



Partnership to Rejuvenate and Optimize Mathematics and Science Education in Florida

A Newsletter for Parents and Students Volume 1, Issue 2 September 2009

Supporting Your Child Who Struggles Learning Math

Math skills are important to have and are used in most jobs today. Young children often have an innate interest in math and science. Yet math can be a tough subject for some students. Students who experience problems with math show their learning difficulties in different ways. It's important that parents figure out what issues may lead your child to have problems with math.

Dr. David Allsopp of Florida PROMISE has identified issues of struggling math learners and has created educator modules and suggested resources to help students become more successful. Knowing what to look for and applying the correct strategies can lead your child to do better in math.

Reasons your child may struggle with math:

Learned Helplessness

Children who have failed in math will keep expecting to fail. It is this lack of confidence

that has them rely on assistance from others to complete tasks.

Passive Learners

Students who have learning problems often are not "active" learners. They do not actively make connections between what they already know and what they are now learning.

Memory Problems

Memory issues play a big role in math learning problems. Memory problems are most obvious when students show difficulty remembering their basic addition, subtraction, multiplication, and division facts.

Attention Problems

Math requires a lot of attention, especially problems that include multiple steps. While being taught, students who have attention problems often "miss" important pieces of information. If your child has trouble paying

attention, complex problems will be harder.

Low Level of Academic Achievement

Students who don't do well in math often lack basic math skills because it takes them longer to process information.

Cognitive/Metacognitive Thinking Deficits

Metacognition has to do with students' ability to monitor their learning and problem solve. Since math involves problem solving, students who do not have metacognitive skills may have difficulty doing well in math.

Math Anxiety

Some students often view math fearfully. Because math is difficult for them, "math time" is often an anxiety-ridden experience.

These are some of the issues of children struggling with math. Below are a some useful tips and resources for parents that can help your child become more successful.

Things to Consider and Help Available to Parents of Struggling Math Learners

When helping your child who struggles with math, it is important to remember that your child's view of math is often different from yours. An adult often has a more sophisticated point of view, and it is important for parents to start at the level where the child is.

Struggling learners are often taught that there is only one way to do math. This does not help children make the connections that they might have made if they had been taught that there are many ways you can arrive at a solution to a math problem. Also remember that struggling learners face other stresses such as time limits, organization of problems and distractions while trying to do math. This adds to math frustration and a child not understanding what to do.

Some strategies to help your child

Before starting math homework, one way to help your child would be to talk about the

problem first. Find out what he/she thinks it is asking and how to solve it. Another strategy you can try is using real world examples to help your child relate to math. By putting math into terms and experiences your child relates to, it will be a little easier for him/her to understand. For example, you could use baseball as a tool to problem solve.

Struggling learners may need help understanding math concepts, and they need for instruction to be clear. One way to do this is by using concrete objects in order to help them understand abstract concepts. Simple supplies such as paper plates or straws can be used to represent an algebra problem. Using these items can help students feel and see the problem. Once they fully understand how to use concrete objects, they can then move on to drawing out their own problems. They can draw circles, etc. to represent the problem. Using concrete and representa-

tional drawings will then lead to better understanding of abstract math concepts.

Where can I find Help?

CPALMS (www.floridastandards.org) is a PROMISE component and has resources available to help parents and students. Also, websites like The Learning Toolbox (<http://coe.jmu.edu/learningtoolbox/>) and the National Council of Teachers of Mathematics (<http://www.nctm.org>) can help you support what your child is already learning in school and help you use these strategies when dealing with assignments done at home.

For additional information about the other resources that are available to parents, please visit www.flpromise.org and click on *Parents and Community* under the Resources link.

What's New with Florida PROMiSE?

The purpose of Florida PROMiSE is to help teachers understand the Next Generation Sunshine State Standards (NGSSS), and how teachers can better teach students to learn to think critically, solve problems and increase math and science success. PROMiSE strives to improve the math and science achievement of all students in Florida.

Florida PROMiSE is a project designed and delivered by the following partners:

- Universities (USF, FSU, UF)
- School Districts (Duval, Hillsborough, Miami-Dade & Seminole)
- Educational Consortia (Heartland Educational Consortium, Northeast Florida Educational Consortium, & Panhandle Area Educational Consortium)
- Florida Virtual School
- Horizon Research, Inc.

In Year 2 of the project, PROMiSE has made strides in its ongoing projects. PROMiSE recently completed its series of Summer Institutes for teacher professional development. From June - August, a total of 26 (13 in math and 13 in science) 2-week Institutes were held in order to provide teachers with in-depth knowledge and skills of math and science topics. What they learned at these Institutes will help prepare teachers to deliver the new standards to their students and will hopefully be turned into enlightening lessons in the classroom.



PROMiSE has also made progress with its web-based CPALMS which provides ongoing support and resources for teachers, parents and students. Over 1,100 resources have been contributed by Florida educators to the CPALMS resource repository so far, and the approved resources are currently available. For more information, please visit: www.floridastandards.org

PROMiSE Leadership in Math and Science Instruction professional development, designed to prepare Florida's educators to make changes in math and science to align with the new standards, is in the process of completing its final sessions for the 2009 cohorts. The program has been receiving positive feedback from teacher leaders about the sessions they have held so far.

For more detailed information about Florida PROMiSE and its ongoing efforts, please visit www.flpromise.org.

Program Components and Coordination

Summer Institutes for Teacher Professional Development

- Mathematics: Development Facilitated by USF
- Science: Development Facilitated by UF
- Regional Design/Development Teams: UF, FSU, USF and FIU

Curriculum Planning and Learning Management System (CPALMS)

- Development Facilitated by FSU

PROMiSE Professional Development for Leaders

- Development Facilitated by FSU

Program Evaluation

- Internal Evaluation—Coalition for Science Literacy at USF
- External Evaluation—Westat

PROMiSE Mission Statement

Florida PROMiSE Mission:

To improve Florida student achievement in mathematics and science through professional development for Florida's educators and to build capacity to sustain quality implementation of the Next Generation Sunshine State Standards (NGSSS).



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