

Robots can help teach math, science, reading

Robots!

Love them or fear them, robots are becoming more mainstream every day. Take a look at American popular culture. We like them so much; we almost forget C-3PO and R2-D2 aren't human. Robots appear everywhere in our television programs and movies. Many of us grew up watching cartoons like Transformers and Voltron. This summer Pixar Studios released a new movie called Wall-E, about the adventures of a waste disposal robot, stranded on Earth for 700 years after all humans have left. We love robots. We can even book a robot-themed birthday party for our children. But outside of the realm of pop-culture and science fiction, what does this mean for the real world and our children's future?

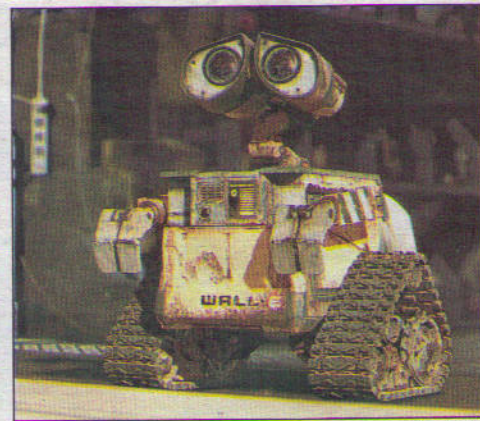
In the real world robots are becoming more commonplace as well. Engineers are working to make robots

more sophisticated, more interactive, and even more human. Robots are popping up everywhere — robot dogs that behave like real dogs, police robots that perform bomb disposal, even robots to do household chores. Every day robots become more integrated into our lives. And our children will create the technology of the future.

Children who explore robotics will gain science and math literacy. Robots are designed to mimic living things, so we need to investigate how those organisms work. Robots need to be user-friendly yet functional. This requires creative thought into the design. Programming a robot requires logical thought, and step-by-step planning. Math concepts are reinforced while calculating the robot's movement and the geometry of its design. In short, robotics is a cool way to apply and extend what kids learn in science and math classes. Plus, with the way robots are popping up in all aspects of our lives, experience with robots could give kids a competitive advantage in future job searches.

Robots are also a great way to get kids to read. My local library has dozens of great children's titles, both fiction and nonfiction, about robots. For an introduction, try the informative DK Eyewitness book "Robot," all about the history, uses, and future of robots. For older children, there are some great science fiction titles, like Isaac Asimov's "I, Robot" series, and how-to guides for building robots. Speaking of building, there are some great learning opportunities there as well.

Each fall, teams of kids ages 9 to 14 compete in the First Lego League. They are given a series of tasks on a theme for their robot to accomplish in two minutes or less. Last year's theme was



File photo

Pixar's "Wall-E" is one of the latest examples of robots in popular culture.

alternative energy. They have to design, build, and program the robot, and also prepare a thematic research project to be presented at competition. Many middle and high schools have robotics clubs, and some compete in these types of events. Local youth organizations like the Girl Scouts have also formed teams for competition. Even if kids don't want to compete, there are many opportunities to experience hands-on robotics. El Paso Community College offers children's classes in robotics, and Mad Science of El Paso offers a one-week summer day camp.

So, why not encourage kids to enter the world of robotics? Robotics builds science and math literacy. They can do it as a team and interact with peers. They can learn valuable communication and organizational skills. They can exercise their competitive nature in a way that also works their minds. And most important of all, they will have so much fun. We live in a world where science and math literacy will determine children's future job prospects. We may as well give our kids a fun head start!

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PUZZLE ANSWERS

1	2	6	9	7	3	8	4	5
4	8	7	5	1	2	3	6	9
5	9	3	6	4	8	7	2	1
6	1	4	7	9	5	2	8	3
9	7	8	2	3	1	6	5	4
2	3	5	8	6	4	1	9	7
3	4	2	1	8	9	5	7	6
7	5	9	3	2	6	4	1	8
8	6	1	4	5	7	9	3	2

Jumbles: FUR, TANK, TOOT, ROSY

Jumble answer: What the clown turned into when he wore a space outfit: An "ASTRO-NUT"