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## ***READY for SCHOOL* Parent News: Parents Play a Role in Encouraging Math and Science**

You may have seen stories in the news about whether the US is sufficiently supporting and encouraging young people to pursue careers in math and science. Concerns have been expressed about whether there will be enough individuals in the future with engineering and technical skills to meet the demands of a global society. Recent research points towards the role that parents can play in encouraging children's interest in these areas.

A joint study by Penn State and the University of Michigan and another by the University of California, Santa Cruz indicated that parents play a major role in determining whether their children continue an interest in math and science past the middle school years. Not surprisingly, some gender differences were found. Parents did more to encourage their sons in math and science than their daughters. Furthermore, if fathers held gender-stereotypical views of boys and girls (ie, held the view that boys prefer and are better at science and math than girls), the less interested their daughters were in math or science.

While these studies were focused on older children, attitudes about math and science start early. There is much that parents can do in the preschool years to encourage interest in these areas. Here are a few suggestions:

- Encourage scientific inquiry – While it is important to provide answers to your child's questions, also frequently ask your child, "What do you think?" to show that their opinion matters and to encourage them to think things through.
- Use opportunities throughout the day to build math skills. During waiting times in the car or in the doctor's office, make up easy word problems. "There were only five leaves left on the tree. Two fell off. Now how many were left?"
- Talk about how things work and encourage your child to ask questions and share his/her opinions. Discuss how cars work, how plants grow, how our bodies work, etc.
- When you purchase toys and materials, look for:
  - books that encourage exploration and discovery (consider Stephen Biesty's books showing the cross-sections of how things work) or children's cookbooks where they can follow a pictorial recipe with help from you
  - open-ended interconnecting building materials (like Legos or marble rolls) that encourage creativity and experimentation with gravity, balance and how things fit together
  - open-ended materials like playdough, sand, or water which encourage experimentation ("What happens when the sand gets wet?; "How many straws can I stick in this little piece of playdough?").

It is always important to keep it fun and interesting – avoid drill and drudgery. Remember that your interest matters. And if you aren't that interested in science or math yourself, take the opportunity to learn something new with your child or find a family member or friend with a math/science interest that your child could spend time with.

Reference: Cavanaugh, S. (October 24, 2007). "When it Comes to Math and Science, Mom and Dad Count." *Education Week*.

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