

Parent's Guide to Higher Learning Standards in Mathematics

Why Are Higher Learning Standards Important?

Higher learning standards are important because they will help all children – no matter who they are – develop the skills they need to succeed in the next grade level and in the future. The standards are clear expectations for what your child should know and be able to do in key areas. The following overview breaks down the standards and offers suggestions for how you can work with your child's teacher to help your child succeed.

To improve student learning, the college and career readiness standards in math challenge students to understand and apply concepts, not just memorize math formulas. These changes are called shifts. The chart below shows what shifted, what you might see in your child's backpack, and what you can do at home.

What Shifted?	What to Look for in the Backpack	What Can You Do?
<ul style="list-style-type: none"> Your child will <u>work more deeply in fewer topics</u>, which will ensure full understanding. (Less is more!) 	<ul style="list-style-type: none"> Look for assignments that require students to show their work and explain how they arrived at an answer. 	<ul style="list-style-type: none"> Know what concepts are important for your children based on their grade level and spend time working on those concepts.
<ul style="list-style-type: none"> Your child will <u>keep building on learning year after year</u>, starting with a strong foundation. 	<ul style="list-style-type: none"> Look for assignments that build on one another. For example, students will focus on adding, subtracting, multiplying, and dividing. Once these areas are mastered, they will focus on fractions. Building on that, they will then focus on algebra. You should be able to see the progression in the topics they learn. 	<ul style="list-style-type: none"> Be aware of what concepts your child struggled with last year and support your child in those challenge areas moving forward.
<ul style="list-style-type: none"> Your child will <u>spend time practicing and memorizing math facts</u>. 	<ul style="list-style-type: none"> Look for assignments that ask your child to master math facts such as addition groupings up to 20 or multiplication tables. 	<ul style="list-style-type: none"> Help your child know and memorize basic math facts. Ask your child to "do the math" that pops up in daily life.
<ul style="list-style-type: none"> Your children will <u>understand why the math works and be asked to talk about and prove their understanding</u>. 	<ul style="list-style-type: none"> Your children might have assignments that ask them to show or explain their mathematical thinking – to say WHY they think their answer is the right one. 	<ul style="list-style-type: none"> Talk to your children about their math homework and ask them to teach you new concepts. Help them figure out ways to explain their thinking.
<ul style="list-style-type: none"> Your child will now be asked to <u>use math in real-world situations</u>. 	<ul style="list-style-type: none"> Look for math assignments that are based on the real world. For instance, homework for 5th graders might include adding fractions as part of a dessert recipe or determining how much pizza friends ate based on fractions. 	<ul style="list-style-type: none"> Provide time every day for your child to work on math at home.

TALKING TO YOUR CHILD'S TEACHER

When talking to your child's teacher, try to keep the conversation focused on the most important topics that relate to your child. This means asking the teacher how your child is performing based on grade-level standards and expectations.

Also, ask to see a sample of your child's work. Compare your child's samples to those found at <http://www.engageny.org/resource/new-york-state-common-core-sample-questions>. Also, feel free to bring those samples to your child's teacher and ask the teacher to explain how the samples are used in the classroom.

This information will enable you to make important adjustments at home that can help your child succeed in the classroom.

Working with the "Shifts"

What Parents Can Do to Help their Children Learn

What's the shift?	What will students have to do?	What can parents do to help?
Build skills across grade levels	Keep building on learning year after year	Be aware of what your child struggled with the previous year and how that will effect ongoing learning
		Ensure that support is given for those skills.
Learn more about less	Spend more time on fewer concepts Go more in-depth on each concept	Know what the priority work is for your child at their grade level
		Spend time with your child on priority work
		Ask your child's teacher for reports on your child's progress on priority work
Think fast AND solve problems	Spend time practicing by doing lots of problems on the same idea	Help your child at home to know, understand and memorize basic math facts
		Know all of the fluencies your child should have
		Prioritize learning the fluencies your child finds most difficult
Really know it, really do it	Make the math work, and understand why it does rather than just learning rote procedures	Ask questions and review homework to see whether your child understands <i>why</i> as well as <i>what</i> the answer is.
	Talk about why the math works	Provide time for your child to work on math skills at home
	Prove that they know why and how the math works	
Use math in the real world	Apply math in real world situations	Ask your child to do the math that comes up in daily life
	Know which math skills to use for which situation	Talk about the application of math concepts in your home and family

Some Online Resources:

- <http://www.greatschools.org/gk/milestones/>
 - Click on the grade level and scroll to math.
 - There are short videos on each of these areas: math skills, math concepts, and word problems.
- <http://achievethecore.org/page/2736/talking-with-parents>
 - Click on "Learn More About the Common Core"
- <https://www.engageny.org/parent-and-family-resources>
- <http://greatminds.net/support/parents>
 - Homework Helpers are available for some lessons. They feature a completed problem set with thought bubbles that explain the process.
 - Grade Roadmaps are grade-specific explanations of what children will be studying at that grade and share strategies for parents to use at home
 - Module Tip Sheets help parents address questions children may have at home and offer tips to help support them.

KEY AREAS OF FOCUS IN MATH

Grade	Focus
K	Counting, comparing numbers understanding of addition & subtraction
1	Addition & subtraction, place value (tens & ones) measurement
2	Addition and subtraction fluency using properties place value
3	Multiplication & division fractions
4	Multi-digit multiplication & division equivalent fractions +/- fractions with like denominators whole # x fraction
5	Decimal place value operations with fractions and decimals

PROCEDURAL SKILL* AND FLUENCY EXPECTATIONS

*Knowledge and use of a rote, efficient procedure

Grade	Expectation
K	Add and subtract within 5
1	Add and subtract within 10
2	Add and subtract within 20 using strategies Add and subtract within 100*
3	Multiply and divide within 100 Add and subtract within 1,000*
4	Add and subtract multi-digit numbers* Add and subtract within 1,000,000*
5	Multiply multi-digit whole numbers*