

STEM Family Nights

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STEM Nights provide wonderful child and parent interaction

“Equipping our students with 21st Century Skills” and **“Engaging our School Community in the Student’s Learning”** are two goals often stated for the new school year. It is presented at Back to School Nights and PTA meetings to our school community. Sounds great! But just how can you help bring that about – along with the million other demands on your time???



Exploration in Hands-on Centers Works for All Ages

We discovered over the past several years that the first and best step towards capturing a school's and community's interest is to hold a **Family STEM Night**. It is truly the **ultimate public relations experience**. Families come together to explore engineering, science and math with engaging hands-on activities. The students love to show their families, the important adults in their lives, what they've learned. These adults then get to participate in the child's learning. **It's a win-win for everyone.**

Where do I Start?

Organizing a STEM Night

The single most important thing for you to do is to **start very early in your planning**. If you are choosing a fall date, then you need to begin planning in early spring. Begin planning for a spring date as soon as you head back to school. **There is no such thing as beginning to plan too early.**

Before you begin planning, be sure to download our **FREE STEM Family Event Planning Packet: The Nuts and Bolts of Planning a STEM Event**. This packet is a **timeline checklist** to help you plan and keep you on track for a successful STEM celebration. It includes **hints, tips and resource ideas** that we have learned over many years.

Family STEM Night

STEM

Nuts and Bolts of Planning an Event

FREE

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stem for kids

[FREE Family STEM Night Planner](#)

One of the first things to do is to get your **administration and staff on board**. These are the people that you will look at **to provide volunteer support** and possible **financial support from the administration or district**. Don't forget to get your **PTA** involved as soon as possible since they will help with procuring your volunteers and can possibly provide some funding.

While looking for volunteers, **invite outside groups** such as museums, professional organizations and local colleges and universities. Not only can they supply volunteers but often will bring an activity to share and the staff to run it.

Materials

Be sure to read our recent blog on “STEM Materials and Organization”. [Planning Your STEM Class - Get Caught Engineering - STEM Resources for Teachers & Parents](#) In it, we discuss **resources for donated materials**, as well as practical ideas on storing them. Just be sure that you **begin gathering the materials early** so that you have time to package them for easy distribution.

What Activities Should I use?

We typically would have a mixture of **short activities that needed little oversight and longer facilitated activities that required more supervision**. Each family would be assigned to the longer activity, at random, upon arrival, and would spend any time not in that activity exploring all of the other shorter activities.



Handing families ready to go packets with all the materials they need keeps things organized, easy to distribute and clean up.

Good shorter activities should:

- Need **few materials** that can easily and quickly be replenished
- Can be completed with **little active instruction**
- Should be able to be **completed within 5 minutes**
- Have a **narrow focus** such as a building activity or a short exploration of boat designs.



Art Bots are always an exciting activity.

Longer facilitated activities should

- Have materials that can be **easily packaged and distributed**
- Be **able to be completed by a wide range of ages**, with help from the adults or a facilitator
- Still have a **narrow focus** but might require more planning and thought to **complete**.
 - Build an Art-Bot or Toothbrush Robot
 - Create a unique animal
 - Make an artificial hand
 - Explore at a Take-A-Part Center



A highlight is always the Take-A-Part Area

Themes

We love themes for almost any event and a Family STEM night is no different. Why have a theme? First of all, a theme can **create a buzz and a sense of excitement**. It gives a chance for in depth exploration of a topic such as oceans, robots, weather, or structures.



How to Stay Warm Like a Whale in the Ocean -
A Hands-On Blubber Experience!

Some of our favorite themes for a Family STEM night are:

- Super Heros
- Oceans

- Space
- Robots
- Diner with a STEM Exploration Menu
- Literature Connections
- Nature and STEM
- Holidays



The Experiment Diner- a Popular Event and So Much Fun

Tips for a Successful Night

- **Begin planning early.** This cannot be emphasized enough.
- **The event organizer should not oversee an activity;** but rather should be available to be available to solve those small problems that tend to crop up.
- Be sure to **overlap the shifts of your volunteers,** if you have divided the time. This will ensure a smooth transition from one person to another. Be sure to **have extra volunteers** that can help control the flow of people, ensure that one activity doesn't get too crowded and answer any questions. Finally, be sure your volunteers have been **adequately trained** in the activities they will be overseeing. Don't forget to **distribute inquiry questions** for your volunteers to ask the families while they work on an activity.
- **Enforce parent participation.** This is a family event and students shouldn't be dropped off without an adult. Speaking of adults, keep an eye out for parents that take over the activity and do not let their child participate. It does happen!
- Consider **having drawings for prizes** throughout the night. It creates great excitement. We would typically ask some of the vendors of STEM kits for donations.



Keep track of the popular activities for future years and think about adaptations that would work.

Final thoughts

Once you begin hosting a Family STEM night, your families will look forward to it every year. Therefore, **plan on expanding your activities** from year to year. You cannot do the exact same activity each year.

Consider **adding decorations** that relate to your theme. We would typically highlight real engineers and scientists and what their career entailed.



As our Family STEM nights grew, we began to add such things as QR codes for more information. We also added food trucks to help our families who didn't have time to eat at home before they attended.

A Family STEM night does take significant planning and prep time in advance; but it is worth every minute. It quickly became **the most anticipated annual family event** at our school. Most importantly, it helped build a strong community relationship

We hope you “Get Caught Engineering®” at a Family STEM Night this year!

Wendy and Cheryl

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