

West Deptford Township School District
SECOND GRADE Parent Guide and
Resources for



General Guidelines

1. K-6 math instruction now focuses more on **problem solving, reasoning, and understanding** in addition to efficient computation.
2. Learning tasks are designed to develop concepts, not just promote efficient computation therefore a young child will build **deep understanding** that leads to **better skills and fluency**.
3. **Struggle means your child is learning.** When a student is putting in effort to think, the brain is creating new pathways and connections. We call this “cognitive sweat.” In fact, the very first math standard for all K-12 students is *Make sense of problems* and **persevere** in solving them. Help your child build that perseverance by allowing him or her to work through a difficult problem solving task without first memorizing the shortcuts.



Homework Tips

- Communicate with the teacher directly:
 - Write notes on the homework.
 - Note questions that were challenging.
- **Parents should not be re-teaching** during every assignment. See the next section for suggestions about ways you can help when you don't understand all the math.
- Use the **many online tools** from the program to support student work at home.



Instead of Reteaching, Try Questioning

Instead of attempting to reteach a skill, try asking questions that help your child think through the solution on his or her own:

- What do you think might work to solve this? Why do you think that might work?
- What about this problem seems familiar?
- What is easy about this problem? Why do you think that part is easy?
- What seems difficult about this? Why is it confusing or complicated?
- What is the question you are trying to answer? What do you need to know in order to answer it? Are you missing some important information?
- What might happen if you try the opposite of what you're doing now? It might not work, but it could give you some interesting ideas about how to solve it.
- If you gave this problem to your teacher, what do you think he or she would do next?



After your child finds an answer, instead of telling him or her whether it is correct, try asking these kinds of questions:

- Why do you think that's a good answer? How do you know?
- Tell me how you got that answer. Why does that work?
- Why did you solve it that way?
- Is there another way you could solve it?

Online Resources

All of the following are available through the student online portal:

- Visual Learning Video (Grades K-5)
- Math Tools (Grades K-5)
- Games (Grades K-5)
- Glossary (All Grades)
- Student Edition (All Grades)
- Virtual Nerd Video (Grades 6-8)





- **Major Cluster:** Most important and greater emphasis
- **Supporting Cluster:** Strongly connects to major work
- **Additional Cluster:** Completes grade-level content

GRADE TWO CLUSTERS

- **2.OA.B Operations and Algebraic Thinking**
Add and subtract within 20.
- **2.OA.C Operations and Algebraic Thinking**
Work with equal groups of objects to gain foundations for multiplication.
- **2.NBT.B Number and Operations in Base Ten**
Use place value understanding and properties of operations to add and subtract.
- **2.OA.A Operations and Algebraic Thinking**
Represent and solve problems involving addition and subtraction.
- **2.MD.C Measurement and Data**
Work with time and money.
- **2.NBT.A Number and Operations in Base Ten**
Understand place value.
- **2.NBT.B Number and Operations in Base Ten**
Use place value understanding and properties of operations to add and subtract.
- **2.MD.A Measurement and Data**
Measure and estimate lengths in standard units.
- **2.MD.B Measurement and Data**
Relate addition and subtraction to length.
- **2.MD.D Measurement and Data**
Represent and interpret data.
- **2.G.A Geometry**
Reason with shapes and their attributes.

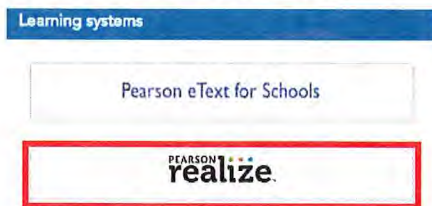
Supporting Your Child At Home

- Have your child log in to their Power Student/Parent Account
- Select “Pearson Courses” underneath the Navigation tab

Navigation

- Grades and Attendance
- Grade History
- Attendance History
- Teacher Comments
- School Bulletin
- Class Registration
- My Calendars
- My Schedule
- School Information
- Pearson Courses**
- Contact Manager

