Math in Focus Parent University FAQs

Available Online Resources

Question: **Do all students and parents have access to *Math in Focus*' online component, ThinkCentral?**

Answer: Yes, all students in K-5 and their parents have access to *Math in Focus* resources on ThinkCentral. That website can be accessed using children's login information. Students in grades 2-5 also have access to the prior grade's materials on ThinkCentral. The website is http://www-k6.thinkcentral.com/ePC/start.do . For additional information on many topics related to *Math in Focus*, please refer to the resources and videos available on ThinkCentral.

Question: **Who should parents contact if they have technical questions about the website not working properly?**

Answer: Any questions about issues with ThinkCentral should be directed to Houghton Mifflin Harcourt's Technical Support at 1-800-323-9239.

Instruction

Question: **Do students have to do the mathematics all the same way? Is there only one correct way to do the work?**

Answer: All students are taught mathematics via conceptual learning then pictorial representation of their learning and lastly using the abstract or algorithms. Students are encouraged to think differently and deeply about mathematics, so they might find another way to do the work or the algorithm, but they have to understand the concept and the pictorial representation regardless of the method they use to obtain answers.

Question: **What are manipulatives?**

Answer: Manipulatives are used during conceptual learning of mathematics. They are objects that allow students to participate in hands-on learning. Using manipulatives, students can "see" the why behind how the mathematics works. Examples of manipulatives are: cubes, geometric shapes and solids, craft sticks, base-ten blocks, paper strips, plastic or foam chips, "play" money, etc.

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Question: **What is more important the process or operation (the journey) to obtaining an answer or the answer (the destination)?**

Answer: Both the work to get answers and the answers are important. The work allows students and teachers to see what students are actually thinking. It is the record of what the student has learned and can do. Answers are also important because of mathematics' precision and accuracy. Problems have right answers (sometimes there are more than 1 correct answer, though), and those answers are valued as evidence that students can do the work required correctly. However, the work to obtain answers (even if they aren't correct) can be valued for what is correct and incorrect. From incorrect work, students and teachers can also see what help students need to continue their learning.

Question: **What support is available for long term substitute teachers since they haven't had training on the new program?**

Answer: Long term substitutes will receive support from their mentor teachers, as well as other teachers and the schools' principals. They will also participate in ongoing professional development during the time they are employed by DASD. There is professional development embedded within the actual program as well. Also, teachers have access to additional resources via ThinkCentral.

Question: **Why are there no track levels in the classroom, especially since a new, harder math curriculum is being introduced this year?**

Answer: The district believes that students can learn and can excel in mathematics. Tracking elementary students fosters the fixed mindset that some students can do mathematics and some will never be good at it. Students need to learn to communicate (verbal and written) mathematically with their peers and explain their thinking to others. Students of all performance levels also need to hear their peers' ideas and thoughts as well. To have such discourse, students of all performance levels need to learn together. *Math in Focus* is designed for all students learning mathematics together. All students learn from their peers. The Common Core State Standards does not suggest any such tracking of students by performance until the middle school level.

Supporting Children in School

Question: **What support is available for children who are struggling with learning mathematics?**

Answer: Some children are experiencing significant transition gaps in content and rigor, and teachers are differentiating instruction to meet a variety of performance levels within the classroom while filling those gaps in order to get to the new learning. Teachers are using differentiated activities during centers to help fill students' needs for support and for additional challenge. Some schools are able to provide aides for additional support in classrooms as needed. All schools have been given additional aide hours to support mathematics instruction. Teachers are also assigning students tasks on Study Island to help fill content gaps.

