Minnesota Council of Teachers of Mathematics

MCTM Duluth Conference 2018

Resources for Elementary Math Teachers

From the session ‘5 Ways Elementary Teachers can Support Learning in Secondary’

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1) Estimating/Sense Making

* [Estimation 180](http://www.estimation180.com/days.html)
* [3-Act Tasks](https://gfletchy.com/3-act-lessons/)
* [Numberless Word Problems](https://bstockus.wordpress.com/2014/10/06/numberless-word-problems/)
* [Between Two Numbers](http://www.between2numbers.com/)
* [Notice and Wonder video Annie Fetter](https://www.youtube.com/watch?v=8BEzDHJ7ocQ)
* [Estimating - Making Sense of Things blog post by Mark Chubb](https://buildingmathematicians.wordpress.com/2017/03/17/estimating-making-sense-of-things/)

# [First Grade Tales from a Former High School Teacher by Megan Schmidt](https://mathybeagle.com/2018/02/08/first-grade-tales-from-a-former-high-school-teacher/)

2) Flexibility with Numbers

* [Number Talk Images](http://ntimages.weebly.com/photos.html)
* [Daily Number Talks](http://www.dailynumbertalks.info/)
* [Number Strings by Tedd.org](https://tedd.org/activities/number-strings/)
* [Number Strings](https://numberstrings.com/)
* [Number Talk Strings Padlet](https://padlet.com/jdueck/NumberTalkStrings)
* [Rational Number Project](http://www.cehd.umn.edu/ci/rationalnumberproject/)
* [Choral Counting](https://tedd.org/activities/choral-counting/)

3) Visual Representation

* [Visual Patterns](http://www.visualpatterns.org/)
* [Math Visuals](https://mathvisuals.wordpress.com/)
* [Clothesline Math](https://clotheslinemath.com/)
* [Graham Fletcher’s progression videos](https://gfletchy.com/progression-videos/)
* [Same or Different](https://samedifferentimages.wordpress.com/)

4) Questioning

* [101 Questions](http://www.101qs.com/)
* [Notice and Wonder Resources](http://mathforum.org/pow/noticewonder/)
* [The Art of Questioning by NCTM](http://teachers.henrico.k12.va.us/math/Newsletter/The_Art_Of_Questioning.pdf)
* [Max Ray-Riek: Why 2 is Greater Than 4](https://102phim.net/video/h00Ux1qx2zw/why-2-is-greater-than-4-a-proof-by-induction-.html)
* [Never Say Anything a Kid Can Say](http://courses.edtechleaders.org/documents/proportions/NeverSayAnything.pdf)
* [Teacher Prompts to Promote Discourse and Understanding Posters](https://docs.google.com/presentation/d/1FAkmTeujHO2Ffri1DmNeNoJcdLlCk8Vch-Ojeo_PE1M/edit#slide=id.g38f7e6c99e_0_23)
* [NCTM 2018 “Engaging Students in Seeing Structure” by Sara Van Der Werf](https://saravanderwerf.com/2018/04/27/nctm-2018-presentation-resources-engaging-students-in-seeing-structure/)
* [The Slow Reveal by Brian Bushart, Numberless Graphs](https://bstockus.wordpress.com/2017/05/18/the-slow-reveal/)

5) Justifying, Convincing, Defending

* [Which One Doesn’t Belong](http://wodb.ca/index.html)
* [Would You Rather Math](http://www.wouldyourathermath.com/)
* [Convince Me That](https://docs.google.com/presentation/d/1_kMfjsrEGWtNbWT-nwrzbfe5WB3C_u6vo3PvFquZA5I/edit#slide=id.p)
* [True/False Equations](https://tedd.org/activities/truefalse-equations/)
* [Same or Different](https://samedifferentimages.wordpress.com/)
* [Nrich: Always, Sometimes, Never](https://nrich.maths.org/12672)
* [Fawn Nguyen Blog: Always, Sometimes, Never](http://fawnnguyen.com/always-sometimes-never/)
* [Always, Sometimes, Never Elementary](https://docs.google.com/document/d/1Uqbt0F4N8e1NKWWv5X5-_NYNfEGCL_EjxX3EdBEEWAk/mobilebasic?pli=1)
* [Levels of Convincing by Robert Kaplinsky](https://robertkaplinsky.com/levels-of-convincing/)

