

## **RECOMMENDATIONS:**

### Math:

- Provide XXXX with individualized math instruction that is consistent with his learning profile and goes at his own pace.
- Work with XXXX to create a math strategy notebook that documents the content he is learning. When he is taught a new topic, record the concepts, procedures and related examples so XXXX can reference them at future times. Make sure to highlight or color-coded the key steps and provide diagrams if applicable. See enclosed samples. Consider allowing him to use his strategy notebook on quizzes and tests.
- Teach XXXX to create his own checklists or listing of steps to solve related problems. Have him record them in his strategy notebook or on the computer.
- Given XXXX's dyslexia, teach him to use the Method of Loci to help him memorize the steps to a given math sequence. This technique incorporates visualization, physical movement in familiar locations and memorization. For example, to help XXXX learn the 4 steps to solving multi-step algebraic equations (1. Simplify each expression on both sides of the equals sign by the distributive property or combining any like terms, 2. Get the variables on the left and the numbers on the right, 3. Isolate the variable using multiplication or division, 4. Check your answer), have him select a familiar room in his house and four different items in the room. Have him walk from one item to the next in a given sequence. Create a verbal or visual association for each item to each of the steps listed above. XXXX should practice walking and talking through the steps as he looks and touches each item.
- Teach XXXX to talk through the steps of computation problems as he attempts to solve them. This can be out loud or silently in his head.
- XXXX will benefit from knowing the big picture first. Give him the goal of instruction prior to teaching any steps. Allow him some flexibility to initially figure out his own way of getting there. After a period, teach him the most efficient way. XXXX would benefit from some coaching around the reasoning behind why the most efficient method is most preferred.
- Visual-spatial learners remember what they see and forget what they hear. When teaching XXXX a new skill, structure the lesson to move from the concrete (manipulatives: Algebra Tiles, Algeblocks), to two-dimensional representations (drawings, computer models), and then to the abstract procedures.
- Provide graphic organizers and other visual models as much as possible, making sure to make an explicit link to the abstract. Encourage XXXX to create his own visual representations as well. See attached article: Math Graphic Organizers for Students with Disabilities.

- Allow XXXX the use a calculator for computation.
- Continuously provide opportunities for XXXX to go back and practice previously mastered procedural math skills.
- Provide the answers to homework at the time that homework is given so that XXXX can make sure he is not practicing errors. This will also allow him to work at his own pace to understand his mistakes.
- Encourage XXXX to stop after completing a few problems and check for accuracy (independently, with a partner or teacher).
- Provide XXXX with alternative quizzes, tests and homework assignments that limit the amount of problems.
- Provide XXXX extra time to complete assignments and tests
- Given XXXX's challenges with Algebra, provide individualized Algebra instruction using a program that is specifically designed for visual learners. Possible programs and resources include:
  - Math Learning Center, Algebra Through Visual Patterns  
<http://www.mathlearningcenter.org/curriculum/highschool/algebra>
  - Hands-On Algebra: Ready-to-Use Games and Activities for Grades 7-12  
by Frances M. Thompson
  - Manipulative Interludes Algebra: Building Understanding With Base Ten Blocks, Mary Laycock and Margaret A. Smart, 1990.
  - National Library of Virtual Manipulatives:  
[http://nlvm.usu.edu/en/nav/category\\_g\\_3\\_t\\_2.html](http://nlvm.usu.edu/en/nav/category_g_3_t_2.html)
  - Algebra Tiles, Algeblocks
- Teach XXXX to use metacognitive strategies while he is learning and doing math. Successful learners ask themselves metacognitive questions such as the following:
  - What in my prior knowledge will help me with this particular task?
  - What should I do first?
  - Do I know where I can go to get some information on this topic?
  - How much time will I need to learn this?
  - What are some strategies that I can use to learn this?
  - Did I understand what I just heard, read or saw?
  - Am I on the right track?
  - How can I spot an error if I make one?
  - How should I revise my plan if it is not working?
  - Am I keeping good notes or records?
  - Did my particular strategy produce what I had expected?
  - What could I have done differently?
  - How might I apply this line of thinking to other problems?