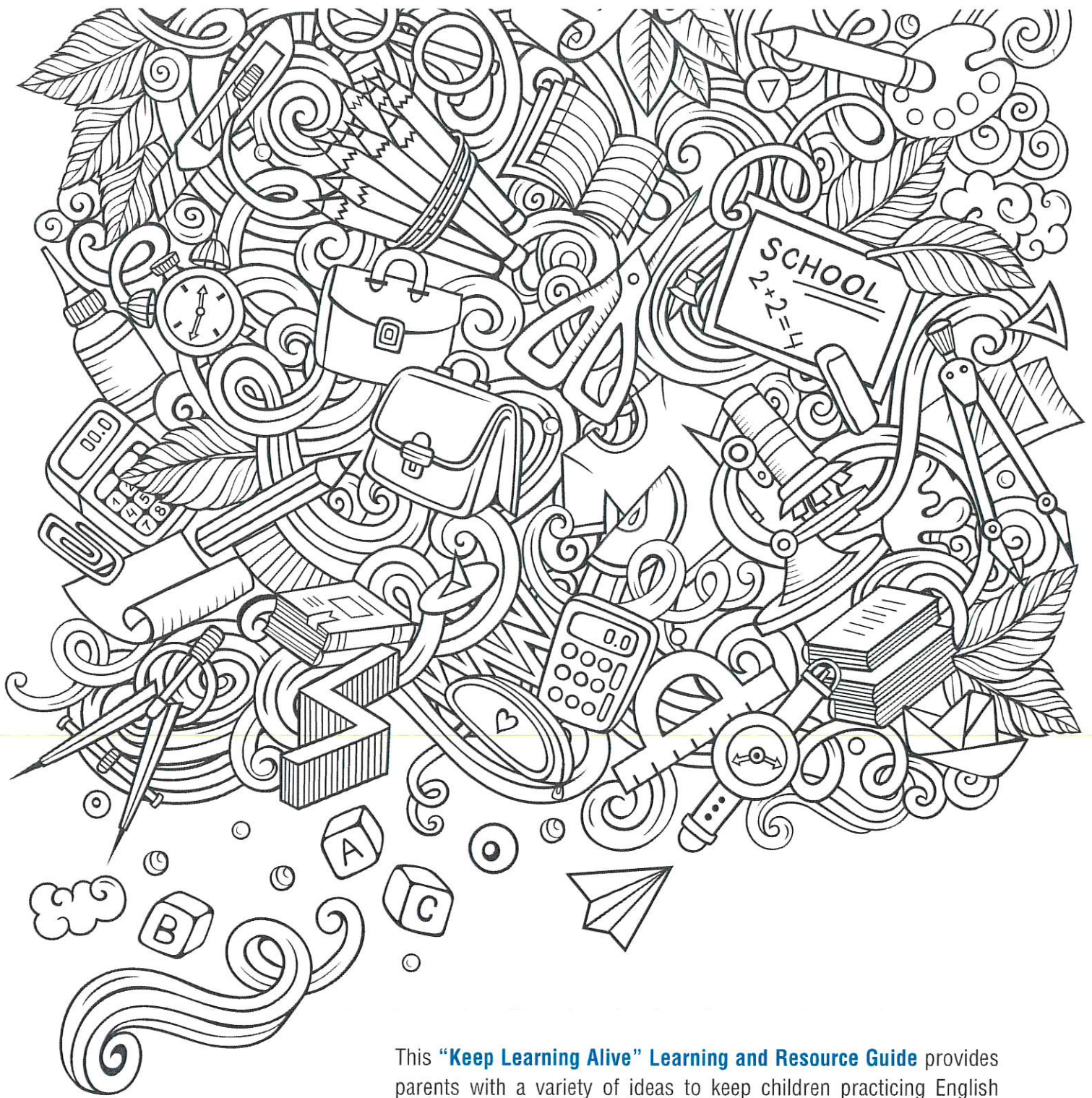
COLOR ME

KEEP
LEARNING
alive



CCPS

Collier County Public Schools



This **“Keep Learning Alive” Learning and Resource Guide** provides parents with a variety of ideas to keep children practicing English Language Arts, Math, Science, and Social Studies while not in school.

Plus, there are a number of websites available in the “Student” section of the District’s website that also provide academic support.

These links can be accessed by visiting:

collierschools.com/students

bridgeprepcollier.com

KEEP LEARNING *alive*

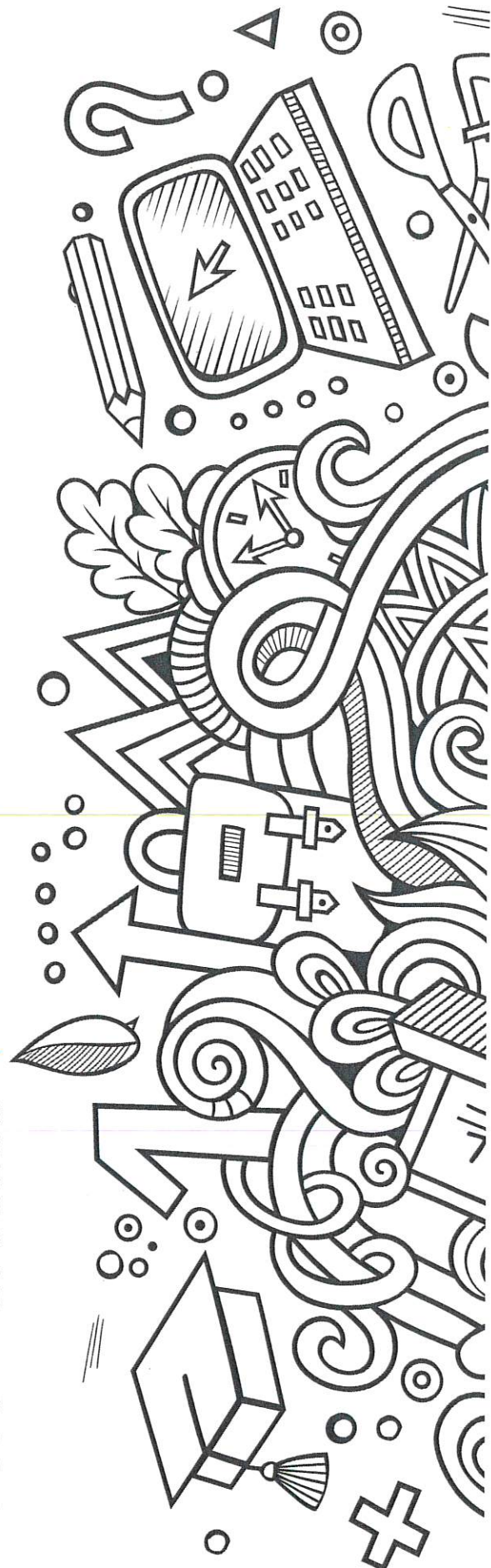


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GRADES K-3 RECREATIONAL READING

Source: Florida Department of Education

This book list has been compiled by the Florida Department of Education (FLDOE) to assist youngsters in selecting books which will enable them to experience the joy of reading. It is a resource for students and parents. The list has been prepared by the FLDOE for a range of grade levels; therefore these age ranges should be used only as guidelines. A book that may appeal to one child may be rejected by another child of the same age.

Before obtaining any of the books listed, it is suggested that you review them personally to see whether they seem right for your child.

