# CORINTH SCHOOL DISTRICT
# STUDENT EXPECTATIONS

**Contact Us**
Corinth School District
1204 North Harper Road
Corinth, MS 38834

662-287-2425
corinth.k12.ms.us

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SIXTH GRADE

**A FAMILY GUIDE FOR STUDENT SUCCESS**

# NOTES

# NOTES

# STUDENT EXPECTATIONS SIXTH GRADE

As a parent, you are your child's first teacher and know your child better than anyone else. You have valuable insight into your child's needs, strengths, abilities, and interests. Knowing you want what is best for your child, we want to partner with you in guiding your child toward success.

The Corinth School District Student Expectation booklet outlines what your child should learn in reading, writing, speaking and listening, mathematics, science and social studies. This grade level booklet represents what a student should know by grading period and the end of this grade. Helpful hints are provided for you to encourage your child's academic growth by reinforcing classroom activities at home.

The achievement of these expectations will help your child meet the Corinth Standards. In an effort to share the goal of preparing your child for college and/or a career, the Corinth School District has established diploma options outlined on the last page. We encourage you to have conversations with your child about these diploma options, college plans, and careers so we can work together to help your child be successful.

If you have specific questions regarding Corinth Standards or school programs, please call your child's school. Thank you for trusting our schools to prepare your child for the future.

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# READING

**During the First Grading Period, your child will study the following Learning Standards:**

- Spell correctly most words used
- Use a dictionary and thesaurus effectively to further develop vocabulary
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience
- Learn to use the terms 'image', 'simile', 'metaphor', 'onomatopoeia', 'setting' and 'genre'
- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing
- Use inference and deduction to recognize implicit and inferred meanings
- Identify and understand the main ideas, viewpoints, themes and purposes in a text. Support comments by quotation from more than one location in the text
- Comment on a writer's use of language, demonstrating an understanding of the implication of their use of vocabulary
- Give an informed personal response to a text and provide some textual reference in support
- Understand how readers make choices about the texts they like reading, *e.g. by author or genre and know a range of ways in which to respond to texts*
- Understand the different ways texts can reflect the social, cultural and historical contexts in which they were written
- Spell correctly most words used
- Use a dictionary and thesaurus effectively to further develop vocabulary
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience
- Learn to use the terms 'image', 'simile', 'metaphor', 'onomatopoeia', 'setting' and 'genre'
- Comment on the use of formal and informal language and discuss the writer's motivation for making the choice
- Show awareness of the reasons for using longer and shorter sentences
- Begin to comment on the control of pace and meaning through choice of sentences and variety of sentence openings

**During the Second Grading Period, your child will study the following Learning Standards:**

- Spell correctly most words used
- Use a dictionary and thesaurus effectively to further develop vocabulary
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience
- Learn to use the terms 'image', 'simile', 'metaphor', 'onomatopoeia', 'setting' and 'genre'
- Comment on the use of formal and informal language and discuss the writer's motivation for making the choice
- Show awareness of the reasons for using longer and shorter sentences
- Begin to comment on the control of pace and meaning through choice of sentences and variety of sentence openings
- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing
- Use inference and deduction to recognize implicit and inferred meanings
- Identify and understand the main ideas, viewpoints, themes and purposes in a text. Support comments by quotation from more than one location in the text

# DIPLOMA OPTIONS

**College and Career Readiness Diploma**

- Complete Traditional Diploma requirements
- Achieve passing scores on Cambridge Subject Area Examinations in Mathematics, Biology, English Language and U.S. History
- Meet college and career readiness measures on the IGCSE Exams, the ACT, or Reach Silver Level on ACT WorkKeys Assessment, including Reading for Information, Applied Mathematics, and Locating Information
- Earn three college credits
- Complete Pillar Senior Project

**Career Technical Diploma**

- Complete Traditional Diploma requirements
- Achieve passing scores on Cambridge Subject Area Examinations in Mathematics, Biology, English Language and U.S. History
- Complete an approved industry recognized certification
- Complete Pillar Senior project or an approved work-based apprenticeship or learning experience

**Applied Studies Diploma (Available to students with an IEP)**

- Earn twenty-four credits of which twelve must be regular education Carnegie credits
- Pass Functional Literacy Exam
- Complete a required modified course of study
- Complete a work-based learning experience

# DIPLOMA OPTIONS

**The Corinth School District values different learning experiences for students. Based on this belief, the District will offer the following diploma options:**

**Traditional Diploma**
- Complete Traditional Diploma requirements
- Achieve passing scores on Cambridge Subject Area Examinations in Mathematics, Biology, English Language, and U.S. History
- Complete Pillar Senior Project

**Early Exit Diploma**
- Complete Early Exit Diploma requirements
- Achieve college and career readiness measures on 9th and 10th grade required IGCSE Exams or in all four content areas of the ACT
- Complete Pillar Senior Project

**Advanced International Certificate of Education (AICE) Honors Diploma**
- Complete Traditional Diploma requirements
- Achieve passing scores on Cambridge Subject Area Examinations in Mathematics, Biology, English Language and U.S. History
- Complete AICE Diploma requirements as outlined by Cambridge International Exams
- Complete Pillar Senior Project

