more

AT

is in the

mATh

fppt.com

Arizona Department of Education

Az-Tech

http://bit.ly/adeaztech

http://tinyurl.com/AzTechFB

Introductions

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Learning Outcomes

- Identify assistive strategies to support students in the math curriculum
- Identify assistive technology tools, devices, and software to support students in the math curriculum
- Support the alignment of assistive strategies and technology to the AZCCRS
- Incorporate universal design for learning (UDL) strategies and tools into the classroom

MATH

Mental Abuse To Humans

Disclaimer

- The Arizona Department of Education/Exceptional Student Services (ADE/ESS) does not prescribe, endorse, or provide advertising space for textbooks, software, devices, or curriculum materials. The ADE/ESS does not evaluate textbooks, software, devices, or curriculum materials for compliance with meeting the state minimum curriculum standards and does not recommend any specific textbooks, software, devices, or curriculum materials. Each public education agency (PEA) is responsible for selecting curriculum materials that will meet the minimum state curriculum standards. PEAs may also establish their own policies for textbook, software, and curriculum materials' selection and adoption.

- The ESS−Assistive Technology (AT) team does frequently review software, devices, and curriculum support items to determine if they may be used to assist students with disabilities in accessing and benefiting from the general education curriculum. These supports may be considered assistive technology, as defined in the Individuals with Disabilities Education Act (IDEA). The ESS −AT team may procure, demonstrate, and provide training on a wide range of assistive technology items and may compare and contrast the features of these items, but the team is precluded from making any recommendations for one product over another.

Assistive Strategies:

Various methods of instruction and organization to enhance individual understanding of concepts

Assistive Technology:

“Any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities”

IDEA 2007

The inverse proportion of Math Curriculum Complexity to Available Assistive Technology

NOTE: This representation is anecdotal only

Graph shows math complexity increasing as available AT decreases

The complexity of available AT to the complexity of mATh concepts.

NOTE: This representation is anecdotal only

Complexity of AT increases, while the Complexity of AT available eventually increases

Universal Design for Learning (UDL)

Multiple means of representation: Present information and content in different ways.

Multiple means of expression: Use different ways for students to express what they know.

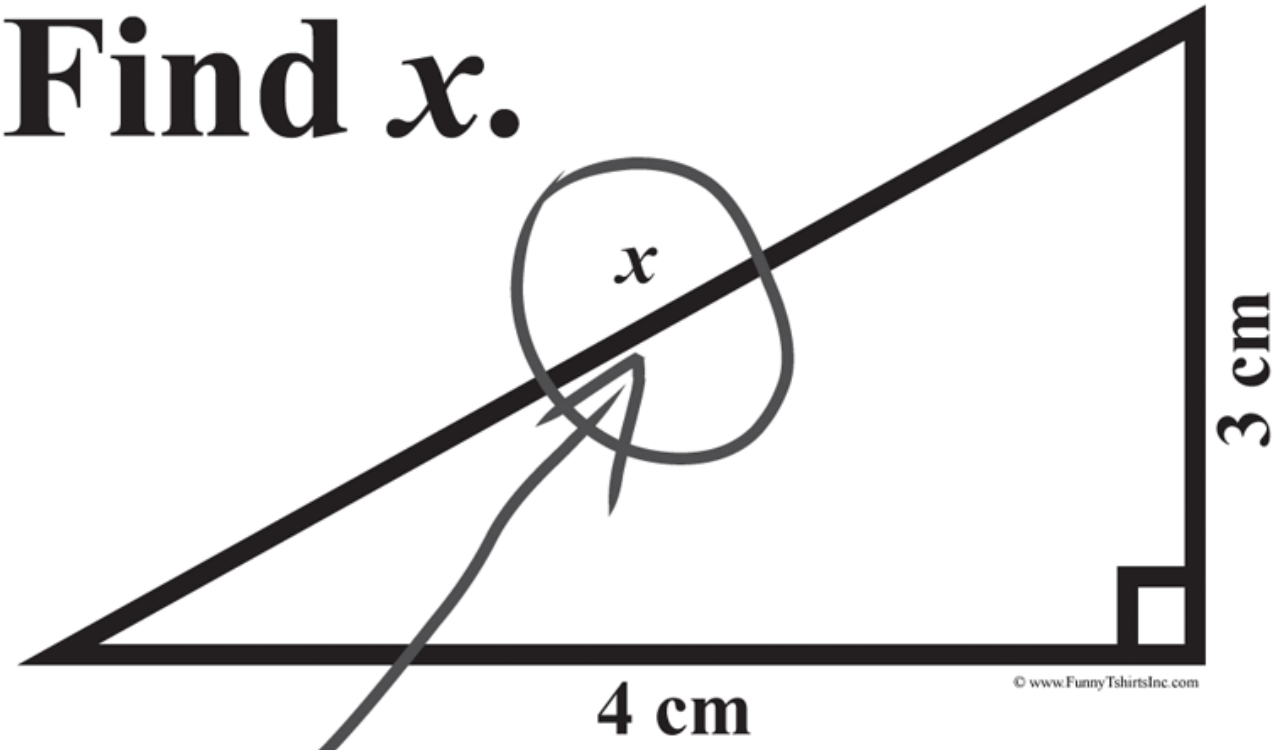
Multiple means of engagement: Stimulate interest and engagement.