6) Low Floor, High Ceiling Tasks

* [Open Middle](http://www.openmiddle.com/)
* [Illustrative Mathematics](https://www.illustrativemathematics.org/curriculum)
* [YouCubed](https://www.youcubed.org/tasks/)
* [Yummy Math](https://www.yummymath.com/)
* [Robert Kaplinsky Lessons](https://robertkaplinsky.com/lessons/)
* [Inside Mathematics: Problem of the Month](http://www.insidemathematics.org/problems-of-the-month/download-problems-of-the-month)
* [[Fake World] Beats Curriculum by Dan Meyer](http://blog.mrmeyer.com/2014/fake-world-culture-beats-curriculum/)

Other Resources

* [Games for young minds](https://www.gamesforyoungminds.com/) - Website for parents to spend 20 minutes a day doing math with their kids through games.
* [Nix the Tricks](https://nixthetricks.com/) - a free downloadable book every teacher should read
* [12 Rules that Expire](http://www.nctm.org/Publications/Mathematics-Teaching-in-Middle-School/2015/Vol21/Issue4/12-Math-Rules-That-Expire-in-the-Middle-Grades/) - a quick article from NCTM - so great.
* [My Fav Places to go to Find Rich Math Tasks created by Margie Pearse @pearse\_margie & Lane Walker @LaneWalker](https://docs.google.com/spreadsheets/d/1yGaZy9g8X0HHFuWMBQkF14pVStu_SIBnbZSkxo9nWPI/edit#gid=0)
* [Rational Number Project: Initial Fraction Ideas](http://www.cehd.umn.edu/ci/rationalnumberproject/rnp1-09.html)
* [Rational Number Project: Fraction Operations and Initial Decimal Ideas](http://www.cehd.umn.edu/ci/rationalnumberproject/rnp2.html)

Videos

* [Graham Fletcher’s progression videos](https://gfletchy.com/progression-videos/)
* [Annie Fetter: Ever Wonder What They’d Notice](https://www.youtube.com/watch?v=8BEzDHJ7ocQ)
* [Max Ray-Riek: Why 2 is Greater Than 4](https://102phim.net/video/h00Ux1qx2zw/why-2-is-greater-than-4-a-proof-by-induction-.html)
* [Same or Different? Teaching Channel](https://www.teachingchannel.org/video/kindergarten-math-lesson-nsf)

People to Follow on Twitter

Tracy Zager [@TracyZager](https://twitter.com/TracyZager)

Graham Fletcher [@gfletchy](https://twitter.com/gfletchy)

Mark Chubb [@MarkChubb3](https://twitter.com/MarkChubb3)

Marilyn Burns [@mburnsmath](https://twitter.com/mburnsmath)

Brian Bushard [@bstockus](https://twitter.com/bstockus)

Kristin Gray [@MathMinds](https://twitter.com/search?q=%40mathminds&src=typd)

Kent Haines [@KentHaines](https://twitter.com/KentHaines)

Christopher Danielson [@Trianglemancsd](https://twitter.com/Trianglemancsd)

Annie Fetter [@MFAnnie](https://twitter.com/MFAnnie?lang=en)

Estimation 180 [@estimation180](https://twitter.com/search?q=%23estimation180&src=typd)

Which One Doesn’t Belong [@WODBMath](https://twitter.com/WODBMath)

Open Middle [@openmiddle](https://twitter.com/openmiddle)

Hashtags to Follow on Twitter

#elemmathchat Thursdays at 8:00 pm, CST

#numbertalk

#wodb

#samedifferent

#noticewonder

#numberlesswp

Technology

* [Desmos for Elementary](https://docs.google.com/spreadsheets/d/1wDbrLz5H3XmDLtpwDkkMdS3z5618SYMS8QdeOBUTAbw/edit#gid=0)
* [Tech Resources from Tracy Zager’s Blog](http://tjzager.com/2018/03/06/a-totally-not-exhaustive-look-at-the-current-state-of-elementary-edtech/)