**Corinth Honors Diploma**
- Complete Traditional Diploma requirements
- Achieve passing scores on Cambridge Subject Area Examinations in Mathematics, Biology, English Language and U.S. History
- Achieve a 3.0 or higher on a 4.0 grading scale
- Earn six college credit hours
- Complete at least two of the following
    - Earn 4 credits on AICE Exams
    - Complete an approved industry recognized certification
    - Achieve the ACT math, science, reading, and English college and career readiness measures
- Complete Pillar Senior Project

# READING

**Second Grading Period, Continued...**
- Identify and describe the effect of writers' and poets' use of literary, rhetorical and grammatical features, including imagery and figurative language
- Comment on a writer's use of language, demonstrating an understanding of the implication of their use of vocabulary
- Give an informed personal response to a text and provide some textual reference in support
- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing
- Give an informed personal response to a text and provide some textual reference in support
- Understand how readers make choices about the texts they like reading, *e.g. by author or genre and know a range of ways in which to respond to texts*

**During the Third Grading Period, your child will study the following Learning Standards:**
- Spell correctly most words used
- Use a dictionary and thesaurus effectively to further develop vocabulary
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience
- Learn to use the terms 'image', 'simile', 'metaphor', 'onomatopoeia', 'setting' and 'genre'
- Comment on the use of formal and informal language and discuss the writer's motivation for making the choice
- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing
- Use inference and deduction to recognize implicit and inferred meanings
- Identify and describe the effect of writers' and poets' use of literary, rhetorical and grammatical features, including imagery and figurative language
- Comment on a writer's use of language, demonstrating an understanding of the implication of their use of vocabulary
- Give an informed personal response to a text and provide some textual reference in support
- Compare poems, showing awareness of poets' use of language and its intended impact on the reader
- Understand the different ways texts can reflect the social, cultural and historical contexts in which they were written
- Make relevant notes to select, collate and summarize ideas from texts
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience
- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing

**During the Fourth Grading Period, your child will study the following Learning Standards:**
- Spell correctly most words used
- Use a dictionary and thesaurus effectively to further develop vocabulary
- Learn a range of vocabulary appropriate to their needs, and use words precisely in speech and writing to clarify and extend meaning and to interest their audience

# READING

**Fourth Grading Period, Continued...**

- Demonstrate understanding of features of narrative and non-narrative texts by explaining and developing these features in their own discussion and writing
- Use inference and deduction to recognize implicit and inferred meanings
- Identify and understand the main ideas, viewpoints, themes and purposes in a text. Support comments by quotation from more than one location in the text
- Identify and describe the effect of writers' and poets' use of literary, rhetorical and grammatical features, including imagery and figurative language
- Comment on a writer's use of language, demonstrating an understanding of the implication of their use of vocabulary
- Give an informed personal response to a text and provide some textual reference in support.
- Extract the main points and relevant information from a text or ICT source, using a range of strategies such as skimming and scanning
- Make relevant notes to select, collate and summarize ideas from texts

# SCIENCE
# HELPFUL HINTS AT HOME

**Helpful Hints at Home:**

- Read books with scientific themes
- Visit science museums, scientific theme parks, libraries, science fairs, zoos, etc.
- Practice accuracy to measuring using a ruler, scale, and thermometer
- Discuss and predict weather patterns using a variety of sources
- Look for and discuss news articles related to science and technology
- Collect and record data about daily occurrences
- Use the internet to view satellite imagery
- Discuss safety issues related to severe weather
- Participate in science fairs
- Show your child pictures of things and have them to identify if they are living or non-living using the seven characteristics of all living things
- Make a poster of plant and animal cells
- Make a chart comparing and contrasting plant and animal cells
- Have your child to draw, label, and give the function of the major organs of flowering plants and the human body
- Make a poster illustrating the particle theory of matter
- Have your child to make a list of the different energy types used to drive a car (explaining that energy is transferred, not created or destroyed)
- Research the work of a famous scientist, e.g., Louis Pasteur
- Have your child collect and classify rocks and soil types
- Help your child build a model of the internal structure of the Earth
- Research the works of Copernicus or Galileo
- Help your child with a plant collection and classify them into major groups
- Create a list of renewable and non-renewable resources used by the family on a daily basis
- Classify household items and food as acids or bases

# SCIENCE

**During the Fourth Grading Period, your child will study the following Learning Standards:**

**Chemistry (Material Changes)**

- Use indicators to distinguish acid and alkaline solutions
- Use a PH scale
- Understand neutralization and some of its applications

**Physics (Force and Motion)**

- Describe the effects of forces on motion, including friction and air resistance
- Describe the effect of gravity on objects

**Scientific Inquiry Standards**

**Ideas and Evidence**

- Be able to talk about the importance of questions, evidence and explanations

**Obtain and Present Evidence**

- Make predictions and review them against evidence
- Make careful observations including measurements
- Present results in the form of tables, bar charts and line graphs
- Use information from secondary sources

**Consider Evidence and Approach**

- Make conclusions from collected data, including those presented in a graph, chart or spreadsheet
- Present conclusions using different methods
- Consider explanations for predictions using scientific knowledge and understanding and communicate these
- Recognize results and observations that do not fit into a pattern

**Plan Investigative Work**

- Outline plans to carry out investigations, considering the variables to control, change or observe (as whole class)
- Choose appropriate apparatus and use it correctly
- Identify appropriate evidence to collect and suitable methods of collection