- A Day in the Life of Murphy**, Alice Provensen
- A Drop of Water:**
A Book of Science and Wonder, Walter Wick
- Actual Size**, Steve Jenkins
- Ants**, Melissa Stewart
- Ape Escapes!: And More True Stories of Animals Behaving Badly**, Aline Alexander Newman
- Aunt Flossie's Hats**, Elizabeth Fitzgerald Howard
- Benny and Penny in the Big No-No!**, Geoffrey Hayes
- Big Wolf and Little Wolf**, Nadine Brun-Cosme
- Buffy the Burrowing Owl**, Betty Gilbert
- Buster**, Denise Fleming
- Christian, the Hugging Lion**,
Justine Richardson and Peter Parnell
- Count Down to Fall**, Fran Hawk
- Daddy & I**, Eloise Greenfield
- Deep in the Swamp**, Donna Bateman
- Diary of a Worm**, Doreen Cronin
- Dino-Dinners**, Mick Manning and Brita Granstrom
- Discovery in the Cave**, Mark Dubowski
- Flat Stanley**, Jeff Brown
- Fly Danny, Fly**,
Chip Gilbertson, Gina Restivo, and Michelle Kendrick
- Frog and Toad Together**, Arnold Lobel
- Gracias *Thanks**, Pat More
- Hi! Fly Guy**, Tedd Arnold
- Hot City**, Barbara Joosse
- How People Learned to Fly**, Fran Hodgkins and True Kelley
- How to Eat Fried Worms**, Thomas Rockwell
- I Always, Always Get My Way**, Thad Krasnesky
- Iggy Peck Architect**, Andrea Beaty and David Roberts
- Jitterbug Jam**, Barbara Jean Hicks
- Leaf Jumpers**, Carole Gerber
- Little Melba and Her Big Trombone**,
Katheryn Russell-Brown and Frank Morrison
- Little Skink's Tail**, Janet Halfmann
- My Name is Yoon**, Helen Recorvits
- No, David!**, David Shannon
- Noisy Paint Box**, Barb Rosenstock and Mary GrandPre
- Ocean Hide and Seek**, Jennifer Evans Kramer
- Polar Slumber**, Dennis Rockhill
- Poppleton in Winter**, Cynthia Rylant
- River of Dreams: The Story of the Hudson River**, Hudson Talbott
- Rosie Revere Engineer**, Andrea Beaty and David Roberts
- She Sang Promise: The Story of Betty Mae Jumper, Seminole Tribal Leader**, J.G. Annino
- Sheep in a Jeep**, Nancy Shaw
- The BFG**, Roald Dahl
- The Chicken Sisters**, Laura Joffe Numeroff
- The Most Magnificent Thing**, Ashley Spires
- The Napping House**, Audrey and Dan Wood
- The Secret Olivia Told Me**, N. Joy
- The Story of Ruby Bridges**, Robert Coles
- Twas the Day Before Zoo Day**, Catherine Ipcizade
- What Do You Do With a Tail Like This?**,
Steve Jenkins and Robin Page
- What Pet Should I Get?**, Dr. Seuss
- Wonder Horse**, Emily Arnold McCully
-

GRADES 4-5 RECREATIONAL READING

Source: Florida Department of Education

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Before obtaining any of the books listed, it is suggested that you review them personally to see whether they seem right for your child.

A Faraway Island, Annika Thor

A History of US, Joy Hakim

A Nest for Celeste: A Story About Art, Inspiration, and the Meaning of Home, Henry Cole

A Snicker of Magic, Natalie Lloyd

Alice's Adventures in Wonderland, Lewis Carroll

AQUIFERious, Margaret Ross Tolbert

Bad News for Outlaws: The Remarkable Life of Bass Reeves, Deputy U.S. Marshal, Vaunda Micheaux Nelson

Bud, Not Buddy, Christopher Paul Curtis

Chasing Redbird, Sharon Creech

Dare to Dream!, Carl Sommer

Discovering Mars, Melvin Berger

Do Not Open: An Encyclopedia of the World's Best-Kept Secrets, John Farndon

Dog Diaries: Secret Writings of the WOOOF Society, Betsy Byars, Betsy Duffey, and Laurie Myers

Eidi, Bodil Bredsdorff

Elijah of Buxton, Christopher Paul Curtis

Extreme Pets!, Jane Harrington

Heroes for My Son, Brad Meltzer

Hurricanes: Earth's Mightiest Storms, Patricia Lauber

Inside Out & Back Again, Thanhha Lai

Island of the Blue Dolphins, Scott O'Dell

Jason and Elihu, Shelley Frazer Mickle

Just Being Audrey, Margaret Cardillo

Life Under Ice, Mary M. Cerullo

My Side of the Mountain, Jean Craighead George

Number the Stars, Lois Lowry

Princess Academy, Shannon Hale

Quest for the Tree Kangaroo, Sy Montgomery

Riddle-iculous Math, Joan Holub

Sarah, Plain and Tall, Patricia MacLachlan

Search for the Shadowman, Joan Lowery Nixon

See What You Can Be: Explore Careers That Could Be for You!, Diane Heiman, and Liz Suneby

The Birchbark House, Louise Erdrich

The Black Stallion, Walter Farley

The Indian in the Cupboard, Lynne Reid Banks

The Underneath, Kathi Appelt

This One Summer, Mariko Tamaki

Viva Frida, Yuyi Morales

Where the Mountain Meets the Moon, Grace Lin

Whittington, Alan Armstrong

Who Has Seen the Wind?, Christina G. Rossetti

Zlateh the Goat, Isaac Bashevis Singer



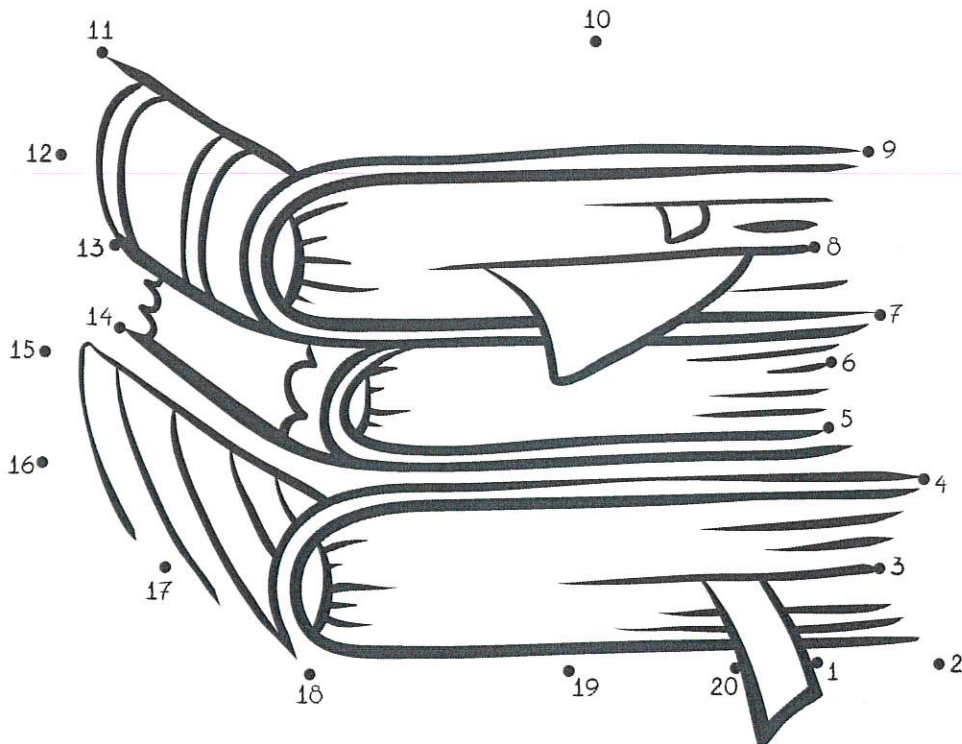


ENGLISH LANGUAGE ARTS

[READING]

It is important to read to your child daily and to also have your child read to and with you. This is true regardless of the age of the child.

- Look for things around the house for your child to read. It could be the newspaper, pamphlets, magazines, books, or websites linked on the school district website.
- While reading to or with your child, stop every now and then to ask questions such as how or why something happened.
- Ask your child to explain, analyze, and summarize things read.
- Read a variety of text including fiction and non-fiction
- Read and discuss newspaper articles.
- Talk about an author's point of view, the main idea of a text, and/or the theme.
- Have your child write responses or reactions to multiple types of text.



