

From Rug Rat to Lab Rat

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Does your child want to be a fireman? A florist? A farmer? Something different from one day to the next? No matter – the one thing all these occupations have in common is science, and having a persistent curiosity can help your child succeed in any field.

In fact, children are natural scientists in ways we are only beginning to appreciate. In her new book, *The Philosophical Baby*, psychologist Alison Gopnik says that even infants tackle the world around them in a systematic way. They may look as though they are randomly playing with blocks or balls, but she argues that these activities are actually intricate experiments. Even before they can read or count, babies appear to measure physical phenomena as a way of understanding how things work.

She concludes that while we may think the most important learning takes place in school, even more can happen before kids ever set foot in a classroom. As proof of that argument, most kids have indeed learned a great deal about the world by the time they begin any formal education. The facts and figures they acquire through education may be the most obvious part of becoming a scientist, but the more fundamental requirement is an investigative spirit.

You can nurture that spirit in easy, enjoyable ways. Entice your kids to help out with cooking by letting them do a little experimenting. If they have a favourite dessert, for example, adjust some of the ingredients so they can sample the result. If the recipe calls for sugar, make one version with the usual amount, another with half that amount, and a third with twice the amount.

If this “kitchen chemistry” becomes a hit, you can find plenty of other exercises along the same lines. The website Wonderville.ca has printable activities with simple experiments to try at home. The children’s science magazine YESMag also has a number of different examples on its website (yesmag.ca/projects). Each of them is straightforward, and calls for a minimum of supplies.

Ask around at your local library or bookstore, where you can find many other publications outlining these kinds of entertaining projects. The goal in each case is to make scientific inquiry exciting and fun, and distinguish each task from our negative stereotypes of science. Rather than starting with a chemistry set where kids follow specific instructions to achieve specific results, let them pull some salt and vinegar out of your cupboard and grow some crystals.

This less structured approach has the advantage of letting young minds take the initiative, allowing their curiosity to lead them to a discovery. As with babies, it may not look like science

at first glance, but you will be encouraging them to hone their questioning and observational skills while investigating interesting phenomena.

Another way of fostering a lifelong interest in science is to showcase the fascinating personalities of great scientists. For example, it is hard for anyone to resist hearing about the drama that defined the life of the astronomer Galileo, who was persecuted for talking about discoveries that we now take for granted. The lives of many Canadian scientists can also provide interesting reading, and hundreds of their stories have been assembled at science.ca. This detailed website introduces both personalities and ideas to young readers developing a taste for the culture of science.

Your task should be clear: make it messy, make it fun, or make it compelling, but avoid making it seem like work. Science should seem like the most natural thing in the world, and in so many ways, it is just that.

Science Alberta Foundation is a non-profit organization committed to increasing science literacy and awareness. Our programs motivate children, youth and families to embrace lifelong science and technology learning. We are helping to create tomorrow's knowledge workers and instill an appreciation of science in a new generation of Albertans. For more information, visit www.sciencealberta.org.