GEMS American Academy Qatar

A Parent's Guide to Grade 5

GEMS prides itself on offering an outstanding educational program where highly effective classroom teachers use an engaging and challenging curriculum to help students meet or exceed grade-level standards. Academic progress is measured in two ways: by monitoring student learning to provide for ongoing dialog (formative assessment) and by evaluating student progress against standards and benchmarks using tests, assignments, and projects (summative assessment). The GAAQ report card is designed to show how well a student is doing in relation to grade-level standards, and also illustrates that by the completion of the academic year, the student will be equipped with the knowledge and skills to succeed at the next grade level.

This guide will help parents understand the concepts and skills that are the focus of instruction in the Grade 5 classroom, as well as the broader academic and thinking skills that will lead to college readiness and beyond. And because parental involvement is a key factor in a student's academic success, this guide also offers suggestions about how parents can support their child's learning at home. A concise overview cannot fully represent the comprehensive curriculum and all units of study in Grade 5, so parents are encouraged to contact the school if they have questions.

Language Arts

Reading – Writing – Speaking – Listening - Language
What your child will learn: Grade 5 students read a wide range of materials, including literature from different times and cultures and informational text on grade-level topics in all subject areas. They practice the foundational reading skills learned in previous grades to read accurately and fluently, but the emphasis in fifth grade is on students' comprehension of complex narrative and informational texts. Students read two or more texts on a topic and use a variety of comprehension strategies to compare, contrast, and integrate information from the texts. They analyze how structure, point of view, visual elements, and figurative language contribute to the meaning or tone of texts. As their text-analysis skills deepen, students are able to determine the main themes or points of text, understand how the author's evidence and reasons support the theme or argument of the text, and draw inferences or conclusions supported by details from the text. They learn academic language and domain-specific vocabulary through their reading and use it in their writing and speaking. In their writing, students learn to group related information logically; use words, phrases, and clauses to link opinions to reasons and to connect ideas to related ideas; and use narrative techniques, such as dialogue, description, and pacing, to develop the story line or characters. They revise, edit, and rewrite their compositions and learn to try new approaches to improve their writing. Students conduct research projects that provide them with practice in gathering information, using print and digital sources, and summarizing information in notes. Students engage effectively in collaborative discussions on fifth-grade topics and texts, identify and analyze logical fallacies in speakers' presentations or from media sources, and learn to deliver speeches in which they state an opinion and support it with a logical sequence of evidence.

They also learn to use gestures and expressions to convey meaning when they recite a section of a speech or poem, or read from a historical or scientific document. To support their writing and speaking, they learn the conventions of standard English grammar and usage, capitalization, punctuation, and spelling, such as using commas and quotations to set off dialogue and correctly indicating titles of different kinds of documents and sources. Students learn to use print and digital reference materials to determine the correct pronunciation and meaning of words and to identify alternate word choices in all fifth-grade content areas.

What you can do at home:
Reading with your child at home continues to be an integral strategy to support literacy skills. As you child enters and progresses through the intermediate grades, it is important for you to share your interest in reading, and it is equally important for them to observe you reading. Provide time and space in your home for your child to read by limiting distractions. Help your child find books, magazines, and other materials that are of interest to them to encourage reading, and engage them in high-quality literature. The use of meaningful technology can also support literacy skills. Talk to your child's teacher about ways to incorporate classroom units of study into reading at home. Libraries and book clubs can also be great way to encourage children to read.

Mathematics

Overview	
Students in Grade 5 apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators. They develop an understanding of the multiplication of fractions and, in limited cases, the division of fractions. Students develop fluency in multiplying and dividing decimals to hundredths and finalize fluency using the four operations with whole numbers. They find the volume of right rectangular prisms and classify two-dimensional figures into categories based on their properties. Students graph points on a coordinate plane to solve real-world problems and interpret the coordinate value of points in the context of the situation.	
Operations and Algebraic Thinking	**Number and Operations in Base Ten, Fractions**
What your child will learn: In fifth grade, students write and interpret numerical expression. The standards call for students to write and evaluate simple numerical expressions, including those that contain parentheses, brackets, or braces. Students express a whole number in the range 2–50 as a product of its prime factors. Students also form ordered pairs from numerical patterns generated from given rules, and they graph the ordered pairs on a coordinate plane.	**What your child will learn:** Students achieve fluency with multi-digit addition, subtraction, multiplication, and division of positive whole numbers. Students find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Students develop an understanding of operations with decimals as they add, subtract, multiply, and divide decimals to hundredths. Students use their understanding of place value to read, write,