ENGLISH LANGUAGE ARTS



[READING WEB-BASED RESOURCES]

**JUST READ, FLORIDA!
SUMMER LITERACY ADVENTURE**
(www.justreadfamilies.org)

Istation
Achieve
ABCya

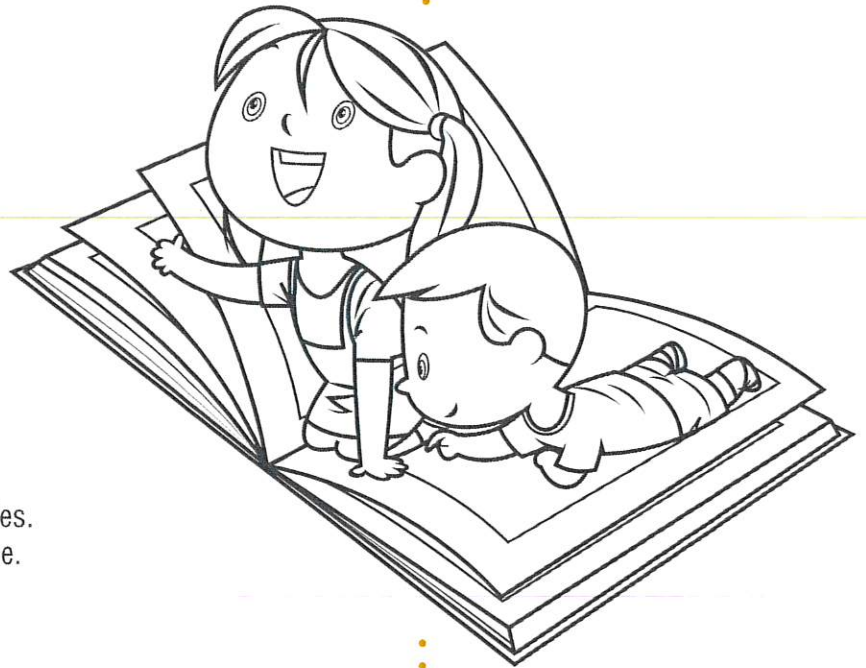
[READING CURRICULUM]

PRE-KINDERGARTEN

- Listen to read-alouds.
- Use descriptive words to tell stories.
- Practice writing first and last name.
- Identify letters in name.

KINDERGARTEN

- Practice letters and sounds.
- Read basic sight words.
- Listen to and read easy books accurately and fluently.



*Where can I find read-aloud
activities in the community?* →



VISIT

Collier County Public Library
Visit www.collierlibrary.org
for times and locations.



ENGLISH LANGUAGE ARTS

[READING CURRICULUM (continued)]

1ST GRADE

- Read sight words and phrases with fluency.
- Read literary and information books.
- Draw or write about topics and events in books.

2ND GRADE

- Read literary and information books.
- Ask and answer questions about key details in books.
- Write about facts and events in books.
- Use new words and phrases in coversations.

3RD GRADE

- Listen to, read, and discuss literary and information books.
- Write (in cursive or on keyboard) about topics and events in books.
- Use new vocabulary when speaking and writing.

4TH GRADE

- Read multiple books on the same topic or theme.
- Access and organize information from online texts and discuss similarities and differences.
- Record new vocabulary and define how it is used in texts.
- Analyze texts and write (in cursive or on keyboard) to develop topics with facts, details, and opinions.

5TH GRADE

- Read literary and information texts.
- Discuss and quote information from texts.
- Integrate knowledge and ideas from print and digital sources in a range of writing (in cursive or on keyboard).

ENGLISH LANGUAGE LEARNERS (ELL)

- Practice reading activities outlined for child's grade level.

EXCEPTIONAL STUDENT EDUCATION (ESE)

- Practice reading activities outlined for child's grade level.

ADVANCED LEARNERS

- Research topics of interest using text and digital resources.
- Write (in cursive or on keyboard) notes, summaries, and reports integrating multiple sources.

ENGLISH LANGUAGE ARTS



[WRITING]

Students can practice handwriting skills or writing about topics of interest. Students in K-2 should practice their manuscript (printing), while students in grades 3 and up should practice writing cursive. Encourage your child to keep a diary or reading response journal during their time away from school

[WRITING TOPICS]

READ LIKE A DETECTIVE - WRITE LIKE A REPORTER

- Look for clues and gather evidence in text:
 - > Read
 - > Look carefully for clues in pictures and the words
- Ask questions:
 - > Ask who, what, when, where, how, and why something happened
 - > Think carefully about what information is in the text and missing from the text
- Make your case:
 - > A case is based on opinion backed by facts and solid evidence
 - > Look carefully at the evidence gathered from reading books
 - > Classify information, determine sequence, compare, contrast, or look for causes and effects
- Prove it:
 - > Think about what you learn from text and from asking questions
 - > What's important to share?
 - > Plan and write your opinion
 - > Reread what you have written to be certain it is clear and free from errors



ENGLISH LANGUAGE ARTS

[WRITING TOPICS (continued)]

ALL ELEMENTARY GRADE LEVELS

- Many parents worry about helping their students be successful in school. Create a piece of writing that could become a how-to brochure for parents: How to Help Your Child Succeed in School.
- Write letters to family members, friends, teachers, the newspaper, and/or important people.
- Think of a friend you have, in or out of school. Tell one story that comes to mind when you think of this friend.
- Think of a place that is so special to you that you just love thinking about it.
 - > It might be as big as a city or as small as one corner of a room. Tell one story that comes to mind when you think of this place.
 - > Describe this place so clearly that your reader will know just what it's like to be there.
- Think of a teacher or friend you have had that you will remember for a long, long time. Describe this person so clearly that your reader will know just what made you remember him or her.
- Think of a person you have known who has been important to you. Describe why he or she made such an impression on you or made a difference in your life.
- Pretend your class is putting together a time capsule. It might not be opened by anyone for 100 years or more. This time capsule will tell people in the future what life on Earth was like in the 2000s. You can choose one thing to put inside the time capsule. Explain what you would choose and why.
- Think of the most valuable thing you own that was not bought in a store. Explain why it is important to you.
- Write about your name.
- Pick something you are wearing or something in your desk or pocket. Write an advertisement for this thing that would convince someone to buy it.











[MATH]