# READING HELPFUL HINTS AT HOME

**Helpful Hints at Home:**

- Ask your child to read aloud a story or a short passage from the newspaper, magazines, letters, etc. Notice if our child corrects himself/herself when mispronouncing a word
- Ask your child to read aloud short stories found on the internet
- Let your child hear you read aloud
- Help your child improve fluency by modeling reading a passage aloud using expression and varying rate and tone. Then ask your child to read the same passage to you, mimicking the expression, rate, and ton you used when reading
- Have your child read aloud to younger siblings/relatives/neighbors
- Using sentences from a passage from magazine articles, scramble the sentences and ask your child to put the sentences in logical order
- Post a magnetic post-it board on the refrigerator. Whenever your child comes to a word that he/she does not recognize, your child should write the word on the board and the parent should pronounce and use the word in a sentence
- Locate frequently-used words that your child has problems spellings in the newspaper. Have your child cut out these words and make a collage in the shape of a star, flower, football, etc.
- Ask your child to read aloud license plates and identify state/country/vanity tags while taking a road trip
- Point out charts, graphs, and pictures in newspaper and magazines articles. Ask your child to tell you what they mean
- Read aloud a short story and ask your child to retell the story. Look for references to main characters, plot, setting, and theme
- Ask your child to find meaning of unknown words in a dictionary
- Ask your child to read aloud a short story. Ask him/her to identify the main idea
- Assist your child with scanning for information by having "information hunts" using passages from textbooks or articles from the newspaper. Pick out 3 – 6 facts you want your child to locate in the article. Time how long it takes your child to locate the information. Race again the next day or week with a different article. Challenge your child to beat his/her time for the previous exercise
- Ask your child to retell what happened to him/her at school or to retell movies that he/she has seen.
- Ask questions that encourage your child to provide greater detail when retelling
- Have your child scan labels of food containers for specific ingredients
- Introduce several types of genres to your child (poetry, fables, etc.). Ask your child to write an example of one type of genre that he/she chooses
- Cut out several short articles from the newspaper. Ask your child to determine the author's purpose
- Read a current article about a natural disaster and describe measures taken to overcome the problem
- Ask your child to construct a poem/song with all words having the same initial sound (alliteration)
- Give your child index cards that have facts or opinions on them. Ask your child to identify the statement as fact or opinion. [The first president of the United States was George Washington (fact) Bill Clinton was an excellent president (opinion)]
- Ask your child to read a selection from the editorial section of the newspaper. Determine with your child the author's point of view
- Ask your child to find examples of propaganda techniques from commercials on television or advertisements in newspapers or magazines
- Ask your child to identify the elements that make individual commercials persuasive
- After watching a movie based on real events together, discuss what was fact and what was added to the story by the screen writers
- Ask your child to use the telephone book to find telephone numbers of businesses or friends for you
- Take opportunities to discuss prior knowledge your child has of movies or nature show documentaries you watch together
- Allow your child to help you plan and cook a meal. Pay close attention to the sequence of the preparation of the food so that all items are ready at approximately the same time
- Ask your child to follow directions to a simple recipe as you read it aloud to him/her
- Ask your child to complete a series of chores and check of each one as it is completed
- Encourage your child to complete projects with you where the directions must be followed in the correct order. For example, sewing a button on a shirt or changing the oil in your car
- Rent a line dancing, fitness, or yoga video. Together follow the instructions on the video to improve listening skills and provide practice following directions

# WRITING

**During the First Grading Period, your child will study the following Learning Standards:**

- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue
- Use correct grammar, including articles, word order and tenses in a range of genres and text types
- Provide clarity and emphasis in writing, using a variety of sentence lengths, structures and subjects
- Use a range of increasingly complex sentence structures to communicate meaning and to give fluency to their writing
- Build up detail and convey shades of meaning through sentence structure, *e.g. controlling order of clauses, expanding verb phrases*
- Develop different ways of generating, organizing and shaping ideas, using a range of planning formats or methods
- Understand the conventions of standard English and how to use them consistently in writing.
- Write to express a personal viewpoint
- Shape the overall organization, sequence and presentation of a text to convey ideas clearly and effectively
- Mirror the purpose of the writing by appropriate use of paragraphs and selection of linking words and phrases
- Use vocabulary precisely and imaginatively to clarify and extend meaning and create specific effects.
- Vary sentence length and structure in order to provide appropriate detail and clarify relationships between setting, characters, themes, plot, etc.
- Begin to develop character and voice in fiction writing
- Explore some of the key linguistic and literary techniques used by writers, and begin to use them for intended effect
- Establish and sustain a clear and logical viewpoint through the analysis and selection of convincing evidence, opinions and appropriate information
- Write to analyze, review and comment
- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue

**During the Second Grading Period, your child will study the following Learning Standards:**

- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue
- Use correct grammar, including articles, word order and tenses in a range of genres and text types
- Clarify relationships between ideas with an increasingly accurate and growing use of connectives
- Provide clarity and emphasis in writing, using a variety of sentence lengths, structures and subjects
- Use a range of increasingly complex sentence structures to communicate meaning and to give fluency to their writing
- Develop different ways of generating, organizing and shaping ideas, using a range of planning formats or methods
- Understand the conventions of standard English and how to use them consistently in writing.
- Write to express a personal viewpoint
- Shape the overall organization, sequence and presentation of a text to convey ideas clearly and effectively
- Mirror the purpose of the writing by appropriate use of paragraphs and selection of linking words and phrases
- Use vocabulary precisely and imaginatively to clarify and extend meaning and create specific effects

