

Janelle Mayes-Henry - Math Playground

<http://www.mathplayground.com/>

New Thinking Games



Math Games and Learning Activities by Topic



Math Playground is a fun resource for students that allow them to practice and enhance math skills through games, puzzles, and instructional videos. It is a self-paced web source that is students, parent, and teacher friendly. When clicking on the Common Core tab, there are specific games that were hand picked for students to practice certain math skills required by that standard. Math Playground is provides an age-appropriate and safe learning experience for students of all ages.

Evaluation

Curator: [Janelle Mayes-Henry]

1. Learning Activity Types

- **LA-Practice** - practicing for fluency
- **LA-Present** - (read or attend to) presentation of new content/ideas
 - **LA-Present-Demo** - demonstration
- **LA-Explore** - exploring/investigating mathematical ideas
- **LA-Apply** - applying mathematics to problems and situations

2. Mathematics Content & Learning goals

2a. What mathematics is being learned?

Math Playground offer a variety of games that allow students to practice the following math skills:

- Addition and Subtraction
- Multiplication and Division
- Fractions and Decimals
- Geometry
- Percent and Ratio
- Integers, Graphs, and Number Puzzles

Instrumental Understanding is practiced when playing the math games and puzzles. Relational Understanding is learned when students watch the math videos that the site offers to explain what something is (for example: there is a video titled, "What is a quotient?").

2b. Content Standards: What NCTM content standards or CCSM standards are addressed?

Make sense of problems and persevere in solving them.
Look for and make use of structure
Look for and express regularity in repeated reasoning.

There are many Common Core Standards that are aligned with some of the games per grade level. Some standards are under the Operations and Algebraic Thinking Strand, Numbers and Operations, Measurement and Data, and Geometry Strands. There are too many standards to name, but there are games suggested for each grade level where students can practice certain skills to reach the goal of each standard.

2c. Proficiency Strands/NCTM Process Standards/CCSM Mathematical Practices

Since this site aligns some of the games with Common Core Standards, the Procedural Fluency strand is what's practiced the most when using Math Playground. Students are able to "carry out procedures flexibly, accurately, efficiently, and appropriately" which is just what each math game and puzzle requires.

2d. How does activity/focus fit with your current curriculum/lesson goals?

Like I mentioned before, there are specific games that are aligned with Common Core that focuses on reaching an end goal for a specific standard. Other games, which are not specifically aligned with Common Core standards, can still be used for students to practice fluency in a variety of math skills; such as addition and subtraction, multiplication and division, as well as geometry.



3. What role does technology play?

3a. Which affordances of technology are important?

Computing and automating is one of the affordances of technology that is represented in this site. The games are already prepared for the student. All students have to do is apply what they know about mathematical concepts taught or that they are learning to the games and puzzles that they choose.

3b. Are there other tools or activities (non-tech-heavy) that might support learning goals better?

Students could always use more hands-on learning, such as manipulatives, for those that are not tech savvy. Calculators, cubes, and other hands-on materials might work for some students better than the computer games.

3c. How is the mathematics represented?

Mathematics is represented through a variety of different ways. There are games, puzzles, and instructional videos that cater to the student's needs when learning or practicing different math skills.

4. Learners

4a. What do learners need to know?

The learner would need to know how to use a computer. The learner would also have to have some background knowledge about the math skill they are preparing to practice. If the learner needs more help with relational understanding, the site does offer some instructional videos that offer explanations of certain math topics.

4b. Aesthetics: Is the tool/site attractive to students? Is it likely to be engaging?

This site is very attractive. The games and puzzles have bright colors, cool sound effects, and is self-paced. Students are able to manipulate the games at their disposal.

4c. Is the tool accessible/usable by all students?

This site is accessible through computer and tablet, which is good because a lot of students have their own tablet nowadays. This site is usable by students in different grades as well as with different learning styles.

4d. Differentiation: Does the tool allow for modifying/adjusting for different student needs?

A lot of the games allow students to set the mode that best fits them. I like that because students want to feel confident when choosing a game to practice their math skills. Being able to choose your own mode and games allow adjustments to fit the need of any student with whatever learning style they are most comfortable with.

5. Learning/Instruction Support

Can students work at their own pace? Yes students can work at their own pace by choosing whatever game is best for them.

Does the website/app give feedback? Some of the games offer a detail summary at the end where it will tell you the percentage of how many you got right.

Does the student get multiple attempts? On most of the games, students can get multiple attempts to complete the problem/task.

Does the website/app give hints if a student is struggling? On some games there are helpful hints, on others it will just give you another problem to complete in hopes that you would get that one correct.

Are there instructions on the app/website for the student? Yes, there are math instructional videos that offer help for the student and each game comes with a detailed set of instructions.

6. Teacher

6a. What does the teacher need to know/do?

The only thing the teacher would have to do is make sure that the website is compatible with the technology that the students will be accessing the site on. The teacher would also have to have knowledge of how some of the games work in case a student doesn't understand what to do.

6b. What supports are there for managing and tracking student activity?

At the end of every game, the game gives a summary. The teacher could keep track of the summaries to see if each student made any improvements.

7. Technology Access & Logistics

Math Playground can be used on any computer, tablet, and mobile device. Students can be at school, at home, or anywhere there is internet service to access Math Playground. This site loads quicker on a computer than it does on a tablet, but only by a few seconds or so. This site is well kept and up-to-date.