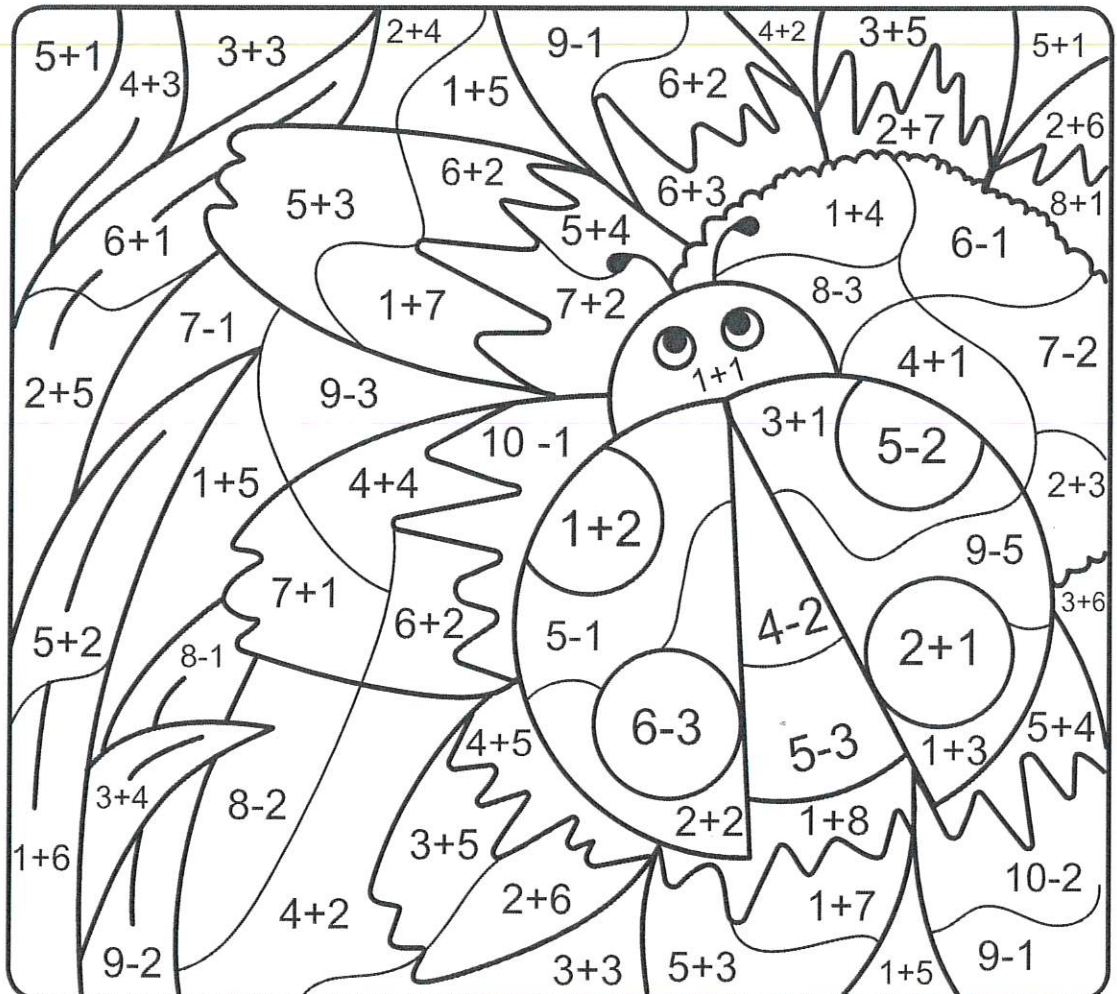
There are many activities parents can involve their children in that are math related. Children of all ages can always practice their math facts (addition, subtraction, multiplication, division) in a variety of ways. Try to make it fun!

[MATH WEB-BASED RESOURCES]

Istation.com

Use the answer to each math problem to determine the color to use for that area

- 2 =  brown
- 3 =  gray
- 4 =  red
- 5 =  yellow
- 6 =  blue
- 7 =  green
- 8 =  light pink
- 9 =  pink





MATH

[MATH CURRICULUM]

KINDERGARTEN

- Practice addition facts to 5 and related subtraction facts.

1ST GRADE

- Practice addition facts to 10 and related subtraction facts.

2ND GRADE

- Practice all single-digit addition facts and related subtraction facts.
(Students should know these from memory by the end of 2nd grade)

3RD GRADE

- Practice all single-digit multiplication facts and related division facts.
(Students should know these from memory by the end of 3rd grade)

4TH GRADE

- Practice addition and subtraction within 1,000,000 using the standard algorithm.

5TH GRADE

- Practice multiplication of up to 2-digit by 5-digit numbers using the standard algorithm.

[MATH ACTIVITIES AND GAMES]

CONCENTRATION (addition, subtraction, multiplication, division)

- You will need index cards or squares of paper. The object of the game is to find pairs of matching cards among an array of face down cards. Help your child write addition, subtraction, multiplication, or division facts on one set of index cards, and the answers on another set. Shuffle the cards and lay them out face down. The first player turns over two cards. If they match, the player keeps the two cards and takes another turn. The next player continues by trying to find two matching cards. When all cards have been collected, the player with the most pairs wins.

DICE GAMES (addition)

- You will need 2, 3, or 4 dice and one score sheet. Tally to so many rolls or to a preset score such as 0 or 100 points. Vary it by adding the sums of the dice together, and the greatest or least score wins! Vary it again by rolling 3 colored dice and 1 white die. Subtract the number on the white die from the sum of the colored dice, and the greatest sum wins.



[MATH ACTIVITIES AND GAMES (continued)]

GO FISH (addition)

- Prepare flash cards from 0-13 (3 sets of each number). Play “Go Fish” to add numbers up to 10. (Ex: Sally has the number 4, so she asks her mother for the number 6 because $4+6=10$)

WAR (addition)

- Divide a deck of cards evenly. Each player will put out two cards and add them together. Whoever has the highest total will take all cards. The object is to take the whole deck. This could be expanded to multiplication.

PIG (addition)

- Players take turns rolling two dice. A player may roll the dice as many times as he/she wants, mentally keeping a total of the sums that come up. When the player stops rolling, he/she records the total, and adds it to the scores from previous rounds. BUT if a one is rolled, the player scores a 0 for that round, and it's the next player's turn.

GUESS MY NUMBER (number logic)

- You need: paper, pencil, partner. Player one picks a number from 0 – 99 and writes it down. Player two makes a guess and writes it down. Player one gives a clue: “Your guess is greater than my number” or “Your guess is less than my number.” Continue playing until player two guesses player one's number. Switch jobs and play again.

THE 1 TO 10 GAME (addition)

- You need: 2 dice, 1 deck of cards, and a partner. Use only the ace, 2, 3, 4, 5, 6, 7, 8, 9, and 10 cards. One of you takes the red cards, one of you takes the black cards. Take turns. On your turn, roll the dice and figure out the sum. Remove enough cards from your hand to add up to that sum. For example, if you roll a 5 and a 3, you can make 8 in many ways ($5+3$, $4+4$, $4+2+2$, etc.) If you can't make the sum with the cards in your hand, roll again. If you can't make a sum after three rolls, you lose the game. You win if your partner can't make a number in three rolls or if you use up all of your cards.

NUMBER FAMILY RUMMY (fact families)

- Use a deck of 40 cards: Four suits of ace through ten. The goal is to make families of three cards that are related by addition or subtraction. For example: 5, 5, and 10 are a family because $5+5=10$, and $10-5=5$. 6, 3, and 9 are a family because $6+3=9$, $3+6=9$, $9-6=3$, and $9-3=6$. Shuffle the deck and deal cards to each player. Place the remaining cards face down in a pile. If you have any families of cards, place them aside. If you don't have any families, you may draw one from the pile and discard one of your own. You may also discard the one that you picked up, if you don't want it. The first player to get rid of all 6 cards (2 fact families) is the winner. Remember that the ace equals one.



MATH

[MATH ACTIVITIES AND GAMES (continued)]

GRAB BAG SUBTRACTION (subtraction)

- Choose a number of things to work with, and put that many objects into a bag. You can use crayons, coins, beans, buttons, etc.) Grab a handful of the items and count them. Use subtraction to figure out how many items are now left in the bag. So if you put 100 items in the bag and pulled out 20, then you would write $100 - 20 = 80$. Let your partner have a turn, and whoever leaves the least amount in the bag is the winner.

SUBTRACTION PIG (subtraction)

- Each player is given 11 cards numbered 0-10. These are placed face up in a row. Players roll two dice on a turn and may choose to add or subtract the two numbers shown on the dice. If the resulting sum or difference equals one of the number cards still face up, the player can turn that card face down. Next player then takes a turn. This continues until one of the players wins by turning all 11 of this cards face down.

CARD CAPTURE (addition, subtraction, multiplication, division)

- Use a set of fact flashcards. Divide the cards equally between the two players. One player attacks, while the other player defends. The defending player shows his cards (problem side up) one at a time to the attacking player. If the attacking player says the right answer, he captures the card and adds it to his own. He can continue capturing cards until he answers incorrectly. When this happens, the defending player becomes the attacker, and gets his chance at capturing the cards. This continues with cards being captured back and forth until one player winds up with all of the cards, or has the most cards when time is called. You can even set the rules to the first player to capture 20 cards, or any number you'd like.