# SCIENCE

**During the Third Grading Period, your child will study the following Learning Standards:**

**Physics (The Earth and Beyond)**

- Describe how the movement of the Earth causes the apparent daily and annual movement of the Sun and the stars
- Describe the relative position and movement of the planets and the sun in the solar system
- Discuss the impact of the ideas and discoveries of Copernicus, Galileo and more recent scientists
- Understand that the Sun and other stars are sources of light and that planets and other bodies are seen by reflected light

**Chemistry (Material Changes)**

- Describe everyday materials and their physical properties
- Distinguish between metals and non-metals

**Biology (Variation and Classification)**

- Classify animals and plants into major groups, using some locally occurring examples
- Understand what is meant by species
- Investigate variation within a species

**Biology (Living Things in Their Environment)**

- Describe how organisms are adapted to their habitat, drawing on locally occurring examples
- Draw and model simple food chains
- Discuss positive and negative influence of humans on the environment, *e.g. the effect on food chains, pollution and ozone depletion*
- Discuss a range of energy sources and distinguish between renewable and non-renewable resources

**Scientific Inquiry Standards**

**Ideas and Evidence**

- Be able to talk about the importance of questions, evidence and explanations

**Obtain and Present Evidence**

- Make careful observations including measurements
- Present results in the form of tables, bar charts and line graphs
- Use information from secondary sources

**Consider Evidence and Approach**

- Make conclusions from collected data, including those presented in a graph, chart or spreadsheet
- Recognize results and observations that do not fit into a pattern
- Consider explanations for predictions using scientific knowledge and understanding and communicate these
- Present conclusions using different methods

**Plan Investigative Work**

- Outline plans to carry out investigations, considering the variables to control, change or observe (as whole class)
- Choose the appropriate apparatus and use it correctly
- Identify appropriate evidence to collect and suitable methods of collection
- Make predictions and review them against evidence
- Make predictions referring to previous scientific knowledge and understanding
- Suggest ideas that may be tested

# SCIENCE

**During the Second Grading Period, your child will study the following**
**Learning Standards:**
**Physics (The Earth and Beyond)**
- Recognize different energy types and energy transfers
- Understand that energy cannot be created or destroyed and that energy is always conserved

**Biology (Cells and Organisms)**
- Identify the seven characteristics of living things and relate these to a wide range of organisms in the local and wider environment
- Identify the structures present in plant and animal cells as seen with a simple light microscope and/or a computer microscope
- Know about the role of micro-organisms in the breakdown of organic matter, food production and disease, including the work of Louis Pasteur

**Biology (Humans as Organisms)**
- Research the work of scientists studying the human body

**Chemistry (The Earth)**
- Observe and classify different types of rocks and soils
- Research simple models of the internal structure of the Earth
- Examine fossils and research the fossil record
- Discuss the fossil record as a guide to estimating the age of the Earth
- Learn about most recent estimates of the age of the Earth

**Scientific Inquiry Standards**
**Ideas and Evidence**
- Be able to talk about the importance of questions, evidence and explanations

**Obtain and Present Evidence**
- Make careful observations including measurements
- Present results in the form of tables, bar charts and line graphs
- Use information from secondary sources

**Consider Evidence and Approach**
- Make conclusions from collected data, including those presented in a graph, chart or spreadsheet
- Present conclusions using different methods

**Plan Investigative Work**
- Outline plans to carry out investigations, considering the variables to control, change or observe (as whole class)
- Choose appropriate apparatus and use it correctly
- Identify appropriate evidence to collect and suitable methods of collection
- Make predictions and review them against evidence
- Make predictions referring to previous scientific knowledge and understanding
- Suggest ideas that may be tested

# WRITING

**Second Grading Period, Continued..**
- Vary sentence length and structure in order to provide appropriate detail and clarify relationships between setting, characters, themes, plot, etc.
- Understand and use degrees of formality in a range of texts according to context, purpose and audience
- Build up detail and convey shades of meaning through sentence structure, *e.g. controlling order of clauses, expanding verb phrases*
- Begin to develop character and voice in fiction writing

**During the Third Grading Period, your child will study the following**
**Learning Standards:**
- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue
- Use correct grammar, including articles, word order and tenses in a range of genres and text types
- Provide clarity and emphasis in writing, using a variety of sentence lengths, structures and subjects
- Use a range of increasingly complex sentence structures to communicate meaning and to give fluency to their writing
- Build up detail and convey shades of meaning through sentence structure, *e.g. controlling order of clauses, expanding verb phrases*
- Write to express a personal viewpoint
- Shape the overall organization, sequence and presentation of a text to convey ideas clearly and effectively
- Use vocabulary precisely and imaginatively to clarify and extend meaning and create specific effects
- Vary sentence length and structure in order to provide appropriate detail and clarify relationships between setting, characters, themes, plot, etc.
- Explore some of the key linguistic and literary techniques used by writers, and begin to use them for intended effect
- Understand and use degrees of formality in a range of texts according to context, purpose and audience
- Establish and sustain a clear and logical viewpoint through
- the analysis and selection of convincing evidence, opinions and appropriate information
- Write to analyze, review and comment
- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue
- Use correct grammar, including articles, word order and tenses in a range of genres and text types
- Clarify relationships between ideas with an increasingly accurate and growing use of connectives

