

DEPARTMENT NEWS

Hands-On Science

We all know students LOVE science! They also LOVE anything hands-on. Combine those two things together for a great learning opportunity. I've pulled together hands-on science activities and aligned them with the currently interdisciplinary units. These activities are also paired with a science anchor text (available through Scholastic.)

Note: These lessons are geared to Ohio, Indiana and Minnesota since all other states (Illinois, Michigan, Missouri and Wisconsin) already have science programs that are hands-on. However, ANYONE should feel free to use any of these activities to enhance the learning in their classroom.

<http://elementary.conceptschools.org/hands-on-science-units/>

ReadCON 2018 Theme: The Magic of Reading

As we ALL believe, books are magical and transport us to any time and place. It's like a dream that you wish, we are so pleased to announce this year's theme as The Magic of Reading.

ReadCON department? Here are the VERY important ReadCON event:

ReadCON is a two-part competition. The first part is a Reading competition based on words read between March 19th



FREE?!?!? (or really, really cheap)

Tech for Math Manipulatives (school and/or home)

Thank goodness the days of demonstrating a lesson using math manipulatives on the overhead is over. With technology like smartboards and projectors we can use online tools to help us show students how to properly use their math tools. Below are a few free online sites that offer virtual manipulatives.



iTools

https://www-k6.thinkcentral.com/content/hsp/math/hspmath/na/common/itools_int_9780547584997_/main.html

This FREE resource from HMH provides just about ALL the tools you can use to effectively demonstrate activities to your class or even for students work from the platform by themselves. There are plenty of manipulatives to choose from as well as different workmats.



Math Learning Center

<https://www.mathlearningcenter.org/resources/apps>

The Math Learning Center offers web and app-based manipulatives – with the best resources for building number sense. The Math Learning Center provides a variety of easy to use number-sense manipulatives – abaci, ten frames, hundreds charts, etc.



Glencoe Manipulative Library

http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html

Glencoe has an awesome collection of grade-specific math manipulatives named "backgrounds" that you can interact with a huge bank of manipulatives. From Part, Part, Whole mats to fraction unit tiles, Glencoe has ALL the materials needed to demonstrate Common Core math strategies and concepts. There aren't as many bells and whistles (pens, markers, flashlights) but in terms of content, it's the best.



Hands-On Math? Yes, please!

by Jennifer Sajovec

Growing up, math was NOT my favorite subject. I always made the grade, but looking back, I never truly understood the concepts at my core and I certainly didn't enjoy the subject. Now, as an educator, math is my favorite subject to teach (well other than reading.)

I credit this passion for math instruction to some intensive training in a program called Math Their Way. In just two days of training (with math manipulatives at the center), I finally understood why that little one carried over to the next column when adding two -digit numbers. Years and years of worksheets and workbooks NEVER got that far.

Why Manipulatives are Critical

In order for students to learn the abstract concepts that math often presents, they require something

Concrete stage	Representational stage	Abstract stage
A mathematical concept is introduced with manipulatives; students explore the concept using the manipulatives in purposeful activity.	A mathematical concept is represented using pictures of some sort to stand for the concrete objects (the manipulatives) of the previous stage; students demonstrate how they can both visualize and communicate the concept at a pictorial level.	Mathematical symbols (numerals, operation signs, etc.) are used to express the concept in symbolic language; students demonstrate their understanding of the mathematical concept using the language of mathematics.

works as opposed to just listening and memorizing. Using math manipulatives gives them an opportunity to explore new ideas and try out different solutions.

List of Math Manipulatives

Ideally, every classroom would be equipped with a whole cabinet of beautifully colored manipulatives. However, you truly only need about 8-10 different tools ("The Essentials"). On the department website, you will find a list of "essential manipulatives" as well as some other ideas (if budgets allow).

One of the VERY cool parts of the Math Their Way training is that they showed us how to make our

own math manipulative! Need two-color counters? Grab a bag of kidney beans and spray paint one side.

Pinterest is full of wonderful ideas for you to cheaply make those necessary math tools. Check out what one teacher did with foam from the local craft store!

<https://goo.gl/vf75dL>

Introducing Manipulatives

We've all been there! You had out tools for a lesson and the student promptly begins playing with said tool. Give them a paperclip and you know the agony!

Whenever introducing a tool you must allow students to be who they are....kids! Give them a few minutes to "explore". Better yet, I found ANOTHER motivating arrangement I make with students regarding manipulatives. I give them one minute when I first hand them out (sometimes longer) and then I tell them they will get an additional minute at the end IF they use the manipulatives appropriately. At the end of the lesson, I do collect the manipulatives who don't hold up their end of the deal. It's pretty powerful.

Organizing and Using Math Manipulatives

I'm pretty sure that teachers single handedly keep the plastic shoe box industry alive. There really is no "right" way to organize all those math tools but we all know that plastic bins WITH LIDS are essential. I love these from Amazon because they have a lid that "locks" into place meaning no unexpected spills.

<https://goo.gl/KSRJVL>

One thing that keeps us from regularly using manipulative is the thought of passing out just the right amount of snap cubes, all in the same color (to prevent pattern-mania!)

Tips for Distribution

Tip #1: Get students to help you organize the day or week before. Burn off some of that extra energy some of your kiddos have.

Tip #2: Ziplocs and small bins are your best