



Resources for 2014 Tools and Materials

Reports, Articles and Information regarding STEM for Young Children:

<http://www.naeyc.org/blogs/%252Fputting-position-statement-early-childhood-science-work-preschool-classrooms>

<http://students.egfi-k12.org/category/k-12-outreach-programs/grades-k-5-outreach-programs/page/3/>

<http://naturalstart.org/feature-stories/engaging-children-stem-education-early>

<http://successfulstemeducation.org/resources/nurturing-stem-skills-young-learners-prek%E2%80%933>

<http://www.wikihow.com/Impart-STEM-Education-to-Your-Children>

<http://www.bostonchildrensmuseum.org/sites/default/files/pdfs/STEMGuide.pdf>

Squishy Circuits

Explore electricity with play dough, LEDs, and other simple materials.



<http://squishycircuitsstore.com/kits.html>

<http://makezine.com/projects/squishy-circuits/>

<http://tinkering.exploratorium.edu/squishy-circuits>

<http://courseweb.stthomas.edu/apthomas/SquishyCircuits/> - Awesome videos from the Playful Learning Lab at the U of St. Thomas School of Engineering.

<http://sylviashow.com/episodes/s2/e7/mini/squishycircuits> - Sylvia's Super Awesome Maker Show

<http://www.instructables.com/id/How-to-make-conductive-play-dough/> - Instructables – How to Make

http://www.sciencebuddies.org/science-fair-projects/project_ideas/Elec_p073.shtml - Multiple Projects

<http://shiftingphases.com/2012/04/15/k-12-engineering-squishy-circuits-tips-and-tricks/> - K-12 Engineering

<https://www.facebook.com/SquishyCircuits> - Facebook Page for Squishy Circuits Community

Kids K'NEX Kit



<http://www.knex.com/for-parents/building-together/> - Parent activities

<http://www.knexusergroup.org.uk/acatalog/knex-primary-schools.html> - Users group with ideas and guides

<http://www.pinterest.com/kassitea331/knex-lego-ideas/> - Pinterest board for K'NEX and LEGOS

<http://www.instructables.com/id/Incredible-KNEX/> - more advanced project ideas for basic K'NEX

<http://www.knexusergroup.org.uk/acatalog/kid-knex-models.html> - models for kids to build

<http://www.urlesque.com/2010/08/20/knex-creations/> - ideas to spark imagination! Way crazy

<http://www.engineersweek.ie/wp-content/uploads/2012/02/How-to-run-KNEX-Challenges.pdf> - how to run a KNEX challenge – from 2014 Engineers Week.

<http://www.knex.com/shop/358/Early-Childhood/> - where you can find more



Balances/Scales

http://www.preschoolexpress.com/discovery_station07/measuring_fun_mar07.shtml - a site with many different activities on measuring/weighting

<http://www.education.com/activity/preschool/measurement/> - Preschool Measurement Activities



<http://www.teachpreschool.org/2011/04/exploring-weight-and-size-with-scales-in-preschool/> - Promoting Excellence in ECE

<http://www.pinterest.com/akwhatley/preschool-science-ideas/> - Preschool Science Ideas on Pinterest

<http://www.preschoolrainbow.org/activity-plan.htm> - Preschool Activities for Small Groups

<http://www.teachpreschoolscience.com/weightsandbalances.html> - Teach Science - Science Discovery

<http://www.parentingscience.com/preschool-science-activities.html> - Various science activities for preschool

<http://kidsactivitiesblog.com/17228/science-for-kids-hanger-balance> - how to make a balance with kids

Magnifying Glasses

<http://www.thestay-at-home-momsurvivalguide.com/p/preschool-activities.html> - stay at home mom survival guide

<http://www.pbs.org/parents/sid/activities/magnification-observation/> - Sid the Science Guy activities

http://www.kellyskindergarten.com/science/science_center_activities.htm - Science Center Activities

<http://babbledabledo.com/20-science-projects-for-preschoolers/> - Babble Dabble Do – 20 science projects for kids

<http://livelovelaughkindergarten.blogspot.com/2012/07/i-spy-differentiated-instruction-and.html> using I spy coupled with a magnifying glass equals fun

<http://www.ready-set-read.com/2013/11/science-activities-for-kids-magnifying.html> - Read Set Read – Science Activities

<http://www.teachpreschoolscience.com/magnify.html> idea for preschooler activity with magnifiers



Viewscopes

<http://www.education.com/activity/preschool/science/> - education .com –Science activities

<http://playfullearning.net/young-scientists-using-a-microscope/> - Playful Learning

<http://www.pinterest.com/binspiredmama/simple-science-experiments-and-activities-for-kids/> - Pinterest –Simple Science Experiments

<http://www.everythingpreschool.com/themes/winter/science.htm> - Preschool Winter Science

<http://www.sciencekids.co.nz/experiments/microscopiccreatures.html> - Science Kids

<http://www.perfectlypreschool.com/Preschool-Lesson-Plans/Snowmen/> - Perfectly Preschool

<http://www.thescientificmom.com/2013/12/youve-got-new-microscope.html> - Information on microscopes and projects.