Question: **Students are struggling with doing word problems. What support/instruction are they being provided to be able to answer these questions?**

Answer: Problem solving and solving "situational problems" is the basis of the *Math in Focus* program. Students work on such problems on a very regular basis, if not daily. Instruction for students to learn to do such problems is scaffolded (modeled, coached) to support students while they learn step-by-step how to complete such problems. The Reteach teacher resource also contains scaffolded problems for students, who might be struggling, to complete. Students are also learning to do such tasks using pictorial representations, such as number bonds and bar models. These representations that help students to visualize the situations are very helpful for them to better understand the problems and then know what to do to obtain answers. The number bonds and bar models do not take the place of students doing the mathematics, but they do help students to think through the problem and then do the correct work to get answers. Students can also see step-by-step solutions via the Student Edition of the textbook on ThinkCentral. Also, each chapter in the program has a lesson called "Put on Your Thinking Cap". The activities in these lessons are strengthening students' problem solving skills and perseverance and are building them up to being able to attack such problems and do the work to get answers without hesitation and frustration.

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Question: **How are teachers helping students fill significant gaps?**

Answer: Such a significant transition to the Common Core State Standards, PA Core Standards, and to *Math in Focus* has brought with it transition gaps for students. To help students fill these gaps, teachers are doing many things, but to name a few:

- Slower pacing – Classes are learning content at a slower pace according to the new standards, but also because of filling gaps.
- Pre-tests – Students are taking chapter pre-tests, and from those tests' results, teachers can tell what prerequisite learning has to occur prior to starting the unit.
- Content from prior years – *Math in Focus* has a Transition Guide, which lets teachers know what content in prior grade levels students need to learn in order to be prepared for new learning of current grade level materials.
- Study Island – Students take benchmark assessments that measure their progress toward learning what can be expected on the PSSAs. From students' results on these tests, teachers can determine and address students' gaps in learning. Using that data, teachers can create practice activities on Study Island for students to work on.
- Practice situational (word) problems, including "novel items" – Problem solving is the basis for the framework for learning mathematics in *Math in Focus*. Students practice doing and learn how to do situational problems almost daily. Each chapter has a lesson called "Put on Your Thinking Cap". The activities in these lessons are strengthening students' problem solving skills and perseverance and are building them up to being able to do the "novel items".

Question: **Will the district offer a summer program to help students fill gaps in their learning of and application of mathematics?**

Answer: The district could consider such a program. Another idea is maybe students could receive summer math work, similar to summer reading lists and corresponding assignments, to keep their math skills sharp. Students will also have access to ThinkCentral and Study Island during the summer. So it's possible that students could be given assignments via those two resources to be completed during the summer.

Question: **How will children who are struggling in math be able to bridge gaps from year to year in addition to the gaps from transition to this program? Won't they fall even further behind due to a cumulative effect?**

Answer: It will take a few years to get entirely through this transition. Each year though the remaining gaps that need to be filled will become less and less. Teachers are working with students to fill gaps prior to starting the grade level's new learning. Being that mathematics is cumulative and new content builds on prior content, students can often not proceed in learning new materials until the gaps are filled.

Question: **There seems to be a decent amount of parents who were once teachers. Would the district be willing to inservice parents on Singapore Math so that they could volunteer in the classrooms and help "fill gaps"?**

Answer: Schools are considering additional needs and supports for parents to help children, which could mean doing more Parent University meetings with the purpose of those meetings being to actually learn and do mathematics like students are learning via *Math in Focus*.

Assessments

Question: **Should students be receiving partial credit on tests?**

Answer: Yes. Students should receive partial credit on assessments for what they do correctly. Partial credit gives value to students' effort as long as something that they did had relevance to the expected solution.

Question: **What are "novel items" on the tests?**

Answer: Each *Math in Focus* test contains one novel item. How to solve that item is unfamiliar to students. They did not solve a "similar" item prior to taking the test. This item is to see if students can truly apply what they learned to novel, unique situations.

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Question: **Students are not doing as well on tests as they had in the past because the tests are very rigorous. What can be done to help students be more successful on the tests?**

Answer: Each *Math in Focus* test contains one novel item. How to solve that item is unfamiliar to students. They did not solve a "similar" item prior to taking the test. This item is to see if students can truly apply what they learned to novel, unique situations. Not having to do "novel" problems with such increased rigor and performance expectations prior to this year is making doing that this year a real stretch for some students. To support students through this transition this year, those items have been removed from students' grades. Students are doing these problems though as part of the learning experience.

