The Synapse Project “encourages young women to enter the field of neuroscience through information and mentorship,” according to its website. This endeavor, an
amalgam of outlets for kids, information for teens and career advice for young women, turns out to be the brainchild of ... a child, one keenly interested in the brain.

Sixteen-year-old Grace Greenwald, a high school junior from Denver, Colorado, is the granddaughter of Glenda Greenwald, president of the Aspen Brain Forum. Grace was inspired by her grandmother's annual meeting of minds (of those who study the same) from around the world. But the younger Greenwald found neuroscience troublesome to pursue at her age. “When I started looking on the Internet for resources, I couldn't find anything about neuroscience geared toward kids in high school,” she says. Her school offered no courses either.

Grace thought that girls, in particular, might really enjoy the subject. She reasoned that educating girls and young women about neuroscience might be one way to entice them to become involved in STEM (Science, Technology, Engineering and Mathematics). So the teenager created a virtual spinoff of the Aspen Brain Forum aimed at young people: a website that provides mentorship, information and resources relevant to kids in elementary, middle and high school.

The site profiles female luminaries in the field such as Amishi Jha, Carla Shatz and Helen Mayberg. These accomplished women serve as role models and mentors who have volunteered to guide young people interested in pursuing a career in neuroscience. “Like a synapse connects two neurons, we hope to connect a lot of people through these interesting mentors,” Grace says.

The site’s resources include a more extensive list of prominent researchers and landmark findings that serve as sources of ideas or useful background for students. The Synapse Project also provides an impressive collection of summer programs and internships for high schoolers. To offer more kindling for an inquisitive mind, Grace has curated articles she thinks might be of particular interest to teens. The topics
cover violence, brain disorders, ethics, gender gaps and Obama’s brain mapping initiative, among others.

Aside from satisfying curiosity, Grace hopes these writings could serve as a scaffold for independent study in neuroscience, something Grace undertook last year in collaboration with a teacher. “The articles and books act like a curriculum,” she says. In the future, Grace hopes to pioneer a massive, open online course in neuroscience for younger students that would include lectures, worksheets and tests. Expanding students’ educational options, she believes, could start young people on a career path they had never considered.

Grace was the only high school student invited last summer to Harvard University’s Innovation Lab (iLab) to work on her latest idea to enhance The Synapse Project: virtual field trips for students as young as elementary school age. In these trips, a classroom would take a tour of a lab via Skype. Through the remote connection, kids would meet neuroscientists, ask them questions and watch lab demonstrations. The first virtual field trip (to Sara Lazar’s meditation research lab at Harvard University) was completed in July. And two labs from the University of Colorado Denver have agreed

Grace has considered a career in neuroscience herself. “I am super excited to take more advanced classes in college,” she says. Teaching the subject particularly appeals to her. Inspired by her internship two years ago at Goldie Hawn’s MindUP program,
she says she’d like to bring brain science into elementary schools and incorporate mindfulness into the classroom. “The earlier you get kids involved, the better,” she says.

More on mindfulness and MindUP:

*Learn to Live in the Now [Video]*

*The Education of Character: Stoking Memory with Stones [Video]*

*The Education of Character: Carefully Considering Craisins [Video]*

*The Education of Character: Teaching Control with a Cotton Ball [Video]*

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