



S.T.E.A.M. EXPO

STUDENT INFORMATION PACKET

WHAT IS S.T.E.A.M.?

In the past, LPIE has hosted a science fair at Stanley every other year. This year, we are expanding this opportunity and encouraging you to submit entries from all the S.T.E.A.M. categories which include art, robotics, home economics, wood shop and computers as well as science and math. The S.T.E.A.M. Expo lets you focus on your creativity and ingenuity. Do you like to build robots? Are you interested in 3-D art? Do you love to create in the kitchen? This is for YOU! Below is a list of the different S.T.E.A.M. categories and the teachers who will be your contact and help answer project questions. Also listed are some project ideas and websites to help get you started. *Full STEAM ahead!*

SCIENCE

Mr. Rasmussen

Ideas & Websites

demonstrations or experiments; scientific investigation; inventions
Science Fair Central: <http://school.discoveryeducation.com/sciencefaircentral>
PBS Kids: <http://pbskids.org/zoom/activities/sci>
Neuroscience for Kids: <http://faculty.washington.edu/chudler/neurok.html>

TECHNOLOGY

Robotics

Mr. Meneghetti

Ideas & Websites

Exploratorium: www.exploratorium.edu
YouTube: search "electronics projects" & "middle school engineering projects"
Pinterest: search "classroom engineering projects"

ENGINEERING

Computers

Mr. Connolly

Ideas & Websites

3-D modeling; manufacturing; electronics; programming
www.arduino.cc • <https://scratch.mit.edu> • <https://www.tinkercad.com>

Wood Technology

Ms. Murphy

Ideas & Websites

design & print using 3-D software; build using CNC or traditional machinery
TinkerCad <https://www.youtube.com/watch?v=0qegWgOBBuY>
Cool School Video <https://www.youtube.com/watch?v=cLGo4QV44gc&t=39s>
Shopbot (CNC) <https://www.youtube.com/watch?v=jb2WWvFWrkq>

ART

Art Projects

Mr. Anke

Ideas & Websites

Wheel ceramics, 3-D art, architectural design
www.robertainke.com • thecrucible.org
http://sms-lafsd-ca.schoolloop.com/cms/page_view?d=x&piid=&vpid=1345028457570&no_controls=t

Home Economics

Mrs. Applin

Ideas & Websites

Cooking, sewing, interior design • Homestyler.com • Pinterest

MATH

Mrs. Mara

Ideas & Websites

Create a puzzle, explore DESMOS, research a famous mathematician
<http://sms-lafsd-ca.schoolloop.com/file/1335087636155/1272096482483/4067370287328790364.pdf>
www.desmos.com/art
<http://mathforum.org/artofmath>
<http://mathsite.math.berkeley.edu/intro.html>
<http://famous-mathematicians.org>
www.dreambox.com/blog/girls-math-more-stem-women

S.T.E.A.M.

Science, Technology, Engineering, Art & Math



GUIDELINES & SAFETY RESTRICTIONS

- All projects must be labeled with name(s), grade, name of category teacher.
- Display must stand by itself. Display boards are available at stationary or office supply stores.
- No explosive devices may be used in any part of a project.
- Fire and combustion are generally not permitted. Use of projectiles, electricity and chemicals require prior approval of category teacher. An adult must be responsible for supervision of animal experimentation.
- No harm may come to any living animal: invertebrate, vertebrate or human. No living animal may be displayed with a project.
- Plants, soil or liquids used in the display must be in sealed containers or displayed in a way that prevents spillage. Non-breakable containers are best.
- Controlled substances or dangerous chemicals may not be used in your project. Controlled substances are any substances governed by the Drug Enforcement Agency, Food and Drug Administration or Bureau of Alcohol, Tobacco and Firearms or prohibited to minors by law.
- Use of pathogenic agents or tissues are not allowed without prior approval by your category teacher. In such cases, student must have direct supervision by a suitably qualified medical professional. Substances considered as tissue include blood, blood byproducts, established cell line and any animal or human tissues. Pathogenic substances are any disease causing agents such as viruses or bacteria.
- **Projects requiring electricity must have a battery source. No household current will be available for project displays. If your project is free standing, check with Mr. Meneghetti.**
- LPIE and Stanley Middle School cannot be responsible for projects containing moveable, fragile or valuable parts.

PROJECT CHECKLIST

- Choose a project.
- Sign up ASAP—deadline to register is **Friday, March 24!**
- Make sure your project is labeled with: student name(s) grade name of category teacher
- Drop off your project in the Gym & MUR the day of the S.T.E.A.M. Expo between 7:30-9:00 am
- Attend the S.T.E.A.M Expo **Thursday, April 20** from 5–7 pm!
- Take your project home after the Expo ends at 7pm.

NOTE: Projects NOT taken home Thursday evening will be discarded.



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