## **Desmos**

Graphing

Analyze Data

Accessibility features such as Braille Displays

Interactive activities and lessons created by teachers

Free

#### **Evaluation Rubric**

#### **DESMOS Resources:**

#### Watch (Videos)

Introduction to DESMOS (1:58 mins)

Introduction to DESMOS Activities (1:02 mins)

# Read (Explore website)

**Desmos Main Website** 

**Desmos Help Center** 

# Follow up Resources

**Desmos YouTube Channel** 

<u>Interactive activities and lessons</u> Created by teachers

Professional Learning at Desmos Upcoming webinars and pre recorded webinars

# GeoGebra

Graphing Resource Bank of Lessons

Geometric construction CAS Calculator

Algebra Scientific Calculator
Analyze data Explore 3D Math
Classroom Mode Notes feature

Integrates with <u>Graspable Math</u> Freehand drawing feature in Notes

Free

#### **Evaluation Rubric**

#### GeoGebra Resources:

#### Watch (Videos)

Introduction to GeoGebra (Big Picture) (1:44 mins)

Example of solving a problem with GeoGebra (4:39 mins)

GeoGebra Classroom Demo (Start to Finish) (4:35 mins)

An Introduction to Geogebra Software for Teaching Math (15:22)

## Read (Explore website)

GeoGebra Main Website

Learn GeoGebra (tutorials/videos/recorded webinars)

## Follow up Resources

<u>Introduction to GeoGebra Graphing</u> (overview of some graph functions; 56:56 mins)

GeoGebra YouTube Channel

# TextHelp EquatIO

Handwriting Recognition Virtual Manipulatives

Equation Prediction Interactive Periodic Table of Contents
Speech to Text Virtually manipulate atoms/compounds

Works with MS Word, Google Docs, Sheets, Slides, Forms & Drawings

Freemium; Premium free for all educators

#### **EquatIO Resources:**

#### Watch (Videos)

EquatIO in 5 (5:22) (Does not show specific science tools)

How to Use EquatIO's STEM Tools (Periodic Table; molecular models; 2:47)

Getting Your Students Started with EquatIO (overview video; 3:08 mins)

Getting Your Students Started with EquatIO MathSpace (Overview demonstrates

tools for older students but this has tools for younger students also; 2 mins)

EquatIO MathSpace Updates (This short video will show you some elementary examples of Mathspace; 2:03 mins)

Read (Explore website)

**EquatIO Main Website** 

**EquatIO Training & Learning** 

## Follow up Resources

TextHelp EquatIO YouTube Channel

<u>EquatIO Overview Video</u> (Excellent overview of ALL EquatIO features; 32:39 mins)

<u>Using OrbitNote and Equatio To Make Math & STEM Digital</u> (2:21 mins) Free Premium subscription for teachers

# Microsoft & Google Suites

# Microsoft Math Solver

Solve math problems

**Graph solutions** 

Explain the steps

Text to Speech reads aloud

Available in:

**Edge Browser** 

**OneNote Math Feature** 

Standalone app

# Google Web Browser

Solve math problems

Graph solutions

Use On-screen calculator

Control Alt Achieve Blog Math Resources

by Eric Curts

#### **OneNote Math Feature & Spreadsheet for Math Resources:**

### Watch (videos)

Microsoft Math Solver Video (30 seconds)

Solving Math with OneNote Math Tools Demo (2:46 mins)

Google chrome tips and tricks How to do math problems and even have a scientific calculator (1:56 mins)

## Read (Explore website)

Microsoft Math Solver

Solve Math Equations with Math Assistant in OneNote

Control Alt Achieve Blog - Google Suite Math Resources

## Follow up Resources

Microsoft Learn Educator Center

<u>STEM and Literacy with Microsoft: Math Tools in One Note</u> (1 hour free webinar 9/26/22)

# Apps to Replace Paper/Pencil

#### Mod Math iTunes App

"Provides students with a pencil-free platform for doing basic arithmetic. Allows older students to complete more complex math assignments, including fractions, square roots and algebraic equations."

