

Option 1: Math App Review

Name of App-Brainiaccamp

Dan Harris (founder) and David Brown (co-founder)

Publisher-Brainiaccamp, LLC

Platform for Use

Brainiaccamp works on Chromebooks, PCs, Macs, iPads, and Interactive Whiteboards. While iPad users can access Brainiaccamp through iPad's web browsers, for a better experience they can download this free app and sign in to unlock all the manipulatives: <https://itunes.apple.com/us/app/manipulative-of-the-week/id1173021675> . You do not need to set up/install any program. It is an entirely web-based program. Simply go to the website and enter a username and password unless you are using an iPad.

Grade Level Target

The App is appropriate for all grades from kindergarten through high school.

I used it for kindergartners.

Math Practices / Standards Addressed

CCSS.MATH.CONTENT.K.CC.A.1

Count to 100 by ones and by tens.

CCSS.MATH.CONTENT.K.CC.A.2

Count forward beginning from a given number within the known sequence

(instead of having to begin at 1).

Count to tell the number of objects.

CCSS.MATH.CONTENT.K.CC.B.4

Understand the relationship between numbers and quantities;

connect counting to cardinality.

CCSS.MATH.CONTENT.K.CC.B.4.A

When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

CCSS.MATH.CONTENT.K.CC.B.4.B

Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

CCSS.MATH.CONTENT.K.CC.B.4.C

Understand that each successive number name refers to a quantity that is one larger.

CCSS.MATH.CONTENT.K.CC.B.5

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.

Compare numbers.

CCSS.MATH.CONTENT.K.CC.C.6

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

CCSS.MATH.CONTENT.K.MD.A.1

Describe measurable attributes of objects, such as length or weight.

Describe several measurable attributes of a single object.

CCSS.MATH.CONTENT.K.G.B.5

Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

CCSS.MATH.CONTENT.K.G.B.6

Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"

CCSS.MATH.CONTENT.K.OA.A.1

Represent addition and subtraction with objects, fingers, mental images, drawings¹, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

CCSS.MATH.CONTENT.K.OA.A.2

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

CCSS.MATH.CONTENT.K.OA.A.3

Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).

CCSS.MATH.CONTENT.K.OA.A.4

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

CCSS.MATH.CONTENT.K.OA.A.5

Fluently add and subtract within 5.

Description of Classroom Use

Brainiaccamp has virtual manipulatives such as color tiles, snap cubes, geobards, linking cubes, pattern blocks and two-color counters. There are also other virtual manipulatives that are geared towards middle and high school. Brainiaccamp has the virtual counter parts of the manipulatives my students use in the classroom to model problems. Since the manipulatives are virtual and can be enlarged on screen, I have used them to model for my students' numerous strategies that my students are working on. The manipulatives can be used for modeling word problems, counting, nonstandard measuring, 2D shapes, patterns, decomposing numbers, addition, and subtractions.

I came upon this app during the NASA's STEM @ Home meetings during the months we were distance learning/teaching. Students use this app to practice concepts and strategies they learned. They can work at their own pace. There's minimum prep work for teachers when using this app. This app does not provide feedback to students about their work, so some educators view it as not providing deeper learning. My students loved that they could explore and see things that reminded them of school.

Description of Integration

Besides art the app does not integrate with other subject areas. Students create shapes, animals, and various objects with pattern blocks and geoboards.

Reference

Retrieved June 26, 2020, from www.brainiaccamp.com