

# **Virtual-world learning in your real-world curriculum: Integrating educational games into standards based lesson plans**



**Diana Sanchez, former early childhood educator and project manager at 7 Generation Games**

# From my experience...



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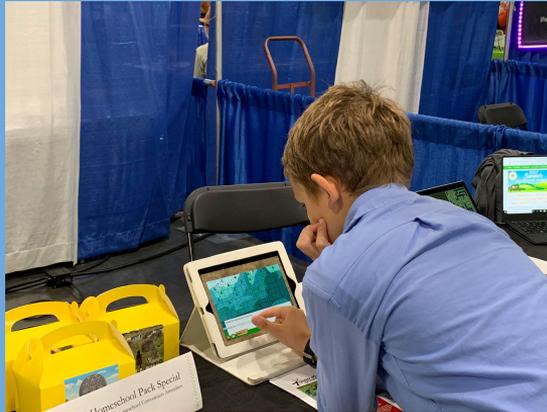
**Standards!**

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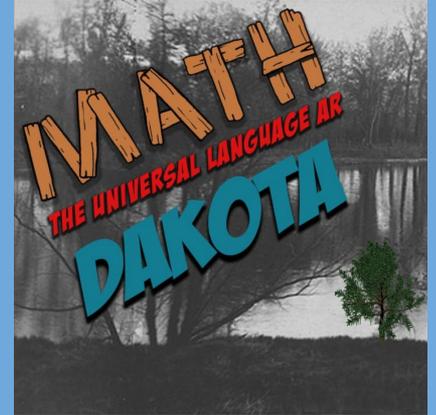
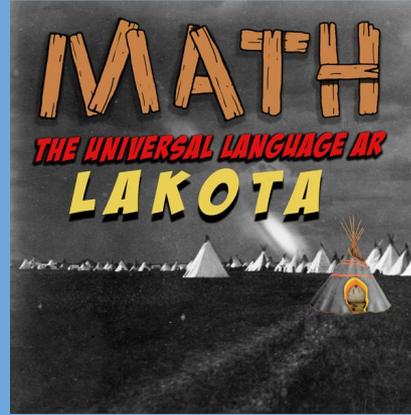
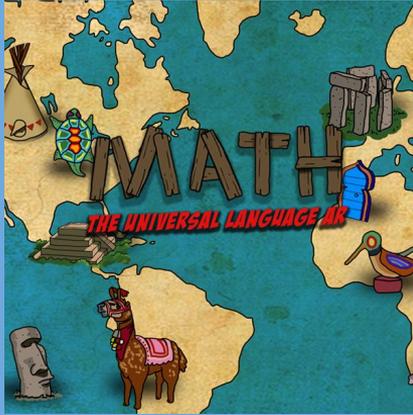
**Standards!**

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# Make math fun!



# 7 Generation Games AR Apps

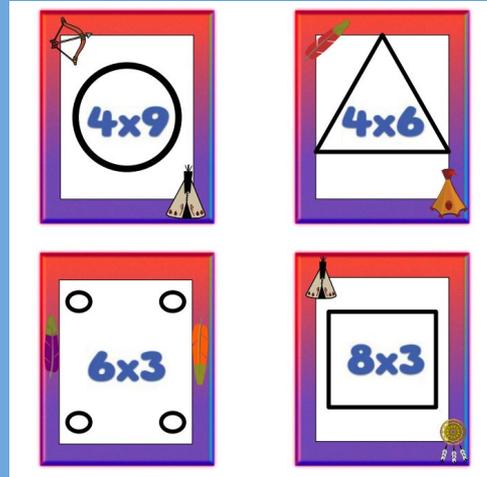


# AR Cards



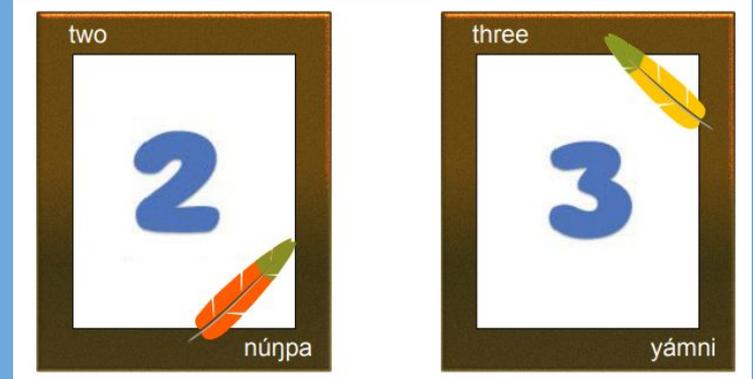
Counting By 2 Languages AR Cards

## Math: The Universal Language AR Cards

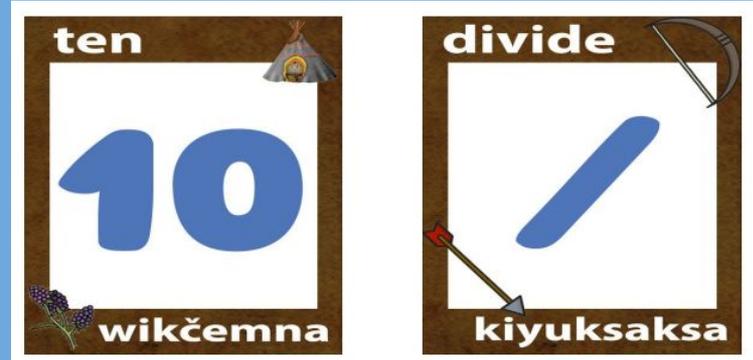


Cards can be printed and cut or viewed on a separate device to use with the app.