This year, tests for grades 1-5 have been bolstered to additionally ease the transition to increased levels of rigor and expectations. Kindergarten was not experiencing such a transition gap and did not need to adjust its assessments. Grades 1-5 tests now contain 20-25 items. Tests were 12 items with one being the novel item, and depending on the test, about half being skill-based questions, and the other half being application items.

Reworking the tests will support students through the transition. By seeing more items on the tests that are similar to those they did during instruction and learning, this will improve students' confidence in doing mathematics at a deeper level.

Question: **Singapore Math seems more complicated to get the answers and more time-consuming to get the answers. Will the tests have fewer questions so the kids have time to complete the tests?**

Answer: Yes, the actual *Math in Focus* tests contain fewer items than other mathematics programs' tests, and part of that is due to students having to apply what they know to obtain answers not just simply do skills to get answers.

Question: **How is success being measured with this program? How often is the progress of success being reviewed?**

Answer: Student success with learning mathematics is being measured on an ongoing, daily basis. Teachers observe students while they are learning and practicing mathematics, and they can tell if students understand the content or need additional support to do so. Teachers also measure students' learning and understanding via formative assessments to determine if students are learning the concepts being taught at any given time. Students also take tests at the end of the units that gauge their progress toward learning and being able to apply the content within the chapters.

In addition to that, students will take Study Island benchmark assessments three times prior to PSSA testing. The results from these tests also let teachers know of any gaps in students' learning of content.

Teachers discuss the successes and challenges that they are seeing in their classrooms during mathematics instruction at monthly grade-level meetings. Teachers are learning from each other and are improving the learning experience for their students based on their and other teachers' successes and suggestions.

Question: **What is the expectation of the new program's impact on students' PSSA results?**

Answer: As with the implementation of any new set of standards and/or program, it's possible that there could be an implementation dip in students' state test scores. It's also possible that there could be an increase in students' results.

Transition to Middle School and Beyond

Question: **What math program is being used in the middle school?**

Answer: *Big Ideas Math* is being used at the middle level. More information about this program can be found online at http://www.bigideasmath.com/ .

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Question: **Will Grade 5 be on target for Grade 6 Math? Or will students still have a big gap to catch up?**

Answer: Fifth grade students are on target for Grade 6 Mathematics as is every grade level is on target for the following grade. The transition gaps will get smaller every year, but they could exist to lesser degrees for the next few years. Implementing the new standards is a significant transition, and completing such takes time. However, every year for the next few years, students will feel more and more comfortable with the new standards, the new program, and the new increased rigor and expectations.

The transition from fifth grade to sixth grade mathematics should be smooth. By students learning concepts then pictorial representations and then the abstract algorithms, they are learning deeper levels of mathematics, and that will support students in any program in future years. *Math in Focus* will definitely prepare students for the rigor of *Big Ideas Math* (the middle school's program) and the Standards at the middle school level. Fifth grade of *Math in Focus* provides students a rich and deep learning experience with fractions, which will have them thoroughly prepared for the big ideas of sixth grade mathematics. The visual strategies that students are learning in elementary school will be a big advantage to them when they get to the middle school level. Although, bar modeling is not specifically emphasized in *Big Ideas Math*, it is a strategy that is transferable to any program, and students can continue to use bar modeling as they progress through middle school.

Question: **How will this program and learning math in this new way help our students in the long term (such as on national tests, SATs, AP tests)?**

Answer: Understanding mathematics better, differently, and more deeply will continue to help students to succeed in learning and performing at higher levels of rigor throughout their education. All of their learning of content (conceptual – pictorial – and abstract) and strategies is transferable to secondary mathematics. Being able to problem solve is going to be a huge advantage to our students as they take such assessments as PSSAs, Keystone Exams, PSAT's, SATs, ACTs, and AP and IB Exams. They will be well-prepared for the rigor and expectations of future courses and tests.