	and compare decimals to thousandths and round decimals to any place. Grade 5 students expand their understanding of place value as they explain the effect of multiplying or dividing by powers of 10 on decimal position and the number of zeros in a product. They also use whole-number exponents to denote powers of 10. Students extend previous understanding of equivalent fractions to add and subtract fractions with unlike denominators, including mixed numbers. They solve word problems involving addition and subtraction of fractions with unlike denominators by using visual fraction models or equations to represent the problem. They also mentally estimate and assess the reasonableness of their answers. (For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.) In fifth grade, students apply and extend previous understandings of multiplication and division to multiply and divide fractions. Students multiply a fraction or whole number by a fraction. They find the area of a rectangle with fractional side lengths by tiling it with unit squares and multiplying the side lengths to demonstrate procedural equivalence. Fifth graders interpret multiplication as scaling (resizing) by explaining the results of multiplying given numbers by fractions greater than 1 (a product greater than the given number) and less than 1 (a product smaller than the given number). They solve real-world problems involving multiplication of fractions and mixed numbers. Students interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). They use visual fraction models or equations to solve word problems involving division of whole numbers, leading to answers in the form of fractions, mixed numbers, or decimal fractions. Students divide unit fractions by nonzero whole numbers and whole numbers by unit fractions. They use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) x 4 = 1/3 and 4 ÷ (1/5) = 20 because 20 x (1/5) = 4.

Measurement and Data	Geometry
What your child will learn: Students convert among different-sized standard measurement units within a given measurement system and use these conversions to solve problems. They represent data in graphs and interpret the meaning of the data to solve problems involving information presented in the graph. Fifth-grade students understand the concept of volume and relate volume to multiplication and addition to solve real-world and mathematical problems. They find the volume of right rectangular prisms by using unit cubes and relate the method to multiplying the height by the area of the base to show procedural equivalence. Students use the understanding of volume to apply the formulas V = l x w x h and V = b x h for rectangular prisms with whole-number edge lengths.	**What your child will learn:** Students extend their understanding of two-dimensional figures as they classify them in a hierarchy based on properties. They distinguish among rectangles, parallelograms, and trapezoids and derive and use the formula for the area of a triangle and of a parallelogram by comparing it with the formula for the area of a rectangle (i.e., two of the same triangles make a parallelogram with twice the area; a parallelogram is compared with a rectangle of the same area by cutting and pasting a right triangle on the parallelogram). Students know that the sum of the angles of any triangle is 180° and the sum of the angles of any quadrilateral is 360° and use this information to solve problems. Fifth-grade students graph points in the first quadrant of the coordinate plane to solve problems.

Use of Calculators
The use of calculators plays a special role in mathematics teaching and learning. Initially, it is important that students in the early grades develop a facility with basic arithmetic skills without reliance on calculators. In later grades, when students are ready to use them to their advantage, calculators can be a useful tool not only for solving problems in various contexts, but also for broadening students' mathematical horizons.

What you can do at home:
Make math fun and meaningful for your child by looking for real world math problems in your daily life. Emphasize problems that include multiplication, division, and measurement. Use everyday objects for reinforcing the concept of fractions and decimals—greater than/less than/equal to—and creating story problems. Ask questions that require mathematical thinking (e.g., estimation, greater/less than, word problems). Encourage your child to keep trying even when a problem may be challenging, talk to them about how they solve an answer to a problem, and praise them for effort, resiliency, and perseverance even if they aren't getting the "right" answer.

Integrated Content

Science	Social Studies
What your child will learn: GAAQ uses the FOSS or Full Option Science System. The program design is based on learning progressions that provide students with opportunities to investigate core ideas in science in increasingly complex ways over time. The target goals are to help students know and use scientific explanations of the natural world and the development of scientific knowledge and technological capabilities, and to participate productively in scientific and engineering practices. There are three FOSS units of study in Grade 5: **Physical Science** – Physical and Chemical Changes **Earth Science** – Earth Surface Changes/Relationships between Organisms and their Environments **Life Science** – Relationships between Organisms and their Environments/Relationships between System Variables	**What your child will learn:** In Grade 5, students use their understanding of social studies concepts and cause-and effect relationships to study the development of Qatar and the United States. By applying what they know from civics, economics and geography, students learn the ideals, principles, and systems that shaped both countries' founding. They conclude the fifth grade by applying their understanding of the country's founding and the ideals in the nation's fundamental documents to issues of importance to them today. This learning forms the foundation and understanding of social studies concepts that will provide students with the ability to examine their role in the community, city, nation, and world.

