

St. Louis Unified School
EXPLORES



STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking. The end results are students who take thoughtful risks, engage in experiential learning, persist in problem-solving, embrace collaboration, and work through the creative process. These are the innovators, educators, leaders, and learners of the 21st century!



Why is S.T.E.A.M education important?

For far too long in education, we've been working with the presumption of teaching to ensure our students get a "good job". But what does that look like? We are preparing students for jobs that don't even exist.

We are at a point where it is not only possible, but imperative that we facilitate learning environments that are fluid, dynamic, and relevant. None of us go outside and look at a tree and say, "that's a tree, so that's science" or, "the sky is blue, so that's art."

Our world is a beautiful, complex, and intricate tapestry of learning all in its own right. Why do we believe that we have the ability or the right to box it in behind brick walls and classroom doors in a place called school?

Integrating concepts, topics, standards and assessments is a powerful way to disrupt the typical course of events for our students and to help change the merry-go-round of "school."

It takes what we do when we open the doors to the real world and places those same practices in our cycles of teaching and learning. So we can finally remove the brick walls and classroom doors to get at the heart of learning.



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S.T.E.A.M Program

St. Louis Unified School believes in creating an environment that engages our students in the areas of inquiry, critical thinking, and process-based learning. Students and staff at St. Louis Unified School embraces the entire idea surrounding [S.T.E.A.M](#) lessons and the [S.T.E.A.M](#) approach. [S.T.E.A.M](#) helps students to develop skills in the areas of questioning, critical thinking, problem solving, creative/analytical thinking, and hands on experiments that embraces [S.T.E.A.M](#) in many ways.

S.T.E.A.M activities are important because these five disciplines are used in everyday activities. According to the U.S Department of Commerce, [S.T.E.M](#) occupations have grown in the last ten years three times faster than [non-S.T.E.M](#) occupations and [S.T.E.A.M](#) occupations are expected to grow by 10% from now until 2020.

We are proud of the progress that our students have made in the areas of [S.T.E.A.M](#). Students at St. Louis Unified School are given many opportunities to create art projects, grow animals and insects, use of the latest technology devices (**students in grades 4-8 each have their own Chromebook for use in class, students in grades 1-3 each have their own iPads for in class use, Smart boards in each classroom for instruction and student use**), hands-on science activities (**Steve Spangler monthly science experiments along with Science By Design activities**), math (**online math activities and assessments**), and engineering (**students create various designs and buildings using blocks, Legos, and other building materials**).

Please visit our Photo Gallery/Video Tab to see our students in action.

Listed below (STEAM parent page) are ways that you can promote S.T.E.A.M activities at home.

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Parent Page

S.T.E.A.M Activities

Here are a few activities that you can explore with your child at home.

Science – Science does not need to be taught through a textbook or through the lab work that some families may remember participating in school. There are so many fun, creative activities that can be done right at home to engage your child in learning more about this discipline.*

Activities can include:

1. Grow plants from seeds in a jar.
2. Make magnetic slime.
3. Create your child's name out of crystals.
4. Join a science club.
5. Explore nature (backyard games using magnifying glasses, nets, bug cages, etc)
6. Visit your local science center.

Technology – Technology is all around us and is rapidly progressing each day. These STEAM activities not only promote a STEAM discipline, but also help prepare a child for their future and the types of skills they will need in their everyday lives.

Activities can include:

1. Learn about space using the NASA data from their website.
2. Programs or games that help develop typing skills.
3. Practice reading, writing or math skills through a fun, educational app.
4. Download various educational websites that promote computer use for learning keyboarding skills and how to use various devices.

Engineering – Many children are already taking part in fun engineering activities on a daily because children love to build and create. Here are some great engineering activity ideas outside of the typical building activities.

Activities can include:

1. Design and create straw bridges.
2. Create a conveyor belt.
3. Design a structure out of cups, sticks, and blocks and test balance.
4. Provide your children with blocks and other materials they can use for building (wooden craft sticks, Legos, magnetic blocks, connecting cubes, etc.).

Art and Design – The newest discipline that has been added to this specific focus of education calls for children to not only be analytical but creative as well during the process.

Activities can include:

1. Research what happens when mixing watercolors and oils.
2. Determine how plants absorb water with food coloring.
3. Dip dye craft sticks to build structures with.
4. Provide paper (different sizes), markers, colored pencils, paints, scissors, crayons, and other materials for your child to explore with.

Mathematics – Your child will use math in their everyday lives, and just like technology it is important that families still encourage activities that promote learning about mathematics so children have the proper tools and knowledge they need in life.

Activities can include:

1. Practice different ways to add numbers and come to the same answer.
2. Learn about odd numbers and even numbers.
3. Learn about different coins and bills and how to add them.
4. Provide your child with a collection of number flash cards.
5. Play games that use counting and numbers (sorry, candyland, games with dice, monopoly, trouble, uno, etc).
6. Provide your child with counting objects (cubes, counters, small sticks, blocks, big dice, etc).