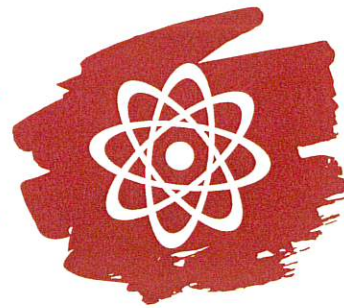
ADDITION AND SUBTRACTION TURNOVER (addition and subtraction)

- Each player is given 11 cards numbered 0-10. These are placed face up in a row. Players roll two dice on a turn and may choose to add or subtract the two numbers shown on the dice. If the resulting sum or difference equals one of the number cards still face up, the player can turn that card face down. Next player then takes a turn. This continues until one of the players wins by turning all 11 of this cards face down.

RACE FOR \$1.00 (money addition)

- You need 30 pennies, 10 nickels, 20 dimes, 1 quarter, a dollar, 2 dice, and a partner. Take turns. On your turn, roll the dice. The sum tells how many pennies to take. When you have pennies, trade for a nickel. When you have 2 nickels, trade for a dime. When you have 2 dimes and one nickel, trade for a quarter. The first player to reach \$1.00 is the winner.

SCIENCE



SCIENCE WEB RESOURCES



VISIT

Big Cypress National Preserve

Visit nps.gov/bicy/index.htm for activities and times.

Golisano Children's Museum of Naples (C'mon)

Visit cmon.org for activities.

Naples Zoo

The first Saturday of each month is free for Collier County residents. Visit www.napleszoo.com.

Conservancy of Southwest Florida

Visit conservancy.org for activities.

Naples Botanical Gardens

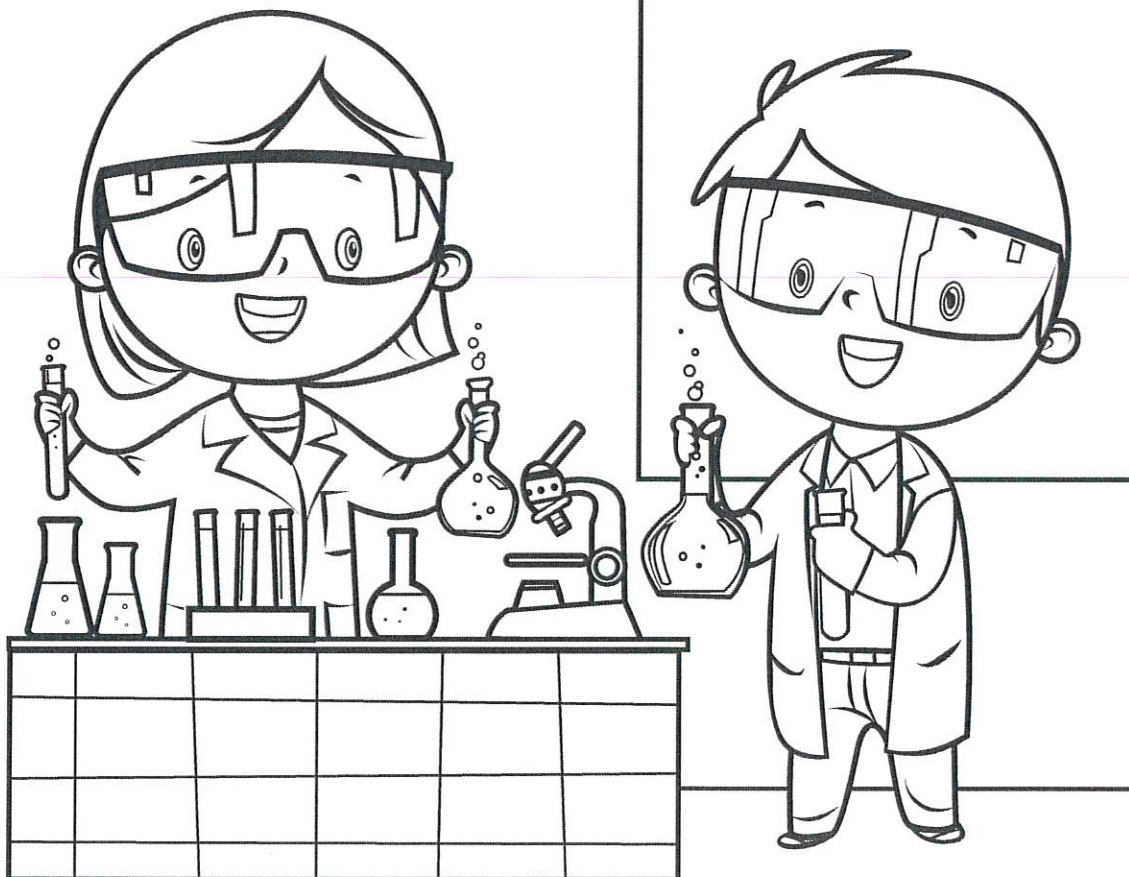
Visit naplesgarden.org for activities.

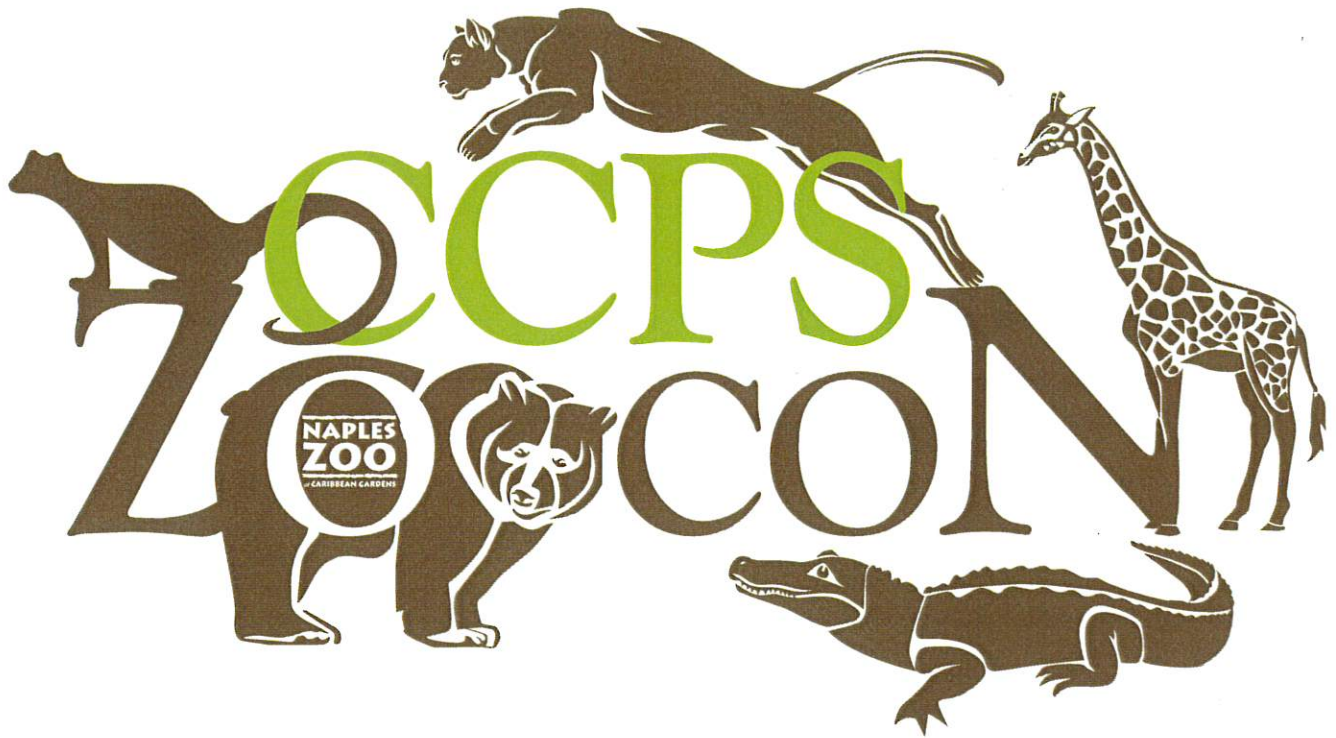
Rookery Bay National Estuarine Research Reserve

Visit www.rookerybay.org for activities.

