FAMILY HABITUS

What is it and how does it impact students' relationships with math and science?









Family habitus refers to the set of values, beliefs, attitudes, and behaviors that are transmitted from one generation to the next within a family. Habitus can be used to explore the extent to which families construct a collective relationship with math and science and the extent to which these fields are "woven" into un/conscious family life (or not). These dispositions can influence a family's beliefs about math and science, as well as how children choose to engage with these disciplines, both in and out of school. Enhancing family habitus around science and math can significantly influence children's attitudes, interests, and confidence in these subjects.

What can families do to foster a positive collective relationship with science and math?

- Engage in science and science conversations
- Participate in community-based STEM activities
- Create a science and math-rich environment
- Involve kids in hands-on STEM activities
- Celebrate science and math achievements
- Leverage technology and media wisely
- Incorporate science and math in daily activities
- Encourage curiosity and inquiry-based learning



Archer, et al (2012). Science Aspirations, Capital, and Family Habitus: How Families Shape Children's Engagement and Identification With Science. American Educational Research Journal, AERA.

What can families do to enhance their collective relationship with math and science?

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Engage in Science and Math Conversations

- **Connect Science and Math to Real-Life Issues**: Discuss current events related to science and math, such as climate change, space exploration, or new technologies.
- **Use Positive Language Around STEM**: Avoid saying "I'm not good at math" or "science is too hard." Instead, model a growth mindset by saying, "Let's figure this out together."

Participate in Community-Based STEM Activities

- **Attend Local Science Fairs, Workshops, or Library Events**: Engage with community-based science and math activities that provide hands-on experiences.
- **Join Science and Math Clubs**: Look for local clubs, camps, or organizations that offer extended learning opportunities for children.

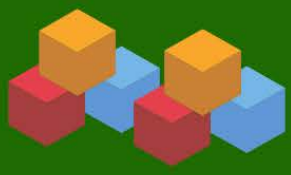





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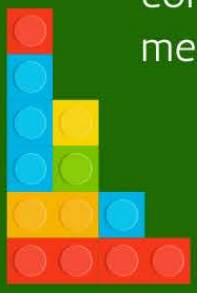


Create a Science and Math-Rich Environment

- **Accessible Books and Resources:** Have a variety of age-appropriate books on math and science topics, from picture books to simple experiment guides.
- **STEM Toys and Games:** Provide puzzles, building blocks, LEGOs, science kits, and math-related games that promote logical thinking and creativity.
- **Display Scientific Curiosities:** Showcase rocks, fossils, shells, or other natural items to spark conversations about geology, biology, or physics.

Involve Kids in Hands-On STEM Activities

- **DIY Science Experiments**: Encourage simple experiments like making a volcano, growing crystals, or creating a weather station.
- **Math in Art**: Explore geometry, patterns, and symmetry through drawing, crafting, and building.
- **Family STEM Projects**: Engage in activities like building a birdhouse, constructing a simple machine, or creating a family tree with measurements.



TILLMAN TRAILBLAZERS



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Celebrate Science and Math Achievements

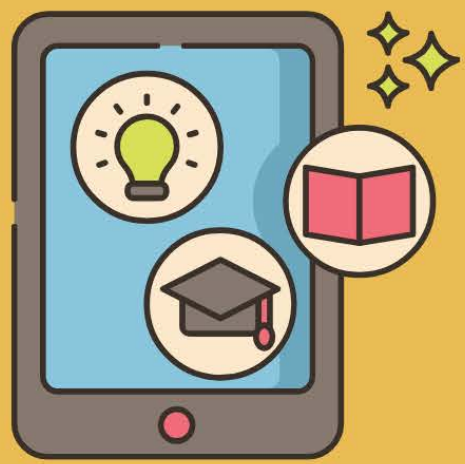
- **Encourage Effort and Perseverance:** Celebrate not just the right answers, but the process of learning, questioning, and trying again.
- **Display Projects and Discoveries**: Create a "STEM Wall" at home to showcase children's projects, drawings, and findings.

Leverage Technology and Media Wisely

- **Educational Apps and Websites**: Use apps like Khan Academy Kids, iNaturalist, Google Earth, or National Geographic Kids to make learning interactive and fun.
- **Watch Educational Shows and Documentaries**: Programs like "Magic School Bus," "Wild Kratts," or "Numberblocks" can make science and math concepts accessible and enjoyable.
- **Virtual Field Trips and Online Resources**: Explore museums, zoos, and science centers virtually to learn about various topics in science and math.







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Incorporate Science and Math in Daily Activities

- **Cooking and Baking**: Use recipes to teach measurements, fractions, ratios, and basic chemistry concepts.
- **Gardening**: Explore plant biology, weather patterns, and the water cycle. Involve children in planning and measuring garden plots.
- **Grocery Shopping**: Teach budgeting, estimation, weights, and basic multiplication while comparing prices and quantities.
- **Nature Walks and Outdoor Exploration**: Identify plants, insects, and animals. Discuss habitats, ecosystems, and environmental science.

Encourage Curiosity and Inquiry-Based Learning

- **Ask Open-Ended Questions**: Encourage children to ask "why" and "how" questions. Guide them to find answers through observation, experimentation, or research.
- **Promote Problem-Solving**: Present everyday problems (e.g., "How can we build a tower that won't fall?") and encourage kids to come up with solutions.
- **Support Experimentation**: Have a designated "science spot" where children can freely experiment with safe, hands-on science activities.