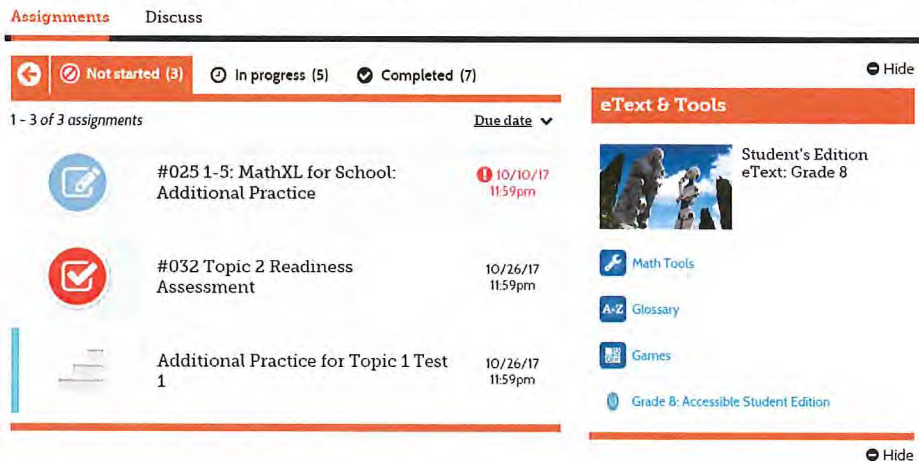
- Select “Pearson Realize”



- Select “Classes” to view your work



- Access assignments and additional math resources



Here are just a few examples of the skills and strategies students will develop as they solve word problems in grade two.

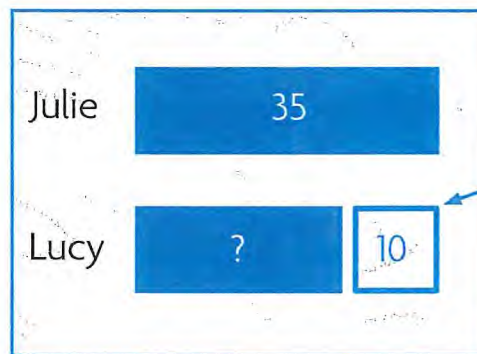
Grade One Mathematics	Grade Two Mathematics	Grade Three Mathematics
Solve word problems by adding or subtracting numbers up through 20	Solve one- and two-step word problems by adding or subtracting numbers up through 100	Solve two-step word problems by adding, subtracting, multiplying, or dividing numbers up through 100

Students in grade two will use diagrams such as this one to think through and solve one- and two-step word problems.

Julie has 35 books. Julie has 10 more books than Lucy. How many books does Lucy have? How many books do they have together?

Step 1: If Lucy has 10 less books than Julie, students first need to figure out what 10 less than 35 is.

$$35 \text{ books} - 10 \text{ books} = 25 \text{ books}$$

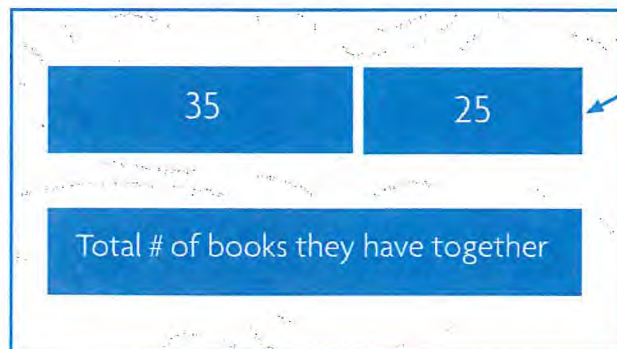


$$25 + 10 = 35$$

$$35 - 10 = 25$$

Step 2: Students then have to add the number of books Julie has to the number of books Lucy has.

$$35 \text{ books} + 25 \text{ books} = 60 \text{ books}$$



$$35 + 25 = 60$$

Here are just a few examples of how students will develop and use their understanding of place value in grade two.

Grade One Mathematics

- Understand that 10 can be thought of as a bundle of ten ones—called a “ten”
- Understand that the two digits of a two-digit number represent amounts of tens and ones (place value)
- Add and subtract numbers through 100 using what students have learned about place value

Grade Two Mathematics

- Understand that 100 can be thought of as a bundle of ten tens—called a “hundred”
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones (place value)
- Add and subtract numbers through 1000 using what students have learned about place value

Grade Three Mathematics

- Use place value understanding to round whole numbers to the nearest 10 or 100
- Quickly and accurately add and subtract numbers through 1000
- Use place value understanding to multiply and divide numbers up through 100
- Multiply one-digit whole numbers by multiples of 10 between 10 and 90. For example, 9×80 or 5×60

Students learn that $250 = 2$ hundreds and 5 tens, 25 tens, or 250 ones.

$$\boxed{250} = \boxed{2} + \boxed{5} + \boxed{0}$$

hundreds tens ones

Students apply their understanding that 5 tens + 5 tens = 10 tens, or 1 hundred, that can then be added to the hundreds place.

