

Brainstormed STEM Topics

Science

- Senses
- Flight
- Optical illusions
- Weather (storms)
- Electricity
 - Making a battery with a lemon - <http://pbskids.org/zoom/activities/sci/lemonbattery.html>
 - Or a potato - <http://www.miniscience.com/projects/potatoelectricity/>
- Water
- Magnets/magnetism
- Rocks
- Animals
- Building a volcano
- Genetics (eye and hair color)
- The physics of sports
- How things work
- Photosynthesis
- Making ice cream - <http://crafts.kaboose.com/ice-cream-in-a-bag.html>

Technology

- Energy conduction and static electricity
- Electricity (see above)
- Inventions
- Taking apart machines/computers
- Simple machines - pulleys, levers, ramps
- Homemade solar panels using aluminum foil
(<http://greenenergy4life.hubpages.com/hub/Homemade-Solar-Panels-for-Kids>)
- Invent a tool for a job that should exist, but doesn't
- Robots
- Technology for health (crutches, hearing aids, etc.)

Engineering

- Three-item build – what can kids build with popsicle sticks, tape and paper (or newspaper)
- Build a boat and see if it floats
- Bridges and stability
 - Structural integrity – how easily can something be destroyed
- Paper airplane designs – which designs fly the furthest? Which do the most loops?
- Ramps – skateboarding, balance

- Creating musical instruments
- Gears
- Origami

Math

- Probability – card/dice games
- Proportions/measurement
- Baking
- Athletics/crossfit – timed contests
- Measuring distances
- Money
- Knitting
- “World” records – How many sit ups can you do in a minute? Compare that to the world record.
- Weights
- Shapes
- Comparisons (greater/less than)
- Use homemade play dough for measurements and other math activities
- Estimation
- Musical scales
- Play Uno
- Patterns