**During the Fourth Grading Period, your child will study the following**
**Learning Standards:**
- Use a wide range of punctuation to make meaning clear, including generally accurate use of commas in complex sentences and to present dialogue
- Use correct grammar, including articles, word order and tenses in a range of genres and text types
- Clarify relationships between ideas with an increasingly accurate and growing use of connectives
- Provide clarity and emphasis in writing, using a variety of sentence lengths, structures and subjects
- Use a range of increasingly complex sentence structures to communicate meaning and to give fluency to their writing
- Build up detail and convey shades of meaning through sentence structure, e.g. controlling order of clauses, expanding verb phrases

# WRITING
# HELPFUL HINTS AT HOME

**Helpful Hints at Home:**

- Write sentences for your child that contain capitalization and punctuation errors, and have your child correct the mistakes
- Provide your child with a picture, and have your child name the things he/she sees in the picture, and have your child write sentences with these naming words
- Write sentences with misspelled words, and have your child correct the mistakes
- Have your child read a story, list the characters in the story, and write what he/she likes and dislikes about each character
- Have your child read a story, draw pictures about the story, and retell the story through the use of the drawn pictures
- Have your child read a story and write a play to retell the story
- Have your child lists facts he/she thinks are true about a topic (frogs, etc.), take your child to the library to locate information on the topic, and have your child prove whether his/her facts on the topic were true
- Have your child make a list of questions on a topic such as mail delivery, and have your child interview a postal worker to answer the questions
- Provide your child with sentences that contain words used incorrectly, and have your child use a dictionary to find words that could be used to correct the mistakes
- Have your child read about a controversial event in the newspaper and write how he/she feels about it
- Have your child read a story and write why the author wrote the story
- Give your child a true statement, have your child research the statement, and have him/her write three facts that prove the statement to be a true statement
- Have your child write a paragraph describing his/her favorite pet, food, etc.
- Have your child write letters to friends during the summer months
- Have your child write a thank-you letter to his/her teacher thanking the teacher for a good school term, year, etc.
- Have your child write to different businesses requesting free items such as catalogs, maps, etc.
- Have your child write a breakfast, lunch, and dinner menu for his/her family
- Have your child write the directions for putting a kite together and flying a kite
- Read an article (school violence, etc.) from the newspaper to your child, and have your child write his/her feelings about the article
- Have your child listen to debates on a topic (wearing school uniforms, etc.) and write his/her opinion about the topic
- Have your child listen to an article and write a summary of the article

# SCIENCE

**During the First Grading Period, your child will study the following Learning Standards:**

**Biology (Cells and Organism)**

- Identify the seven characteristics of living things and relate these to a wide range of organisms in the local and wider environment
- Identify the structures present in plant and animal cells as seen with a simple light microscope and/or a computer microscope
- Compare the structure of plant and animal cells
- Relate the structure of some common cells to their function
- Understand that cells can be grouped together to form tissues, organs and organisms
- Recognize the positions, and know the functions of the major organs of flowering plants, *e.g. root, stem, leaf*

**Biology (Humans as Organisms)**

- Recognize the positions and know the functions of the major organ systems of the human body
- Explore the role of the skeleton and joints and the principles of antagonistic muscles
- Chemistry (States of Matter)
- Show in outline how the particle theory of matter can be used to explain the properties of solids, liquids and gases, including changes of state

**Scientific Inquiry Standards**

**Ideas and Evidence**

- Be able to talk about the importance of questions, evidence and explanations
- Make predictions and review them against evidence

**Obtain and Present Evidence**

- Make careful observations including measurements
- Present results in the form of tables, bar charts and line graphs
- Use information from secondary sources

**Consider Evidence and Approach**

- Make conclusions from collected data, including those presented in a graph, chart or spread-sheet
- Present conclusions using different methods
- Recognize results and observations that do not fit into a pattern
- Consider explanations for predictions using scientific knowledge and understanding and com-municate these

**Plan Investigative Work**

- Outline plans to carry out investigations, considering the variables to control, change or observe (as whole class)
- Choose appropriate apparatus and use it correctly
- Identify appropriate evidence to collect and suitable methods of collection