Supporting Children at Home

Question: **Homework – What does it look like? How often do students get homework?**

Answer: Many parents have asked about homework in regards to *Math in Focus*, what they should expect to see at home, and how they can help their children with their homework. Here are answers to those questions:

- Students should have homework fewer nights than they did in the past. When they do have homework, there should be fewer problems to do, but involve more critical thinking and higher levels of questioning. Students might need to use the virtual manipulatives on ThinkCentral as learning tools to help them complete their homework. They will use less standard algorithms to solve problems.
- If a student does not understand how to complete an assignment, even given parental support, it is okay to return an incomplete assignment to the teacher with a note letting him/her know that the child needs additional support/instruction. To best help your child maintain independence while doing homework, please resist the urge to just show him/her how to get an answer. Instead, encourage your son/daughter to look at sample problems and ask him/her questions to help him/her to remember what to do. Such problems can be found on the student online text or the tutorial lessons on ThinkCentral. Both online resources provide step-by-step instructions how to solve similar problems.
- If a child is struggling to complete an assignment, a parent's support/encouragement and positive attitude towards mathematics will go a long way to helping a child succeed in learning mathematics.

Question: **Can parents get access to other grade levels' online resources so they can help their children fill known or expected gaps?**

Answer: Yes. Students in grades 2-5 have access to the prior grade level's ThinkCentral materials.

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Question: **Will students/parents have access to ThinkCentral during the summer?**

Answer: Yes. Students will have access to ThinkCentral and Study Island (grades 3-5) during the summer.

Question: **How can parents help their children with math at home? What are some non-online ways for parents to support their students?**

Answer: Parents can help children with their becoming fact fluent with basic facts. Parents can encourage their children to do Interactivities on ThinkCentral and those in grades three though five can work on Study Island. This was in a recent NCTM (National Council of Teachers of Mathematics) electronic newsletter:

What Families Can Do: Ideas to Help Your Child Succeed in and Enjoy Mathematics

1. Be positive. “Help your child have a “can do” attitude by praising your child’s efforts”
2. Link Mathematics with Daily Life. “Every day, people face situations that involve mathematics”
3. Make Mathematics Fun. “Play board games, solve puzzles, and ponder brain teasers”
4. Learn about Mathematics-Related Careers. “Mathematics is foundational to a wide variety of interesting careers”
5. Have High Expectations. “Communicate high expectations to your child”
6. Support Homework, Don’t Do It! “You can facilitate your child’s homework by asking questions and listening to your child”

Other

Question: **Why was this math program implemented to all grades as opposed to starting with the younger grades, i.e. K, 1, 2?**

Answer: Given an ideal situation and if new testing was not starting next year, maybe a rolling implementation (K then grade 1 then grade 2 …) of such a program might be preferred. Doing so would have taken six years to implement the program K through grade 5. Districts do not have the luxury of such time since the new PSSA tests that will impact grades 3-5 (and 6-8) starting in the 2014-15 school year. Some districts that started implementing a new mathematics program a few years ago tried to do a rolling implementation and had issues with older children's parents because they wanted the new program for their children as well. Also, the professional development started this year and will continue throughout this year for two more years. If a district were to do three years of training for each grade level during a rolling implementation, trainers would be in the district for eight years until all teachers were trained. Professional development is quite expensive, and staggering training in such a way would be a problem logistically, especially in a district the size of Downingtown.

Question: **What schools/districts in the area are also using *Math in Focus*?**

Answer: Other Chester County districts that are also using *Math in Focus*:

- Great Valley
- Tredyffrin/Easttown
- Unionville-Chadds Ford
- West Chester

Delaware County districts that are using *Math in Focus*:

- Haverford Township
- Wallingford-Swarthmore

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Question: **Can the PowerPoint presentation (from Parent University) be posted online as well?**

Answer: Yes, it can be found on the district's website www.dasd.org and then:

- District
- Academics
- Math in Focus
- Math in Focus Parent Information