$$\boxed{2} \boxed{5} \boxed{0} + \boxed{2} \boxed{5} \boxed{3} = \boxed{5} \boxed{0} \boxed{3}$$

hundreds tens ones hundreds tens ones hundreds tens ones

Standards for Mathematical Practice: A Guide for Parents

Practice Standard	What it Looks Like: <i>Your child might...</i>	Questions to Ask
1. Make sense of problems and persevere in solving them.	<ul style="list-style-type: none"> ● puzzle over the meaning of a problem. ● plan an outline of a solution path instead of just jumping in. ● start and stop and start again a different way. ● look at other problems she did to look for ideas. ● use concrete objects or pictures. 	<ul style="list-style-type: none"> ● What are you asked to figure out? ● Can you think of a problem you solved before that is like this one? ● What information is here that might be useful? ● What is your plan for solving this? ● Does your solution make sense?
2. Reason abstractly and quantitatively.	<ul style="list-style-type: none"> ● break a problem apart and represent the parts with objects, pictures, words, or symbols. ● organize information in different ways. ● write number sentences to represent meaning. ● explain the meaning of symbols. 	<ul style="list-style-type: none"> ● Can you write an equation (number sentence) or expression to match the problem situation? ● What do the numbers or variables refer to? ● Can you explain that equation in words? ● How did you decide to use this operation?
3. Construct viable arguments and critique the reasoning of others.	<ul style="list-style-type: none"> ● talk confidently about math using mathematical language fluently. ● practice math vocabulary. ● justify a solution by explaining its logic. ● give a counterexample to disprove a statement. ● recognize when logic is flawed and suggest ways to improve it. 	<ul style="list-style-type: none"> ● What does your answer mean? ● How do you know your answer is correct? ● Are there other correct answers to this question? How do you know? ● If I told you the answer should be _____ (give a wrong answer), how would you convince me I'm wrong?
4. Model with mathematics.	<ul style="list-style-type: none"> ● use math to solve real world problems and problems with more than one solution. ● organize data to understand something happening in the real world. ● use "found" information to create and solve his own problems. ● interpret mathematical answers in context. 	<ul style="list-style-type: none"> ● Can you make a model of this with objects, pictures, or symbols? ● Is there an equation or expression that would represent part of this situation? ● What does that answer represent in real life? ● Is there something interesting we can find out from this collection of data?

Practice Standard	What it Looks Like: <i>Your child might...</i>	Questions to Ask
<p>5. Use appropriate tools strategically.</p>	<ul style="list-style-type: none"> choose for herself when to use a tool such as a ruler, protractor, or calculator to help solve a problem. decide for herself when to use mental math, paper and pencil, a calculator, or computer program. use estimation appropriately. use a table, graph, or spreadsheet to organize complex data. 	<ul style="list-style-type: none"> What tools can you use to help you solve this problem? How can this tool help you? Is there a better tool? How can you organize this information to help you solve the problem? Is there a different way to organize it that might be better?
<p>6. Attend to precision.</p>	<ul style="list-style-type: none"> use clear and precise math language and accurate terminology (<i>sum</i> or <i>product</i> instead of “answer”). use precise numbers and labels. explain exactly what she is confused about. 	<ul style="list-style-type: none"> How do you know this is an accurate answer? What do you mean when you say ___? Is there a more precise word you could use? What units does that represent?
<p>7. Look for and make use of structure.</p>	<ul style="list-style-type: none"> recognize patterns and look for them when they aren't obvious. sort objects, pictures, or numbers into groups. use the structure of math to help solve problems (e.g. fact families or the distributive property). try ways to break numbers apart and put them together in different ways to make a problem easier. 	<ul style="list-style-type: none"> Do you see any patterns? Can you group these things in a way that makes sense? Is there another way of grouping them? Can you take the numbers apart and put them together in a different way to make more sense? What do you notice about the answers to the exercises on this page?
<p>8. Look for and express regularity in repeated reasoning.</p>	<ul style="list-style-type: none"> find his own shortcuts that work to solve problems. create strategies from repetitions that show up in his work. generalize about a strategy to apply it to other kinds of problems. create a rule out of a pattern of exercises and solutions. 	<ul style="list-style-type: none"> Do you notice anything interesting about these problems? Is there a pattern to what you notice? Is there a shortcut that will always work for this kind of problem? How do you know it will always work? Is there a rule that seems to be true about this pattern of numbers? Can you prove the rule is true? What are the connections between this and other kinds of problems with similar numbers?