# MATHEMATICS HELPFUL HINTS AT HOME

**Helpful Hints at Home:**

- Encourage the use of math software on a computer at home or at the library
- Reinforce basic facts by asking your child to find solutions mentally to real-life problems involving adding, subtracting, multiplying, and dividing
- Let your child "teach" you what he/she learning in math class today
- Emphasize the importance of mathematics by discussing with your child how you use mathematics in your job or in daily life
- Have family estimation contests to see who can come the closest (Estimate the total cost of the groceries, estimate the distances from place to place around town, estimate dimensions of rooms or outdoor spaces, etc.)
- Challenge your child to see how many different outfits he/she can create with 3 different pairs of pants and 4 different shirts
- Construct a circle graph to represent the family budget, and encourage your child to budget his/her allowance or earnings. Involve your child in paying bills, calculate the cost per kilowatt hour of electricity or the average cost per day to heat your home
- As you take trips, enlist the help of your child in reading a road map and mentally calculating the distance between two places; determine the shortest route; figure distance traveled per hour and miles per gallon
- Enlist your child's help when shopping in finding the best buy based on price, quantity, size, quality, etc. Point out unit pricing labels on store shelves
- Listen for patterns in music and point out relationships between rhythms and fractions
- Look for examples of tessellations in fabrics, quilts, and art
- Play card and board games using math concepts as a centerpiece *(e.g. Yatzee, Connect 4, Sudoku, Monopoly, Rummy, Pyramid Solitaire, etc.)*
- Look for real world examples of ratio and proportion (maps to real world, model cars, etc.)
- Discuss with your child how the use of geometry can be used in real life situations such as sports (pool, baseball, basketball) and real life (building), and give them chances to use geometric tools (angles, arc) in such situations.

# SPEAKING & LISTENING

**During the First Grading Period, your child will study the following Learning Standards:**

- Deliberately shape talk for clarity and effect and to engage listener
- Use a range of vocabulary appropriate to context, and use language to clarify meaning and to interest and convince their audience
- Practice speaking fluently and clearly at an appropriate pace and volume
- Develop the ability to listen courteously to others and be sensitive to turn taking
- Work in solo, paired and group assignments, including role-play
- Speak for a variety of purposes, such as to explain, describe, narrate, explore, analyze, imagine, discuss, argue and persuade
- Explain features of own and others' language, showing sensitivity to the impact of varying language for different purposes and situations

**During the Second Grading Period, your child will study the following Learning Standards:**

- Speak for a variety of purposes, such as to explain, describe, narrate, explore, analyze, imagine, discuss, argue and persuade
- Develop the ability to listen courteously to others and be sensitive to turn taking
- Begin to make significant contributions to group discussions, engaging with complex material, making perceptive responses and showing awareness of a speaker's aims
- Work in solo, paired and group assignments, including role-play
- Speak for a variety of purposes, such as to explain, describe, narrate, explore, analyze, imagine, discuss, argue and persuade
- Develop the ability to listen courteously to others and be sensitive to turn taking
- Begin to make significant contributions to group discussions, engaging with complex material, making perceptive responses and showing awareness of a speaker's aims

**During the Third Grading Period, your child will study the following Learning Standards:**

- Speak for a variety of purposes, such as to explain, describe, narrate, explore, analyze, imagine, discuss, argue and persuade
- Deliberately shape talk for clarity and effect and to engage listener
- Practice speaking fluently and clearly at an appropriate pace and volume
- Develop the ability to listen courteously to others and be sensitive to turn taking
- Begin to make significant contributions to group discussions, engaging with complex material, making perceptive responses and showing awareness of a speaker's aims
- Work in solo, paired and group assignments, including role-play
- Through role-play, show insight into texts and issues through choice of speech, gesture and movement
- Use a range of vocabulary appropriate to context, and use language to clarify meaning and to interest and convince their audience

# SPEAKING & LISTENING

**During the Fourth Grading Period, your child will study the following Learning Standards:**

- Speak for a variety of purposes, such as to explain, describe, narrate, explore, analyze, imagine, discuss, argue and persuade.
- Deliberately shape talk for clarity and effect and to engage listener.
- Develop the ability to listen courteously to others and be sensitive to turn taking.
- Begin to make significant contributions to group discussions, engaging with complex material, making perceptive responses and showing awareness of a speaker's aims.
- Work in solo, paired and group assignments, including role-play.
- Explain features of own and others' language, showing sensitivity to the impact of varying language for different purposes and situations.
- Practice speaking fluently and clearly at an appropriate pace and volume.
- Through role-play, show insight into texts and issues through choice of speech, gesture and movement.

# MATHEMATICS

**During the Fourth Grading Period, your child will study the following Learning Standards:**

**Measurement - Time**

- Draw and interpret graphs in real life context involving more than one stage e.g. travel graphs
- Know the relationships between units of time; understand and use the 12-hour and 24-hour clock systems; interpreting timetables; calculate time intervals

**Measurement – Area, Perimeter, and Volume**

- Know the abbreviations for and relationships between square meters (m2) centimeters (cm2) and millimeters (mm2)
- Derive and use formula for the area and perimeter of a rectangle; calculate the perimeter and area of compound shapes made from rectangles
- Derive and use formula for the volume of a cuboid; calculate volumes of cuboids
- Calculate the area of cubes and cuboids from their nets

**Handling Data - Probability**

- Use the language of probability to describe and interpret results involving likelihood and chance
- Understand and use the probability scale from 0 to 1
- Find probabilities based on equally likely outcomes in simple contexts
- Identify all the possible mutually exclusive outcomes of a single event
- Use experimental data to estimate probabilities
- Compare experimental and theoretical probabilities in simple contexts

**Handling Data – Planning and Collecting Data**

- Draw and interpret bar line graphs and bar charts, frequency diagrams for grouped discrete data, simple pie charts, pictograms

**Handling Data – Interpreting and Discussing Results**

- Draw conclusions based on the shape of graphs and simple statistics

**Geometry – Position and Movement**

- Transform two-dimensional shapes by: reflection in a given line, rotation about a given point, translation.
- Know that shapes remain congruent after these transformations