Corkscrew Swamp Sanctuary

Visit corkscrew.audubon.org for activities and times.





Collier County Public Schools, in collaboration with the Naples Zoo, hosts several ZooCon virtual field trips with elementary students throughout the school year. This year, each elementary grade level learned about a specific animal or topic. By using videoconferencing technology, students at all elementary schools are able to learn from and interact with subject experts on-site at the Naples Zoo while in the comfort of their classroom. These events are also broadcast LIVE, allowing parents and community members an opportunity to watch right along with the students. Take a look at the replays below and learn more about zoo animals with your child.

▶ Click on the red play button on each image to play video.



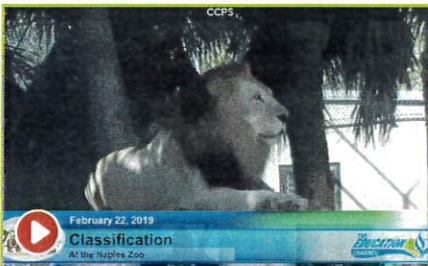
MEET THE ALLIGATORS
(kindergarten)



MEET THE BEARS
(1st grade)



MEET THE GIRAFFES
(2nd grade)



CLASSIFICATIONS
(3rd grade)



MEET THE FOSA with Luke Dollar
(4th grade)



MEET THE PANTHERS
(5th grade)

SOCIAL STUDIES



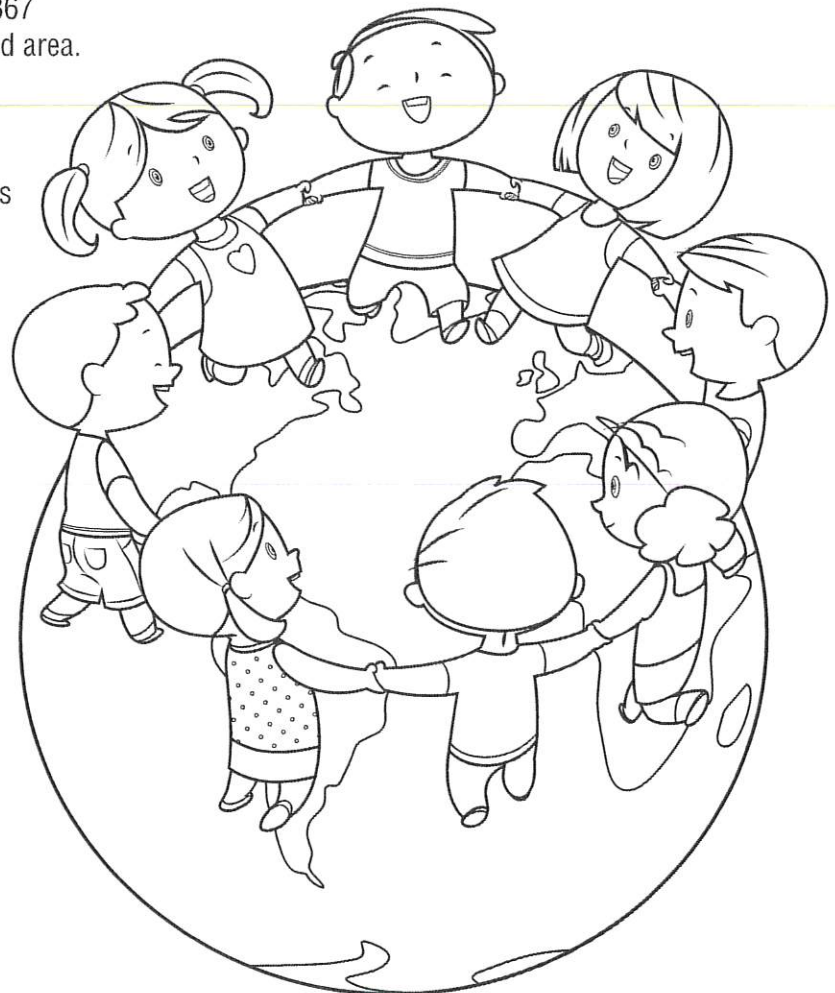
[UNITED STATES FUN FACTS FOR KIDS]

HISTORY & GOVERNMENT

- On July 4, 1776, the Declaration of Independence was issued, establishing the United States of America.
- On the U.S. flag there are 50 stars representing the 50 states and there are 13 stripes representing the 13 original states.
- The U.S. Constitution is the highest law in the United States. It says how the government works. It creates the Presidency. It creates the Congress. It creates the Supreme Court. Each state also has a constitution. The constitutions of the states are their highest law for that state — but the United States Constitution is higher.

GEOGRAPHY

- The United States is divided into 50 states.
- Alaska was purchased from Russia in 1867 and is the largest state in the U.S. by land area.
- Rhode Island is the smallest state by land area being only 37 miles wide and 48 miles long.
- Hawaii is the most recent of the 50 states in the U.S. (joining in 1959) and is the only one made up entirely of islands.
- The Mississippi and Missouri Rivers combine to form the longest river system in the U.S. and the fourth longest in the world.



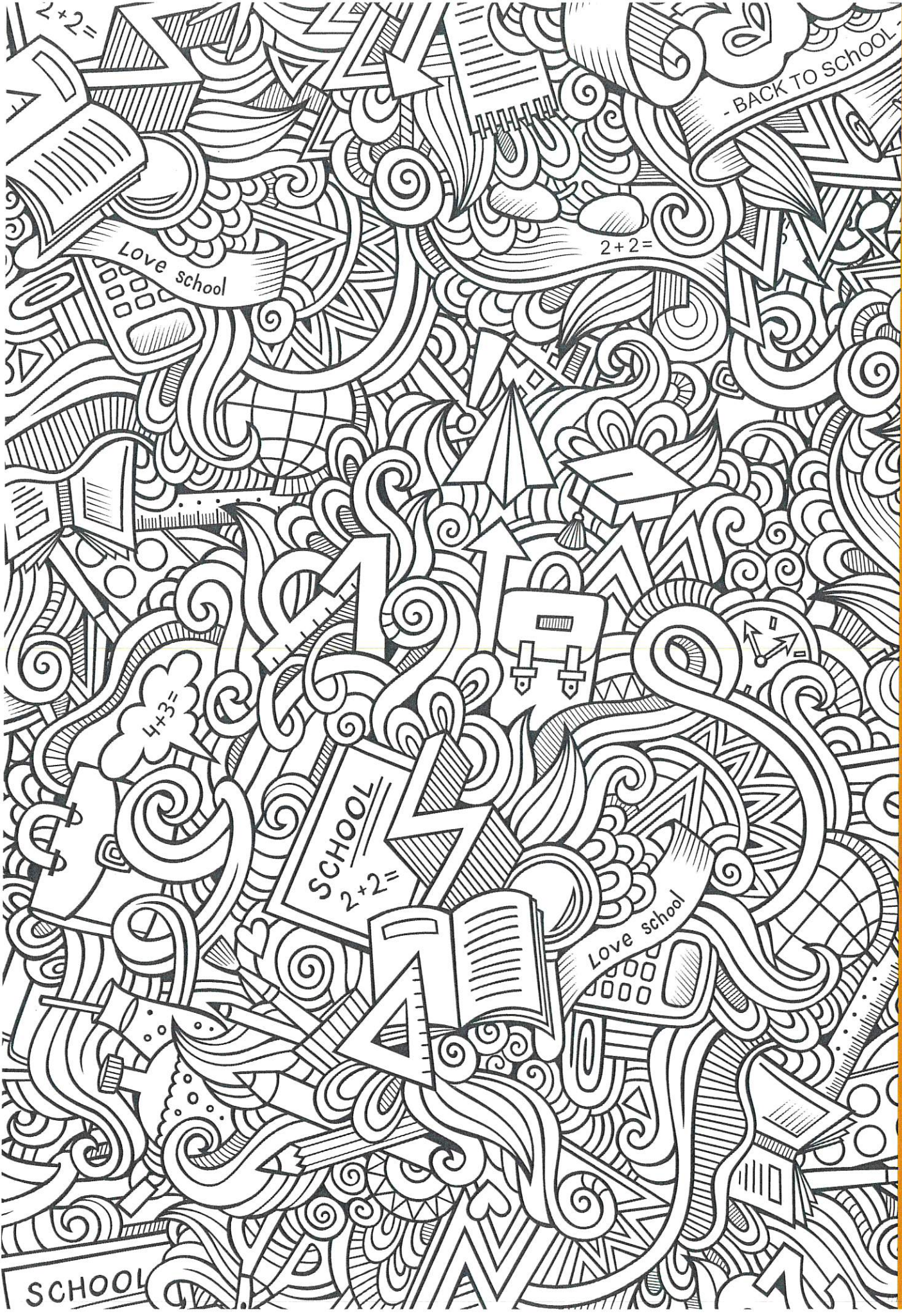
[WEB-BASED RESOURCES]

