

# How can you help your child succeed in Science?

## IDEAS FOR PARENTS



Science is all around us! From investigating how electricity works to light up the world to discovering a cure for cancer, the opportunities are endless. Science allows us to understand life, nature, and the universe in which we live. In school, students have the opportunity to explore their communities through science, and make discoveries of their own. When families and schools work together to support learning; our children tend to succeed not only in school but also throughout life. Here are some helpful hints to get your scientist going!

**1** Enjoy science together as a family and encourage science as a hobby

- **Take it outside.** Watch what's happening around you, and have your child keep track of things like the temperature or the time the sun sets. Visit one of our local free museums or the zoo.
- **Get Active.** Activities, like cooking, working in the garden, hiking, and doing chores around the house encourage students creativity and problem solving ability.
- **Be Curious.** Join your children in learning new things about science and technology. Take advantage of not knowing all the answers to your children's questions and embrace opportunities to learn together!

**2** Read and explore with your children.

- **You don't need to have all the answers.** When your child asks you "why"? Use books, apps, videos, and other resources, to find out more about a topic! Help them read and discover more.
- **Explore your Library.** Our local librarians can help you find books about topics your students may be interested in.

**3** Encourage your children to ask questions and pursue answers.

- **Chat and Chew.** Ask questions and engage in conversation during mealtime around things they have observed.
- **Ask 3.** Three basic questions can help lead children to a better understanding of the world:
  - ✓ What do you see?
  - ✓ How does it work?
  - ✓ Why do you think \_\_\_\_\_
- **I spy...** Use the trip between school and home to develop student's observation skills.

**4** Help your students with "hands-on" assignments when necessary.

- **Reach out for resources.** Talk to your student's teacher or other community resources (Rec centers, etc.) about how best to help your child with their project.
- **Network:** Find support for your student in your community. Talking about your child's project with family, friends, doctors, neighbors, at church, or even at the grocery store, can help connect you with resources. As your child gets older, have them begin these conversations.
- **Google -it!** Online resources for parents and students around hands on projects can help relieve a lot of stress and help guide the process. Use recommended sites, as they will have age appropriate and safe projects for students to conduct.

**5** Encourage older children in science.

- **College and career ready.** Students studying in STEM fields will be better prepared to participate in the 21<sup>st</sup>-century workforce.
- **Find Mentors:** Mentors and internships will develop your student's confidence and ability in the Sciences. Your student's teachers or counselors can connect you with resources in the community.
- **Get Help Early On!** Science can be difficult for students at times. Help them connect them with tutorial options at school or in the community, before it becomes a problem.
- **Be Informed.** Connect with teachers and school staff around the science program and expectations around science at your student's school.



## Spotlight on Science: Introducing the Next Generation Science Standards

Science is all around us! From investigating how electricity works to light up the world, to discovering a cure for cancer, the opportunities are endless. A strong foundation in science, technology, engineering and mathematics (STEM), will put your student on the road to success in school and beyond. In December, 2013 the DC State Board of Education formally adopted the Next Generation Science Standards continuing to honor DC's commitment to College and Career Readiness for all DC students. Learn more about the standards here!

### What are the Next Generation Science Standards (NGSS)?

- The NGSS represent learning goals for what students should know and be able to do at each grade level K-12 in science. The standards promote a new way of teaching and learning that allows students to actively do and experience science in a deep, meaningful way moving away from traditional lectures to engage students.

### Are the NGSS the Common Core State Standards (CCSS) for science?

- No. The Common Core State Standards include literacy components in science, but they do not include the science content that is the NGSS.
- The NGSS are aligned with the CCSS in English language arts and Mathematics. This means when our students are studying science they will also be practicing the skills they have learned in their Math and Reading ensuring they have a connecting learning experience.

### How were the standards developed?

- The standards were written with twenty six states and their broad-based teams worked together for two years with a 41-member writing team and partners to develop the standards which identify science and engineering practices and content that all K-12 students should master in order to be fully prepared for college, careers and citizenship. Four educators from the District of Columbia were represented on the writing team.
- Background information on the development of the NGSS as well as links to resources are available at ([nextgenscience.org](http://nextgenscience.org))

### How will the students be assessed?

- District of Columbia will continue to administer a science assessment for the coming school year for grades 5, 8 and high school Biology.
- The assessment will be NGSS aligned beginning this year, so parents will have more information about their students' performance in science.

### When will the NGSS be implemented?

- It begins now! Full implementation of NGSS is planned to occur over several years and beginning with building awareness and supporting schools in the transition to new science standards. The OSSE has identified three phases of implementation which include: community outreach and communication, professional development, and organizational support.
  - Awareness and Transition Phase (2013-2015)
  - Implementation Phase (2015-2017)
  - Sustainability Phase (2017-2018)

### What do the NGSS mean for Science Education in DC?

<b>Success for ALL students.</b>	The District of Columbia is a diverse learning community; we need standards that allow our educators the flexibility to all students effectively.
<b>Connecting the Dots</b>	Our students will be able see a clear connection between what they learn from each year to the next. Their understanding of science will get more detailed as they grow.
<b>21st Century Skills for 21st Century Jobs</b>	Learning how to think critically about the world, problem-solve, and communicate effectively, are all important skills for us to know how to do. We need standards that support the development of these skills.
<b>DC College and Career Ready</b>	All students graduating college and career-ready is the goal of NGSS. The standards are designed to prepare students for success in whatever they choose to do after graduation and in life, and are aligned with the Common Core Standards.
<b>Increased Access to Learning Resources</b>	Standards will be the same for students in most states. Families with children transferring to new schools will not have to adjust to new learning expectations.  We can share experiences, methods of assessment, teaching practices, instructional materials, and approaches to helping parents support and reinforce learning at home.

