

# RESOURCES FOR LAUNCHING YOUR LESSON



## (ACTIVATING PRIOR KNOWLEDGE)

We have all probably used quick, simple links to prior knowledge. Daily warm-up questions displayed as students enter the classroom might be one example. Beginning statements such as, “Remember yesterday when we...” or “In previous chapters we have learned ...” are some attempts to connect to prior knowledge. Below is a reference to help you think of more varied and effective ways to access prior knowledge.

**ANALOGIES IN MATH** – *An analogy is a comparison in which an idea or a thing is compared to another thing that is quite different from it. It aims at explaining that idea or thing by comparing it to something that is familiar.*

- [Virginia Math Teacher: Using Analogies in Mathematics Classes](#)  
*Provides examples and a worksheet*
- [Google Images of Math Analogy](#)  
*Many examples and links to other resources*
- [Teaching Channel: Kick Me – Making Vocabulary Interactive](#)  
*This can be adapted to a math classroom! Students get to move to match words with missing analogies on worksheet. Can be used for definitions. Includes supporting materials.*
- [ASCD IN SERVICE: Linking Prior Knowledge and New Content with Metaphors \(blog\)](#)  
*Describes a method for introducing analogies in a class (presented by R. Wormeli in ASCD session)*

**ANTICIPATION GUIDE** – *Create a list of statements; have students check “Agree” or “Disagree” beside each statement prior to the lesson. Students compare their choices. After the lesson is over, revisit choices.*

- [Think Literacy: Cross Curricular Approaches-Anticipation Guides](#)  
*Explains how to create a guide and gives specific math samples.*
- [Google Images of Guides](#)  
*A picture is worth a thousand words! Shows many samples.*

**CONCEPT CIRCLES** – *Divide a circle into sections (three or more parts)—write a word, number, symbol or phrase related to a topic. Either (1) identify the topic and have the student tell how all the items are related or (2) given the topic students identify related words/number/symbols/phrases.*

- [Google Images of Concept Circles](#)  
*Images of some concept circles in math.*
- [Think Literacy: Cross Curricular Approaches-Concept Circles](#)  
*Description of concept circles as a way to develop vocabulary. Includes examples.*

- [RPDP Resource: Concept Circles](#)  
*Link to Concept Circle Description and Examples*

**GRAFFITI WALL** – *On a large sheet of butcher paper, whiteboard, large poster, or chalkboard, groups of students take turns coming up and writing random things or drawing pictorial representations of things that relate to one topic. They can write it big, small, crooked, or any way they choose.*

- [Description of Graffiti Wall](#)  
*Definition*
- [Google Images Graffiti Walls](#)  
*Images of Graffiti Walls*

**GRAPHIC ORGANIZERS IN MATH** – *Tools to help student thinking and learning, including brainstorming, seeing connections/patterns/relationships, sharing knowledge, classifying, categorizing, etc.*

- [Google Images of Graphic Organizers](#)  
*Images for graphic organizers in math*
- [Teachers Vision: Popular Math Graphic Organizers](#)  
*You'll find a variety of math-related graphic organizers that you can print and hand out to your class.*

**JOT THOUGHTS** – *In pairs or small groups, students are given a topic. Teammates write one idea per slip of paper or Post-it note, trying to cover the table. Ideas may not be repeated or duplicated. Students can quickly see how much they know about a topic by the number of slips of paper generated.*

- [Google Images of Jot Thoughts](#)  
*Images showing samples of jot thoughts*
- [Jot Thoughts Ideas on Pinterest](#)

**K-W-L CHART** – *Have students identify what they know, what they want to know and what they learned.*

- [NEA Tools: K-W-L](#)  
*Description of K-W-L (Know, Want to Know, Learned)*
- [Google Images for KWL Charts](#)  
*Images for KWL*
- [RPDP Resource: KWL](#)  
*Link to blank template*

**PICTURE BOOKS** – They work no matter the age. If there is a concept or skill you are about to introduce, find a children’s book that’s related in some way and that your students may be familiar with. Many books are posted online/YouTube—find them by simply typing the title of the book in the search engine.

- [Goodreads: Popular Math Picture Books Shelf](#)  
*List of popular picture books—click on title and read a short synopsis of the story and community reviews.*
- [Ohio Resource Center: Mathematics Bookshelf](#)  
*From the State of Ohio resource center, the Mathematics Bookshelf features outstanding trade books that support mathematics instruction in K–12 classrooms. Mathematics Review Board members have selected books that will appeal to students and enrich the teaching and learning of mathematics.*

**REAL LIFE ANALOGY** – Relating real life “stories” to math.

- [Dan Meyer’s Three-Act Math Tasks](#)  
*Dan Meyer’s Three-Act Math Tasks, catalogued by standard. Uses images and video to teach lessons.*
- [Math By Design: Math in Action Videos](#)  
*These videos and support materials will give you another weapon in your answer to “when am I ever going to use math...”. Create interest at the beginning of a unit or lesson.*
- [TED-Ed Lessons Worth Sharing: Math Lessons](#)  
*One type of lesson takes the ideas of educators and brings them to life by using professional animators. The second type of lesson is created by a website visitor that adds supplementary materials to any educational video on YouTube.*
- [Tap into Teen Minds: Real World Math Problems](#)  
*Additional Three-Act Math Tasks are offered. Aligned to Ontario Math Curriculum, but identify CCSS.*
- [Transum Mathematics: Maths Videos](#)  
*Short video clips carefully chosen from YouTube.*

**ROUNDTABLE** – Put students into small groups with one paper per group. Given a topic, students take turns jotting down one thing related to the topic and passing the paper to the next student in the group clockwise. Passing continues until the allotted time has expired.

- [Brainpop Educators: Roundtable Learning Strategy](#)  
*Description of Roundtable*
- [YouTube: Collaborative Learning Kagan Structure Round Table](#)  
*Kagan collaborative learning structure (round table) in an Ontario chemistry classroom; shows a variation with nonverbal strategy*

## **STICKY NOTES**

- [Pinterest: 50 Post It Lessons](#)  
*Collection shows 50 creative classroom uses for Post Its, along with one-minute video, giving step-by-step directions on how to print with Post Its.*
- [That Teaching Blog: Sticky Notes](#)  
*Examples using Sticky Notes (ELA examples)*

**THINK-PAIR-SHARE** – Cooperative learning technique that encourages individual participation and is applicable across all grade levels and class sizes: student thinks independently about a question that has been posed, share with another student and then with whole class.

- [Learning is Growing: Think-Pair-Share Variations](#)  
*Think-Pair-Share Strategy is described and then variations introduced*
- [The Teacher Toolkit: Think-Pair-Share](#)  
*Includes video with teacher comments, downloads, variations.*
- [Teaching Channel: Think-Pair-Share Lesson](#)  
*Video of 7<sup>th</sup> grade math classroom using the strategy to practice simplifying expressions; includes supporting materials you can download*

## **USING HUMOR**

- [School Jokes.com](#)  
*Math jokes*
- [Pinterest: Math Humor](#)  
*Visual math humor*

**WARM-UP/ENTRANCE CARD** – Prior to the lesson, the students answer a question or set of questions posed by the teacher. This task may be done in students' notebooks, on index cards and collected by the teacher, etc.

- [Teaching Channel: Warm-Up Routine](#)  
*Link to My Favorite No: Learning From Mistakes. Show video clip of teacher using this strategy as her warm-up.*
- [Transum Math: Starter of the Day](#)  
*Click on the date in the calendar below for the “Starter of the Day”*