Assistive technology is part of a UDL classroom environment.

All assistive strategies and assistive technology can be used to enhance learning for all students.

www.cast.org

Find x.



Here it is

Mixed Modality Learning

Mixed-modality presentations (for instance, using auditory and visual techniques) improve results in a variety of subjects. Instruction that stimulates more than auditory learning (for example, kinesthetic learning) is more likely to enhance learning in a heterogeneous student population.

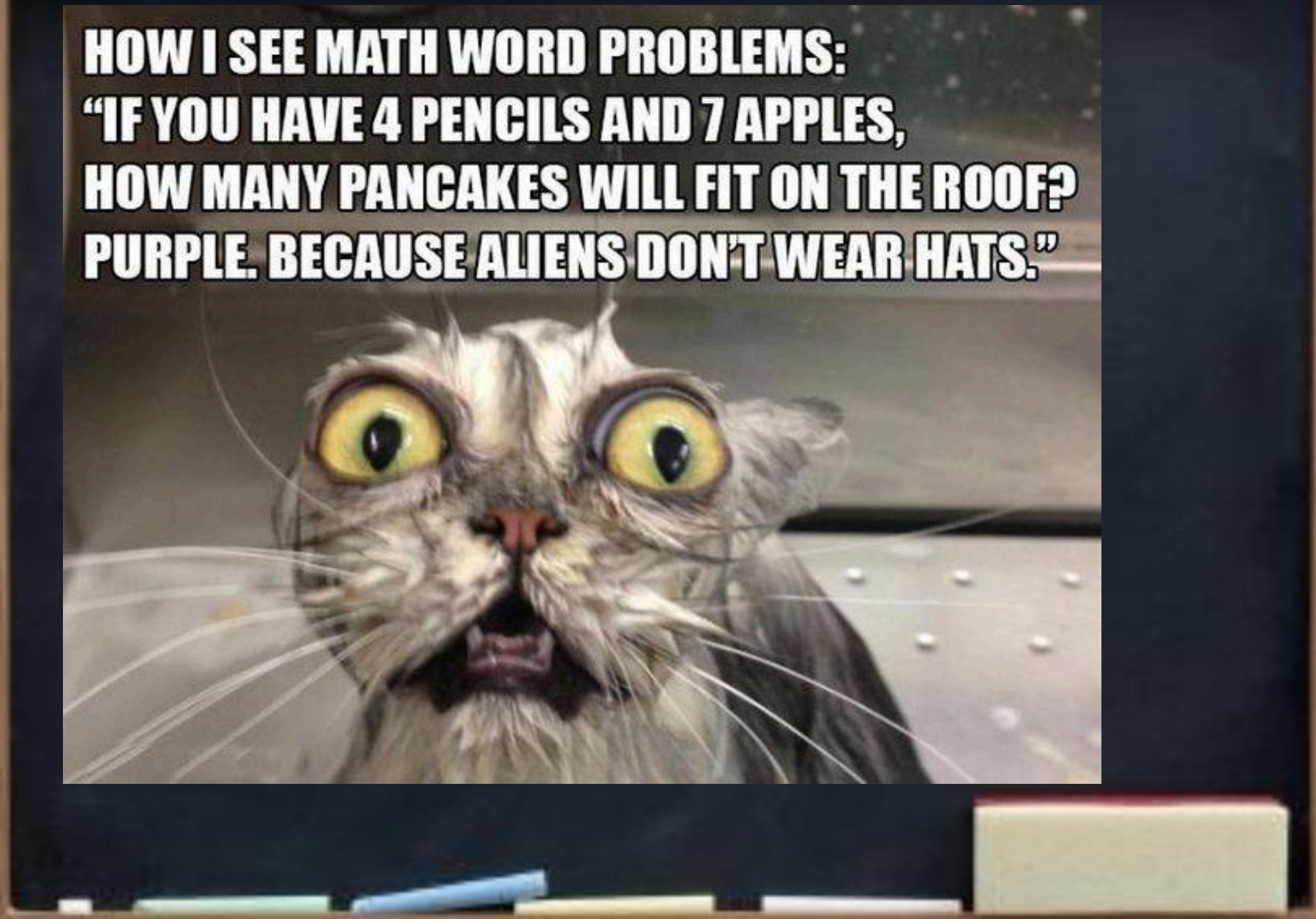
Coffield, F., Moseley, D., Hall, E., Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning. A systematic and critical review*. London: Learning and Skills Research Centre.