GOVERNMENT FOR KIDS

(icivics.org/games)

FLORIDA FACTS

(dos.myflorida.com/florida-facts/kids)



MIDDLESCHOOL & HIGHSCHOOL

GRADES 9-12 RECREATIONAL READING

Source: Florida Department of Education

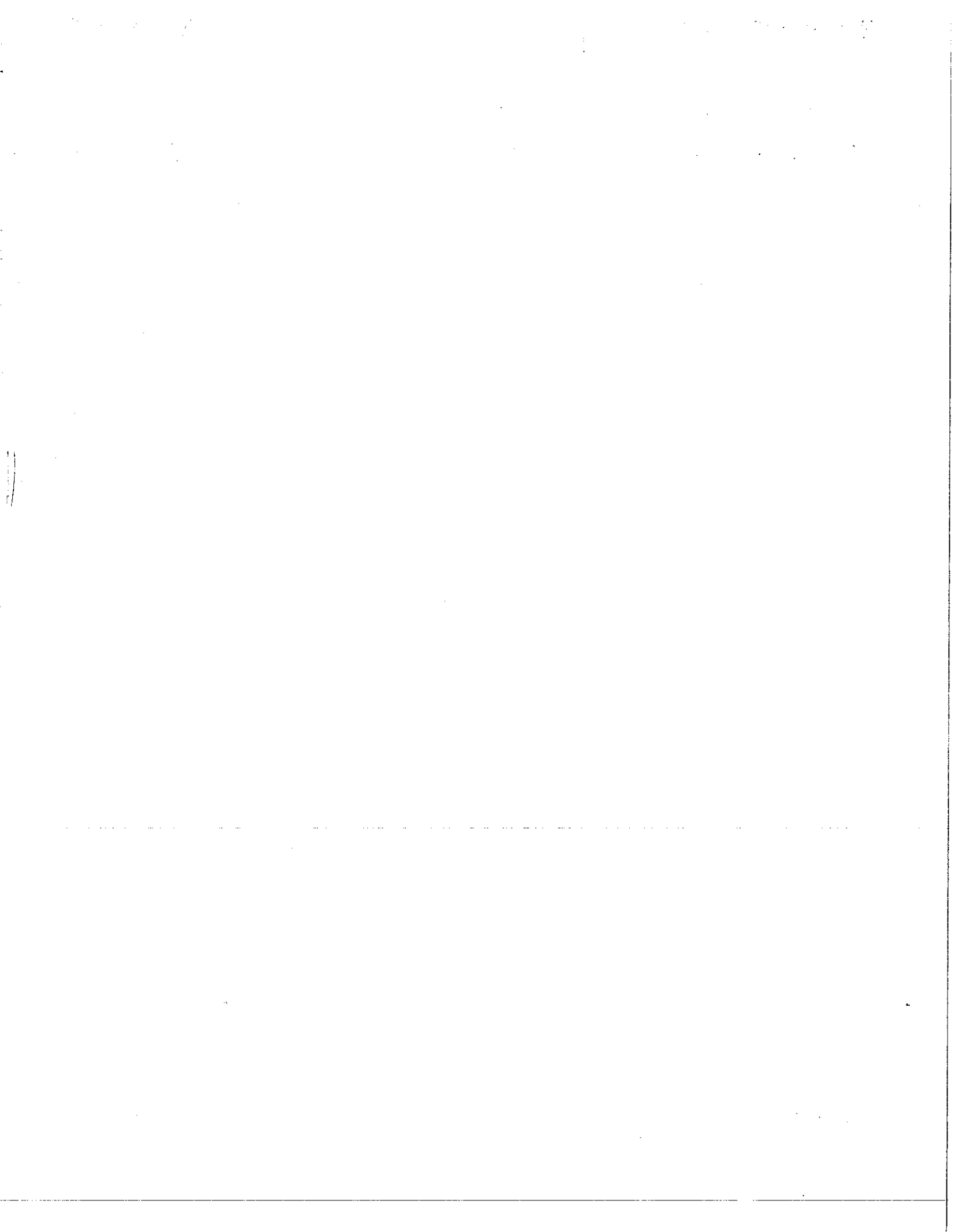
1station.com Achieve.com

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Before obtaining any of the books listed, it is suggested that you review them personally to see whether they seem right for your child.

A Separate Peace, John Knowles
Adventurer's Against Their Will, Joanie Schirm
All Quiet on the Western Front, Erich Maria Remarque
Allegiant, Veronica Roth
Bunheads, Flack, Sophie
Cloaked, Alex Flinn
Courage Has No Color: The True Story of the Triple Nickles, America's First Black Paratroopers, Tanya Lee Stone
Darius & Twig, Walter Dean Myers
Divergent, Veronica Roth
Ender's Game, Orson Scott Card
Fat Angie, E. E. Charlton-Trujillo
Flora & Ulysses: The Illuminated Adventures, Kate Dicomillo
Florida Cowboys, Carlton Ward Jr.
Gifted Hands: The Ben Carson Story, Ben Carson
Imaginary Enemy, Julie Gonzalez
Insurgent, Veronica Roth
Kon-Tiki: Across the Pacific by Raft, Thor Heyerdahl
Looking for the New Deal, Elna C. Green
Marcelo in the Real World, Francisco Stork
Money Hungry, Sharon Flake
Monster, Walter Dean Myers
Music Was It: Young Leonard Bernstein, Susan Goldman Rubin
Night, Elie Wiesel
November Blues, Sharon Draper
P.S. Be Eleven, Rita Williams Garcia
Pilgrim in the Land of Alligators: More Stories about Real Florida, Jeff Klinkenberg
Poof: A Play, David Auburn
Resurrecting Lazarus, Texas, Nathan Barber
Reubin O'D. Askew and the Golden Age of Florida Politics, Martin A. Dyckman
Rose Under Fire, Elizabeth Wein
Silent Spring, Rachel Carson
Solomon, Marilyn B. Shaw