<http://www.teachpreschool.org/2011/04/exploring-seeds-in-preschool/> - Teach Preschool



Turn and Learn Gears



<http://preschooler.thebump.com/preschool-activities-gears-levers-wheels-6749.html> - background and ideas

http://www.ehow.com/info_10024749_preschool-activities-machines-motion.html - Preschool Activities for Machines in Motion

<http://fun-a-day.com/preschool-art-projects-painting-gears/> - Preschool Art Projects

<http://www.bostonchildrensmuseum.org/sites/default/files/pdfs/STEMGuide.pdf> - Boston Children's Museum: "STEM Sprouts" Teaching Guide

<http://teachingmama.org/quiet-time-box-ideas/> - 75 Quiet Time Box Ideas for Preschoolers – like stealth programs!

Measuring Cups



<http://www.pinterest.com/marybethcol/preschool-math-measuring/> - Pinterest Math/Measuring

<http://www.prekinders.com/science-page/> - Prekinders Science Pages

<http://www.brainpop.com/educators/community/lesson-plan/measuring-liquids-lesson-plan-cups-pints-quarts-and-gallons/> - BrainPop Educators

<http://everydaylife.globalpost.com/fun-activities-kids-measuring-capacity-13503.html> - Measuring Capacity

<http://www.learnwithplayathome.com/2013/03/measuring-activity-with-plastic-bottle.html> - Learn with Play at Home

<http://www.mathsisfun.com/activity/discover-capacity.html> - Math is Fun

<http://depts.washington.edu/pku/PDFs2/measure.pdf> - Learning to measure with nutrition education

<http://www.brainpop.com/educators/community/lesson-plan/measuring-liquids-lesson-plan-cups-pints-quarts-and-gallons/> - measuring liquids

Straws and Connectors



<http://www.strawsandconnectors.com/instruc.php> - Blueprints/instructions of designs easy, intermediate, hard.

<http://babbleddabledo.com/stem-kids-straw-geodesic-dome/> if you can't afford straws and connectors make your own!

<http://artfulparent.com/2013/01/my-kids-favorite-building-set-using-straws.html> Build a playhouse and other cool designs

<http://www.domerama.com/fabricating/making-geodesic-models/make-a-geodesic-model-dome-from-straws/> Make a dome with your little engineer A.K.A geodesic model

http://www.youtube.com/watch?v=3_sx-PNXy0E straw and connectors demonstration

<http://joanepizzutoatgedcsbonca.blogspot.com/2011/10/building-with-straws-and-connectors.html> blog that features ideas of what to do with connectors

http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/completely_kinder/6.%20section%202%20classroom%20design%20and%20routines%20final.pdf benefits of children designing with physical materials.





Other Tip Sheets

- Fun at Home with Preschoolers: Getting Ready to Read!
 - [English](#)
 - [Spanish](#)
 - [Polish](#)
 - [Chinese](#)
 - [Korean](#)
- Fun at Home with Preschoolers: Play with Light & Shadow
 - [English](#)
 - [Spanish](#)
 - [Polish](#)

Other Tip Sheets

- Time for Preschoolers: Duration
 - [English](#)
 - [Spanish](#)
 - [Polish](#)

More Ideas for Making with Young Children

Websites to visit:

www.Youngmakers.org

<http://www.pinterest.com/pragmaticmom/fun-stuff-for-kids/>

<http://www.redtedart.com/>

<http://www.thecraftycrow.net/>

<http://www.livebinders.com/play/play?id=179785>

And here are 7 of the Top Picks lists of apps, websites, and games to help your young makers thrive:

1) [Best Tech Creation Tools](#)

Students love to make their own creations — no matter what the topic. These terrific tools give them the right tools to narrate, animate, and dictate. Experiment with different formats to address a variety of subjects and topics.

2) [Websites and Apps for Making Videos and Animation](#)

Teachers know that video making is a tried and true way to get kids engaged in building, demonstrating, and sharing knowledge. These apps and sites have user-friendly tools and features that make it fun to get kids' productions edited and polished.

3) [Mind Mapping and Brainstorming Apps and Websites](#)

These picks give teachers and students ways — both alone or in groups – to generate



and organize ideas that refine and reinvent the traditional graphic organizer. These tools are particularly good for students who have challenges organizing their thoughts.

4) [STEAM Apps, Games, and Websites](#)

When their forces combine, science, technology, engineering, art, and mathematics (STEAM) are a super group of essential subjects that lead to long-lasting learning. Mix and match these picks to help students cultivate design sense and inventiveness.

5) [Game Making Tools for Schools](#)

By making games, students can show what they know. Game development is fun and challenging, energizing classrooms and getting students thinking in new, exciting ways. These picks are great options for entry-level creators and they ease kids into building.

6) [Great Apps, Games, and Sites for Music and Composing](#)

Students can listen to music, make it, or both as they experiment with rhythm, pitch, and lyrics. Watch them turn tunes from major to minor, hear songs arranged for a range of instruments, and make themed playlists.

7) [Top Tools for Remix](#)

Remix – or combining different media to make or say something new – is an essential 21st century skill. It gets kids making things, thinking in new ways, and digging into the essence of meaning. These picks run the gamut and get kids tinkering.