http://www.modmath.com/about/

### Math Paper App

Basic math through upper algebra and geometry

Predictive cursor Switch Accessible

Kami PDF Editor

Solve math problems digitally right on the PDF

Equation Editor Geometry

#### **Apps to Replace Paper/Pencil Resources:**

### Watch (videos)

ModMath 2.0 (2:46 mins)

<u>Panther Math Paper</u> (Specialist demonstrating and discussing pros/cons; 3:41 mins)

Panther Math Paper (Video produced by Panther; 2:28 mins)

Kami for Math (Overview; 3:57 mins)

## Read (Explore website)

**ModMath** 

Panther MathPaper

Learn Kami

## Follow up Resources

YouTube ModMath app

YouTube Panther Math Paper

YouTube Kami Channel

# Virtual Manipulatives

<u>Didax Virtual Manipulatives</u> (includes Unifix Cubes, Ten-Frames, Math Balance & more)

**Math Learning Center Apps** 

<u>Mathigon</u>

Math Playground Manipulatives

<u>Toy Theater</u> (Dice, Timers, Clocks, money from various countries & more)

#### **Kidspiration Math View Resources:**

#### Watch (videos)

<u>Best Online Manipulative Math Resources</u> (Demo of Math Learning Center, Didax Manipulatives, Mathigon; 9 mins)

<u>Virtual Manipulatives</u> by PowerUp (Introduction to manipulatives; Suggestion: Go to Part 3 at 3:00 minute mark; 5:49 mins)

## Read (Explore website)

Getting Started with Virtual Manipulatives by Brittany Hege Five Ways to Use Virtual Manipulatives by Didax

## Follow up Resources

YouTube Math Virtual Manipulatives

<u>Using Virtual Manipulatives to Teach Math</u> by PowerUpWhat Works\_(includes the research supporting manipulatives)

# Low Tech/No Tech

#### Rekenrek

Make a Rekenrek

Ideas for how to use

K-5 Math Teaching Resources Rekenrek

The Recovering Traditionalist: What the Heck is a Rekenrek?

23 Fun Beach Ball Games and Activities...

6, 8, 15 and 16 are specifically Math/STEM but all of the ideas will get you thinking

Heads Up Card Game to practice Math Facts

Counting Rope (created by Kim Sutton)

Math Grouping Idea

Magic Box Activity (Teaching Students with Moderate & Severe Disabilities, Browder & Spooner, 2011, pg. 184)

Students draw a number (from a stack of cards, spinner, etc)

Place that number of objects in box with low divider and lid

Close box and shake

Record how many objects on each side of divider

# Watch (videos)

Counting Rope Kim Sutton (3:31 mins)

How to Use a Rekenrek (2:04 mins)

Read (Explore website)

Denise Gaskin's Let's Play Math Blog

## Follow up Resources

Please share your own resources/activities/ideas

# **Explore More Resources**

- Inclusive Learning Website STEM Pages
- Mathematics: Menu of Best Practices and Strategies
- UDL Guidelines: Math Examples

Adapted by Katie Novak, EdD, Nathan Lang-Raad, and Karen Gartland

- Resource Lists
  - SETC Math Resource List March 2023 list of math resources compiled from educators around the United States
  - Math Resources from M Stanberry
- ° Special Education Technology Center STEM Webinars
  - o <u>09/19/2022</u>, STEM and Literacy with Microsoft: STEM, Microsoft, and You!
  - o 09/26/2022, STEM and Literacy with Microsoft: Math Tools in One Note
  - o 10/10/2022, STEM and Literacy with Microsoft: Reading Progress
  - 10/24/2022, STEM and Literacy with Microsoft: Reading Coach
  - 11/14/2022, STEM and Literacy with Microsoft: Microsoft Translator and the STEM Classroom
  - 11/21/2022, STEM and Literacy with Microsoft: Using Immersive Reader for STEM
  - 12/05/2022, STEM and Literacy with Microsoft: Unlocking Literacy with Minecraft
  - 12/12/2022, STEM and Literacy with Microsoft: Using Microsoft Teams to Create Inclusive STEM Classrooms
  - 12/07/2022, Using High School Ideas to Scaffold Math Pre-grade Level
     Content, to Include All Students