What you can do at home: Foster your child's interest in science by encouraging them to wonder, observe, ask questions, hypothesize, and experiment. Encourage problem solving with everyday tasks (e.g., cooking and gardening). Visit parks, science museums, and zoos. Use technology as a resource to enhance the understanding of scientific concepts.	**What you can do at home:** Take opportunities to talk about civics, civil rights, and civic responsibilities. Read the local newspaper, watch the local news together, or find articles of interest to discuss. Family excursions to local governmental and historical sites can also be fun ways to support social studies curriculum.

Art

What your child will learn:
Elementary art education encompasses several key components and students observe and comprehend various types of art. In art classes, students invent, create, and critique works of art, and they relate, connect, and transfer the skills that they learn into other content areas. In Grade 5, students discover how visual arts communicate the human experience. They analyze the formal and sensory qualities of art, and evaluative criteria are used when responding to works of art. Students use artistic media and expression to communicate personal and objective points of view create art using technological media. They apply an understanding of art processes and creative thinking to plan and create art, and they respond to art from familiar and unfamiliar cultures.

What you can do at home:
Encourage drawing and ask questions about your child's artwork. Pay attention to and support your child's artistic interests. Design a space for creativity and encourage art activities and imaginative play. Visit local art museums and galleries during family outings.

Music

What your child will learn:
The elementary school general music curriculum is built on 12 themes. Each curriculum theme is tailored to match the cognitive development of the students in each of the grade levels. Each lesson addresses specific goals outlined in national standards. The thematic threads in elementary music include:

- Singing/Movement
- Playing Instruments
- Composing/Improvising
- Listening/Analyzing/Describing
- Evaluating Music
- Theory/Notation
- Instrument/Ensembles
- Musical Styles
- Music History/Famous Composers
- World Music/Cultures
- Cross Curriculum Connections
- Life Connections

What you can do at home:
Expand and support the musical experiences and background knowledge of your child by exposing them to a wide variety of musical genres. Attend the opera, symphony, or other musical events. Listen to a variety of types of music in your home or car. Urge your child to explain and discuss what they like and dislike about various types of music. Encourage and foster your child's interest in both vocal and instrumental music!

Health and Physical Education (P.E.)

What your child will learn:
Physical and health education are two subjects that compliment and reinforce each another. While P.E. includes movement patterns, motor skills, and physical activities, both P.E. and health teach students skills to increase safe physical, emotional, and social behaviors, and both disciplines emphasize prevention and risk management for student behavior both within and outside of the school community. Grade 5 students continue to increase in their understanding of how daily activities and healthy behaviors promote overall personal health and safety. They demonstrate mature form in a variety of physical skills and understand how to combine and apply movement concepts and principles (e.g., running, dribbling, etc.). They can apply the basic principles of training to improve fitness and connect fitness to the body systems. Students work to assess and take responsibility for personal behavior and stress management. They participate cooperatively and productively in groups and individual activities, and they identify personal activity interests. Fifth grade students also understand and apply warming up, pacing, and cool-down techniques to prevent injury.

What can you do at home:
Strong and healthy children become strong and healthy learners. Many studies have shown a compelling correlation between physical activity and student achievement. At home, provide opportunities for physical activities (e.g., after-school sports and classes). Expose your child to a wide variety of physical activities, and keep in mind that this may also include limiting television and/or computer screen time. Plan and offer healthy snacks and meals. Be a role model for your child and engage in healthy activities together. Whether you are preparing nutritious meals or enjoying a walk together, make an effort to integrate wellness into your family's daily practices.

Talking to your child's teacher:
Parental involvement in a child's education is crucial, so it's important to build a healthy, collaborative relationship between home and school by establishing good communication with your child's teacher. We encourage you to reach out to the teacher early in the year. Learn about the academic standards your child will be aiming for and discover ways you can support them in their studies. The first step in being able to follow the academic road map is to begin with a solid understanding of what your child will be expected to know by the end of the school year and keep the goal in sight.
Teachers monitor and evaluate student academic progress and achievement on an ongoing basis in many different ways, so parents are encouraged to stay in regular contact with their child's teacher beyond parent-teacher conferences. As the school year progresses, ask to see samples of your child's work to determine, in concert with the teacher, your child's advancement toward grade-level standards. Discuss areas of strength your child exhibits in the classroom as well as areas that may be targeted for growth. Inquire about how you can best help your child at home, and ask the teacher for recommendations and resources. Find out details about specific classroom activities and discuss ways that you may be able to volunteer your time and talents to support classroom activities or units of study.

Growth and learning during the school year doesn't end in the classroom—parents and teachers must work together all year long for the success of each student. We ask that you partner with us in creating an optimal learning experience for your child.