BenZion, Galeet (2010). Does a change in mathematics instructional strategies lead struggling third grade students to increase their performance on standardized tests?. Master's thesis. University of Maryland at College Park.

Why should we explore different ways to teach math?

- 78% of adults cannot explain how to compute the interest paid on a loan.
- 71% cannot calculate miles per gallon on a trip
- 58% cannot calculate a 10% tip for a lunch bill

Phillips, G. 2007


HOW I SEE MATH WORD PROBLEMS:
"IF YOU HAVE 4 PENCILS AND 7 APPLES,
HOW MANY PANCAKES WILL FIT ON THE ROOF?
PURPLE. BECAUSE ALIENS DON'T WEAR HATS."

Web links to many resources from this presentation are available here

http://tinyurl.com/atinthemath

Web links to: more AT is in the mATH

http://tinyurl.com/moreatmath

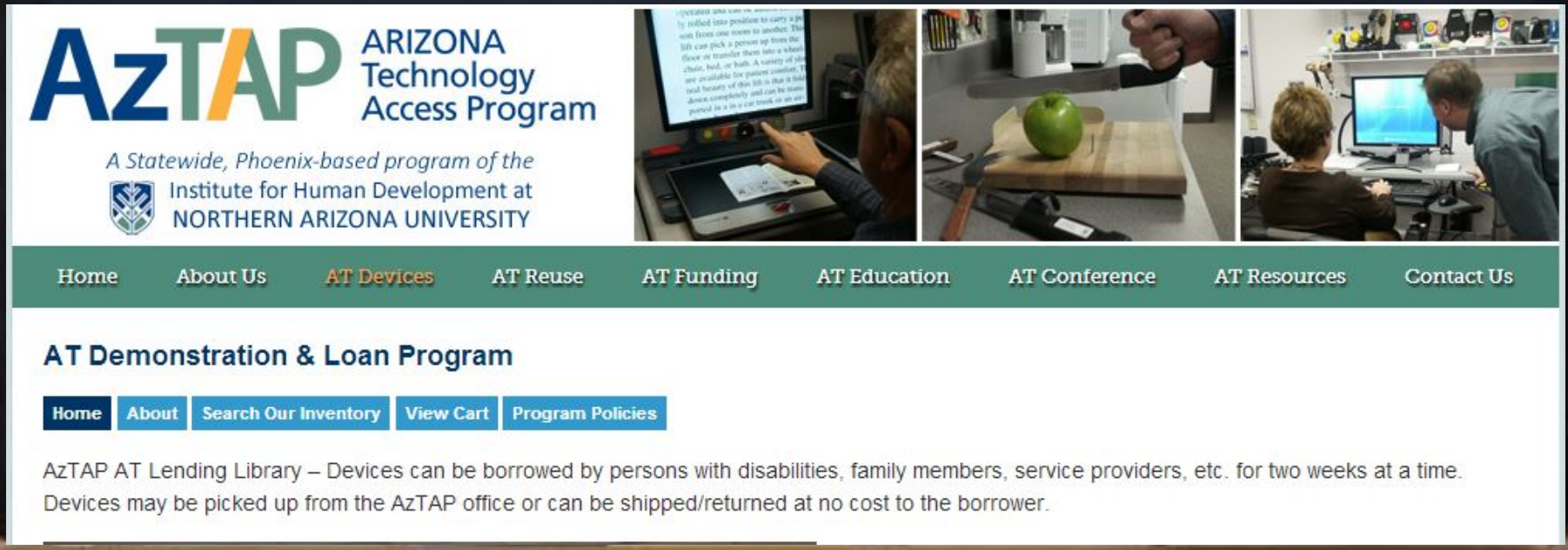
Show & Tell

Arizona Department of Education Assistive Technology Loan Library

www.adeatloan.org

Arizona Technology Access Program
AT Demonstration & Loan Program

http://azatdemoloanprogram.org



Video Modeling