**Problem Solving – Techniques and Skills**

- Understand everyday systems of measurement and use them to estimate, measure and calculate
- Recognize and use spatial relationships in two and three dimensions
- Draw accurate mathematical diagrams, graphs, and constructions
- Solve word problems involving whole numbers, percentages, decimals, money or measures: choose operations and mental or written methods appropriate to the numbers and context, including problems with more than one step

**Problem Solving – Understanding and Strategies in Solving Problems**

- Identify and represent information or unknown numbers in problems, making correct use of numbers, symbols, words, diagrams, tables and graphs
- Work logically and draw simple conclusions
- Record and explain methods, results, and conclusions
- Discuss and communicate findings effectively, orally, and in writing

# MATHEMATICS

**Second Grading Period, Continued...**

**Problem Solving – Understanding and Strategies in Solving Problems**

- Identify and represent information or unknown numbers in problems, making correct use of numbers, symbols, words, diagrams, tables and graphs
- Work logically and draw simple conclusions
- Record and explain methods, results, and conclusions
- Discuss and communicate findings effectively, orally, and in writing

**During the Third Grading Period, your child will study the following Learning Standards:**

**Handling Data – Planning and Collecting Data**

- Find the mode (or modal class for grouped data), median and range
- Calculate the mean including from a simple frequency table

**Data Handling – Interpreting and Discussing Results**

- Compare two simple distributions using the range and the mode, median or mean

**Numbers – Fractions, Decimals, Percentages, Ratio, and Proportion**

- Understand percentages as the number of parts in every 100; use fractions and percentages to describe parts of shapes, quantities and measures
- Calculate simple percentages of quantities (whole number answers) and express a smaller quantity as a fraction or percentage of a larger one
- Use percentages to represent and compare different quantities
- Use ratio notation, simplify ratios and divide a quantity into two parts in a given ratio
- Recognize the relationship between ratio and proportion
- Use direct proportion in context; solve simple problems involving ratio and direct proportion

**Number and Calculation**

- Calculate simple fractions and percentages of quantities, *e.g. one quarter of 64, 20% of 50kg*

**Geometry – Shapes and Geometric Reasoning**

- Use a ruler, setsquare and protractor to:
  - Measure and draw straight lines to the nearest millimeter
  - Measure and draw acute, obtuse and reflex angles to the nearest degree
  - Draw parallel and perpendicular lines
  - Construct a triangle given two sides and the included angle (SAS)
  - Construct squares and rectangles
  - Construct regular polygons, given a side and internal angle

**Geometry – Position and Movement**

- Read and plot coordinates of points determined by geometrical information in all four quadrants

**Algebra – Sequencing, Functions, and Graphs**

- Generate coordinate pairs that satisfy a linear equation, where y is given explicitly in terms of x, plot the corresponding graphs; recognize straight-line graphs parallel to the x- or y- axis

**Problem Solving – Understanding and Strategies in Solving Problems**

- Work logically and draw simple conclusions
- Relate results or findings to the original context and check that they are reasonable
- Recognize mathematical properties, patterns, and relationships, generalizing in simple cases

**Problem Solving – Techniques and Skills**

- Manipulate numbers, algebraic expressions and equations, and apply routine algorithms
- Understand everyday systems of measurement and use them to estimate, measure and calculate
- Draw accurate mathematical diagrams, graphs, and constructions
- Solve word problems involving whole numbers, percentages, decimals, money or measures: choose operations and mental or written methods appropriate to the numbers and context, including problems with more than one step

# MATHEMATICS

**During the First Grading Period, your child will study the following Learning Standards:**

**Number – Integers, Powers, and Roots**

- Recognize negative numbers as positions on a number line, and order, add and subtract positive and negative numbers in context
- Recognize multiples, factors, common factors, primes (all less than 100) making use of simple tests of divisibility; find the lowest common multiple in simple cases; use the "sieve" for generating primes developed by Eratosthenes
- Recognize squares of whole numbers to at least 20 x 20 and the corresponding square roots; use the notation $7^2$ and $\sqrt{49}$

**Number and Calculation**

- Consolidate the rapid recall of number facts, including positive integer compliments to 100, multiplication facts to 10 x 10 and associated division facts
- Use known facts and place value to multiply and divide two-digit numbers by a single digit number, *e.g. 45 x 6, 96 ÷ 6*
- Know and apply tests of divisibility by 2, 3, 5, 6, 8, 9, 10 and 100
- Use the laws of arithmetic and inverse operations to simplify calculations with whole numbers and decimals
- Use known facts, place value to multiply simple decimals by one-digit numbers *e.g. 0.8 x 6*
- Add and subtract integers and decimals, including numbers with different numbers of decimal places
- Multiply and divide decimals with one and/or two places by single digit numbers, *e.g. 13.7 x 8, 4.35 ÷ 5*

**Algebra – Expressions, Equations, and Formulas**

- Use letters to represent unknown numbers or variables; know the meanings of the words term, expression and equation
- Know that algebraic operations follow the same order as arithmetic operations
- Construct simple algebraic expressions by using letters to represent numbers
- Derive and use simple formula *e.g. to change hours to minutes*
- Substitute positive integers into simple linear expressions/formula

**Algebra – Sequencing, Functions, and Graphs**

- Generate terms of an integer sequence and find a term given its position in the sequence; find simple term-to-term rules
- Generate sequences from spatial patterns and describe the general term in simple cases
- Represent simple functions using words, symbols and mappings