Southern Comforts: Rooted in a Florida Place, Sudyca Cauthen
Sugar Changed the World: A Story of Magic, Spice, Slavery, Freedom and Science, Marc Aronson and Marina Budhos
Taken, Edward Bloor
The Book Thief, Markus Zusak
The Boy Who Harnessed the Wind: Creating Currents of Electricity and Hope, William Kamkwamba
The Carnival at Bray, Jessie Ann Foley
The Diving Bell and the Butterfly: A Memoir of Life in Death, Jean-Dominique Bauby
The Everglades, River of Grass, Marjorie Stoneman Douglas
The First Hollywood Florida and the Golden Age of Silent Filmmaking, Shawn Bean
The Great Wide Sea, M. H. Herlong
The Hot Zone: A Terrifying True Story, Richard Preston
The House on Mango Street, Sandra Cisneros
The Notorious Benedict Arnold: A True Story of Adventure, Heroism, & Treachery, Steve Sheinkin
The Old Man and the Sea, Ernest Hemingway
The Real Question, Adrian Fogelin
The Shakespeare Stealer, Gary Blackwood
The Tipping Point: How Little Things Can Make a Big Difference, Malcolm Gladwell
The Yearling, Marjorie K. Rawlings
Things Fall Apart, Chinua Achebe
This One Summer, Clare Vanderpool
Through Her Eyes, Jennifer Archer
We Beat the Street: How a Friendship Pact Led to Success, Sampson Davis, George Jenkins, Rameck Hunt, and Sharon Draper
Wheels of Change: How Women Rode the Bicycle to Freedom (With a Few Flat Tires Along the Way), Sue Macy
When You Reach Me, Rebecca Stead
Whispers from the Bay, John Tkac
Written in Bone: Buried Lives of Jamestown and Colonial Maryland, Sally M. Walker





[MATH WEB-BASED RESOURCES (middle and high school)]

KHAN ACADEMY (www.khanacademy.org)

PARENT RESOURCES IN CPALMS (cpalms.org/Public/search/Course)

Carnegie MathIA

Reflex

1Station.com

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[MATH CURRICULUM (middle and high school)]

6TH GRADE

Skills to review and practice

- Add and subtract whole numbers.
- Multiply whole numbers using standard algorithm and divide whole numbers using larger numbers.
- Add, subtract, multiply, and divide decimals.
- Compare fractions, decimals, and percent using equivalencies.
- Add, subtract, multiply, and divide fractions with like and unlike denominators and rewrite the result as a mixed number.
- Write expressions to model everyday events (e.g. cost of 2 sandwiches and 4 drinks).
- Solve one-step equations.
- Graph points on a coordinate plane in Quadrant 1 (positive X and Y values only).

7TH GRADE

Skills to review and practice

- Add, subtract, multiply, and divide whole numbers.
- Add, subtract, multiply, and divide decimals.
- Add, subtract, multiply, and divide fractions with different denominators, including mixed numbers; convert a fraction into its decimal equivalent.
- Write expressions that contain ratios and rates for everyday events (e.g. cell phone data charges).
- Graph points on the coordinate plane.
- Compare fractions, decimals, and percent.
- Evaluate numerical expressions with whole number exponents.
- Find area, surface area, and volume of triangles, quadrilaterals, polygons, cubes, and right prisms.

Skills to preview

- Solve two-step equations and inequalities that contain fractions and decimals.
- Display data on a number line, dot plot, histogram, and box plot.



MATH

[MATH CURRICULUM (middle and high school continued)]

8TH GRADE

Skills to review and practice

- Add, subtract, multiply, and divide whole numbers.
- Add, subtract, multiply, and divide decimals.
- Add, subtract, multiply, and divide fractions with different denominators, including mixed numbers; convert a fraction into its decimal equivalent.
- Add, subtract, multiply, and divide positive and negative numbers.
- Evaluate problems using the square root and cube root symbols.

Skills to preview

- Write and solve multi-step equations and inequalities that contain fractions or decimals based on real events.
- Graph various lines on the coordinate plane.
- Determine the mean, median, and mode of a set of real world data.
- Create and interpret stem and leaf plots, frequency charts, and scatter plots.
- Evaluate expressions with integer exponents.
- Find the slope of a line.

ALGEBRA 1

Skills to review and practice

- Add, subtract, multiply, and divide positive and negative numbers.
- Add, subtract, multiply, and divide fractions with different denominators, including mixed numbers; convert a fraction into its decimal equivalent.
- Combine like terms: add and subtract expressions with variables.
- Apply the distributive property to expressions with variables.
- Find the least common multiple of two-digit and three digit numbers.
- Find the greatest common factor of two-digit and three-digit numbers.
- Apply the properties of exponents to simplify expressions.
- Write and solve a one-variable equation or inequality based on a real-world scenario. Include multi-step equations with variables on both sides and equations with fractions.
- Write a linear equation in the form $y = mx + b$ and graph it on the coordinate plane.

Skills to preview

- Simplify expressions that contain square roots with whole number exponents.
- Graph an exponential function or a quadratic function on the coordinate plane.
- Factor a quadratic trinomial with a leading coefficient of 1 or a quadratic binomial using difference of squares.



MATH CURRICULUM (middle and high school)

GEOMETRY

Skills to review and practice

- Write and solve multi-step equations or inequalities based on a real-world scenario. Include multi-step equations with variables on both sides and equations with fractions.
- Transformations on a coordinate plane: reflections, rotations, and translations
- Apply the Pythagorean Theorem to find the missing side length of a right triangle.
- Memorize and apply the formulas for finding the area of a triangle, rectangle, trapezoid, circle, and parallelogram.
- Find the perimeter of a polygon and the circumference of a circle.
- Find the surface area and volume of a prism, pyramid, cylinder, cone, and sphere.

Skills to preview

- Compare and contrast triangles based on their properties; compare and contrast quadrilaterals based on their properties.
- Construct geometric figures using a compass and a straight edge (parallel and perpendicular lines, bisecting an angle, copying a line segment or an angle).

ALGEBRA 2

Skills to review and practice

- Factor quadratic and special cubic expressions.
- Simplify expressions involving radicals, including those with rational exponents.
- Solve and graph a linear, quadratic, exponential, or radical equation.
- Identify the key features of the graph of any function (domain and range, intercepts, maximum and minimum points, end behavior, intervals where the function is increasing, decreasing, or constant).
- Construct a histogram, box plot, and dot plot in the context of a real-world scenario. Analyze the resulting distribution in terms of shape, center, and spread.
- Memorize and apply the side ratios of a 30-60-90 and a 45-45-90 right triangle.
- Review domain and range of a function.

Skills to preview

- Solve and graph a rational, polynomial, or logarithmic equation. Identify key features listed above, as well as the location of any asymptotes.
- Use all six trigonometric functions to find missing side lengths and angles of a right triangle.

Girls in

STEAM

science | technology | engineering | arts | math

Collier County Public Schools wants to encourage girls to stay engaged in Science, Technology, Engineering, Arts, and Mathematics (STEAM). Women make up 26% of the workforce in computer and math occupations, according to the U.S. Department of Labor, and we want female students to continue to consider these options as they progress through grade levels. CCPS aims to eliminate the gender gap in STEAM studies and provide multiple pathways for all students. Below are some opportunities to provide girls with an ongoing love of STEAM learning.

1 Provide positive comments about women in the STEAM fields and about the scientific capabilities of women in general. For additional information about engineering fields, visit nacme.org/types-of-engineering.

2 Consider games, activities, and experiences for girls that encourage problem solving and innovation.

3 Encourage group activities and competition among girls that are related to the scientific fields. Review CCPS' Women in STEAM website to learn more about activities and competitions within District schools. [Click here to visit the website.](#)

4 Incorporate successful female STEAM role models in the lives and education of young women. Register for CCPS' [STEAM Conference](#) each fall to see successful women in STEAM careers, learn more about Project Lead the Way (PLTW) in middle school, and consider [NAF Academy](#) opportunities in high school.

5 If you are a woman working in one of the STEAM fields, share your story with others. For other role models, see below to watch the Women in STEAM video series.

6 Advocate for the arts and sciences in the education system. The arts teach flexible thinking and positive risk taking. Artists and scientists both ask questions; designers and engineers provide inspired solutions. Together they are more powerful than apart.

Women in STEAM Video Series

SCIENCE



Jill Schmid
Rookery Bay National
Estuarine Research Reserve

TECHNOLOGY



Sharon Ardry
IT Director
Collier Enterprises

ENGINEERING



Jenna Woodward, E.I.
Davidson Engineering, Inc.

ARTS



Maribel De Armas
Collier County Public Schools

MATHEMATICS



Katie Johnson, Ph.D.
Assistant Professor, Department of Mathematics
Florida Gulf Coast University