## Math: The Universal Language Lakota AR Cards



## Math: The Universal Language Dakota AR Cards



# Counting By 2 Languages AR



**Preschool: Counting 0 to 9 (English and Spanish)**

# Math: The Universal Language AR



**Grades 3-5: Counting 0-10 and Multiplication (English and Spanish)**

# Math: The Universal Language AR - Lakota



**Grades 3-5: Counting 0-10 and Multiplication (English and Lakota)**

# Familiarity = Engagement

Take something students already know (augmented reality) and incorporating it into your standards-based lesson plans promotes engagement.

AR - Snapchat/Instagram filters,  
Pokémon GO

Students will love the idea of augmented reality being included in their learning.



Not actually wearing a hat here. It's AR!



# 7 Generation Games Teacher Resources Site

The screenshot shows the website interface for teacher.7generationgames.com. The browser's address bar displays the URL. The main header is a dark blue bar with the text "EDUCATIONAL RESOURCES FOR GRADES 3-8" in white. Below this is a navigation bar with the tagline "Making Teaching Easier and Students Smarter" and menu items for Home, Mathematics, Social Studies, Blog, and 7 Gen Games. The main content area features a large "Welcome to 7 Generation Games" banner with a diverse group of cartoon characters. Below the banner are three resource tiles: "MATHEMATICS" with a classroom scene, "SOCIAL STUDIES" with a person on a log in a river, and "SUPPORT" with a cartoon of a person helping another who is shouting "HELP!!".

teacher.7generationgames.com

EDUCATIONAL RESOURCES FOR GRADES 3-8

Making Teaching Easier and Students Smarter

Home Mathematics Social Studies Blog 7 Gen Games

Welcome to 7 Generation Games

MATHEMATICS

SOCIAL STUDIES

HELP!!

SUPPORT

<http://teacher.7generationgames.com/>

# **Lesson Plans**

# Math and AR

## Do this activity

You will need a device (smartphone or tablet), a ruler and/or tape measure, and something to write with. You can [use this document](#) to record data, or you can have students record it in their notebooks.

1. Open up the measurement app on your phone or tablet. If you have an iPhone or iPad, this [app is called "Measure."](#) There is also a ["Measure" app available for Android.](#) There are also a number of other similar apps available in the app stores.
2. Find 10 items to measure. They can be anything. (However, if they're only using a ruler, you might recommend they don't pick something too large.)
3. Use the app to measure the item.
4. Use the ruler to measure the item.
5. Compare the measurements.
6. If they don't match up, try measuring again.

*Possible modifications, you can also have students:*

*Estimate the length before measuring*

*Determine the difference in length if the two measurements don't add up.*

**Play one of the apps from the "Math: The Universal Language AR" series to practice multiplication or division and get hands-on experience with AR.**

## Measurement and Augmented Reality

<http://teacher.7generationgames.com/measurement-and-augmented-reality/>

**This lesson plan hits math standards that require students to learn about measurement and multiplication. Students measure objects using an AR measuring tool and an actual ruler and then compare. They then go on to play "Math: The Universal Language AR" to practice multiplication through the augmented reality experience.**

# Math, Writing, and AR

You don't have to just hit one subject in your lesson plan. You can integrate more.

<http://teacher.7generationgames.com/math-writing-and-ar/>

This lesson plan hits not only on math, but writing too. Have students play "Math: The Universal Language AR," practice multiplication, and then create sentences using the multiplication problems and products from the game.



## "Math, Writing, and AR"

Standard: Math (Operations & Algebraic Thinking), Writing (Range of Writing)

Grade Level: Grade 3

Grade 3 Standards Covered:

### Math

#### **Multiply and divide within 100.**

CCSS.MATH.CONTENT.3.OA.C.7

Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

### Writing

#### **Range of Writing:**

CCSS.ELA-LITERACY.W.3.10

Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Directions: Write sentences using the **multiplication problems and products** from "Math: The Universal Language AR."

**EXAMPLE:  $5 \times 6 = 30$**

**Sentences:** Edwin received 5 brand new video game cards for each week he does his chores. Edwin has completed his chores for the last 6 weeks. We know that Edwin has 30 video game cards since  $5 \times 6 = 30$ .

# Treasure Hunting AR!



Another fun activity that you can do with your child at home is have them hunt for the "Counting By 2 Languages AR" or "Math: The Universal Language AR" Cards, bring them to you to be given a device, and then have them practice counting, multiplication, or division. Also, a great way to get them moving around! \*

<https://www.7generationgames.com/if-you-want-you-r-kid-to-do-something-else-than-watch-tv/>

\*Home use only due to possible social distancing practices in the classroom.

# In conclusion...

- Utilizing virtual-world learning through augmented reality makes math fun.
- It's familiar to students (i.e. Snapchat filters and Pokémon GO).
- Familiarity creates engagement and promotes learning.
- Take advantage of virtual-world learning and using that in standards-based lesson plans.
- 7 Generation Games provides AR apps and standards based lesson plans that make learning fun.





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