**Numbers – Place Value, Ordering, and Rounding**

- Interpret decimal notation and place value; multiply and divide whole numbers and decimals by 10, 100 or 1000
- Order decimal including measurements, changing these to the same units
- Round whole numbers to the nearest 10, 100 or 1000 and decimals including measurements to the nearest whole number or 1 decimal place

**Measurement – Length, Mass, and Capacity**

- Choose suitable units of measurement to estimate, measure, calculate and solve problems in everyday contexts
- Know and use abbreviations for and relationships between metric units; Kilo-centi-milli-; converting between; Kilometers Km, meters m, centimeters cm, millimeters mm; Tons t, kilograms km, and grams gs l, and milliliters ml
- Read the scales on a range of analog and digital measuring instruments

# MATHEMATICS

**First Grading Period, Continued...**

**Geometry – Shapes and Geometric Reasoning**

- Use the notation and labeling conventions for points, lines, angles and shapes
- Estimate the size of acute, obtuse and reflex angles to the nearest 10 degrees
- Start to recognize the angular connections between parallel lines, perpendicular lines and transversals
- Calculate the sum of angles at a point, on a straight line and in a triangle, and prove that vertically opposite angles are equal; derive and use the property that the angle sum of a quadrilateral is 360°
- Solve simple geometrical problems by using side and angle properties to identify equal lengths or calculate unknown angles, and explain reasoning
- Use a ruler, setsquare and protractor to:
  - Measure and draw straight lines to the nearest millimeter
  - Measure and draw acute, obtuse and reflex angles to the nearest degree
  - Draw parallel and perpendicular lines
  - Construct a triangle given two sides and the included angle (SAS)
  - Construct squares and rectangles
  - Construct regular polygons, given a side and internal angle

**Problem Solving – Techniques and Skills**

- Use the laws of arithmetic and inverse operations to simplify calculations with whole numbers and decimals
- Manipulate numbers, algebraic expressions and equations, and apply routine algorithms
- Understand everyday systems of measurement and use them to estimate, measure and calculate
- Recognize and use spatial relationships in two and three dimensions
- Check results of calculations by using inverse operations
- Estimate, approximate and check student work
- Solve word problems involving whole numbers, percentages, decimals, money or measures: choose operations and mental or written methods appropriate to the numbers and context, including problems with more than one step

**Problem Solving – Understanding and Strategies in Solving Problems**

- Identify and represent information or unknown numbers in problems, making correct use of numbers, symbols, words, diagrams, tables and graphs
- Recognize mathematical properties, patterns, and relationships, generalizing in simple cases
- Work logically and draw simple conclusions
- Record and explain methods, results, and conclusions

# MATHEMATICS

**During the Second Grading Period, your child will study the following Learning Standards:**

**Data Handling – Planning and Collecting Data**

- Decide which date would be relevant to an inquiry and collect and organize the data
- Design and use a data collection worksheet or questionnaire for a simple survey
- Construct and use frequency tables to gather discrete data, grouped where appropriate in equal class intervals

**Numbers – Fractions, Decimals, Percentages, Ratio, and Proportion**

- Recognize the equivalence of simple fractions, decimals and percentages
- Simplify fractions by canceling common factors and identify equivalent fractions; change an improper fraction to a mixed number, and vice versa. Convert terminating decimals to fractions *e.g. 0.23 = 23 ÷100*
- Compare two fractions by using diagrams, or by using a calculator to convert the fractions to decimals
- Add and subtract two simple fractions. Find fractions of quantities (whole number answers); multiply a fraction by an integer
- Calculate simple percentages of quantities (whole number answers) and express a smaller quantity as a fraction or percentage of a larger one

**Numbers - Place Value, Ordering, and Rounding**

- Round whole numbers to the nearest 10, 100 or 1000 and decimals including measurements to the nearest whole number or 1 decimal place

**Number and Calculation**

- Know and apply tests of divisibility by 2, 3, 5, 6, 8, 9, 10 and 100
- Use the order of operations, including brackets, to work out simple calculations
- Know that in any division where the dividend is not a multiple of the divisor; there will be a remainder

**Geometry – Shapes and Geometric Reasoning**

- Identify, describe, visualize and draw 2D shapes in different orientations
- Name and identify side, angle and symmetry properties of special quadrilaterals and triangles, and regular polygons with 5, 6 and 8 sides
- Recognize and describe common solids and some of their properties, *e.g. the number of faces, edges and vertices*
- Recognize line and rotation symmetry in two-dimensional shapes and patterns; draw lines of symmetry and complete patterns with two lines of symmetry; identify the order of rotational symmetry

**Algebra – Expressions, Equations, and Formulas**

- Simplify linear expressions *e.g. collect like terms; multiply a constant over a bracket*
- Construct and solve simple linear equations with integer coefficients (unknown on one side only) *e.g 3x + 5 = 14*

**Problem Solving – Techniques and Skills**

- Manipulate numbers, algebraic expressions and equations, and apply routine algorithms
- Recognize and use spatial relationships in two and three dimensions
- Solve word problems involving whole numbers, percentages, decimals, money or measures: choose operations and mental or written methods appropriate to the numbers and context, including problems with more than one step