3/23/20

Virtual STEM: Flags and Fractions

Materials:
Youtube/Internet Access (Phone, Computer, Tablet)
1-2 Pieces Blank Paper for Flags, 1 Piece Lined Paper for Answering Questions (or 2-3 Pieces of Blank Paper) (can print this document if printing access)
Writing Utensils (Colored pencils, Crayons, or Markers Recommended)

Note for Parents/Guardians:
Ms. Chaelee will provide fraction answers for worksheet on Wednesday- if you have time to go over the answers with your student, that would be awesome.
Some of these activities include locating a map associated with the child's ancestors- help them find the name of the country if they do not know it. If you do not know it, they can choose a country of their choice.
Anywhere that is red is for writing!

Introduction (10 min)

First, watch this video about flags:
https://www.youtube.com/watch?v=6HWfE3tIXIM

Write Down from Memory on a separate piece of paper:

What are the two most common flag colors?

_____ and _____.

What is the common difference about unusual/unique flags?

They all have different _____.

Write down two reasons why flags can be similar.
   1. _____.

   2. _____.

Rewatch the video to finish your answers or to check your answers.

Decide on 1-3 of your favorite flags!

Which countries have your favorite flags and why do you like them?

Write On the Separate Piece of Paper:

1.
   I like the flag from _____ (country) because

   _____ (reason).

2.
   I like the flag from _____ (country) because

   _____ .

3. **I like the flag from _____ (country) because**

   _____ (reason).

Activity #1: Flags and Determining Their Fractions (20 min)
In a separate tab, open and/or print
https://drive.google.com/open?id=1zZp5zSpcOANGD3C9Oz7DOMwgIMBz7XZf
Adapted from NYC DOE's Third Grade: Learn at Home Math Resources
https://www.schools.nyc.gov/learn-at-home/activities-for-students/grades-k-5/third-grade

For each flag, write down the colors which are on it and what fraction of the flag they make up, as shown in the example with Poland.

Italy:

Sierra Leone:
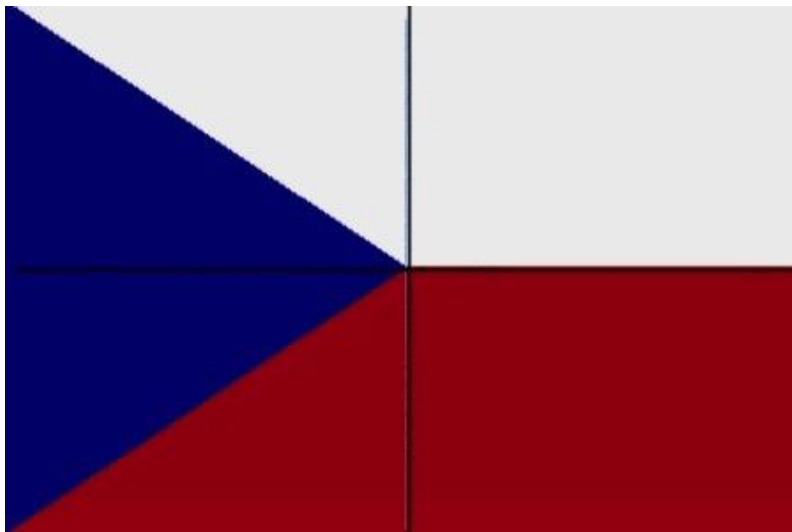
Nigeria:

Madagascar:

Mauritius:

Colombia:

Challenge Czech Republic:
Hint: What imaginary lines can you draw on the Czech Republic map to determine the fractions of colors on the left side of the map?

How many new, equally sized rectangles do you have?
On the left-hand side of the map, how much of each rectangle is blue? Red? White?

Challenge!!!
Now, *estimate* (make a good guess) at what fraction of the United States flag are which colors?

Red is _____

Blue is _____

White is _____

Hint: Remember that the fractions must add up to 1!
If you need more help:
First, estimate how much of the total flag is the red and white stripes. Are there more red stripes or white stripes?
Second, estimate how much of the flags is the blue background and white stars.
Is there more blue or white in this section?
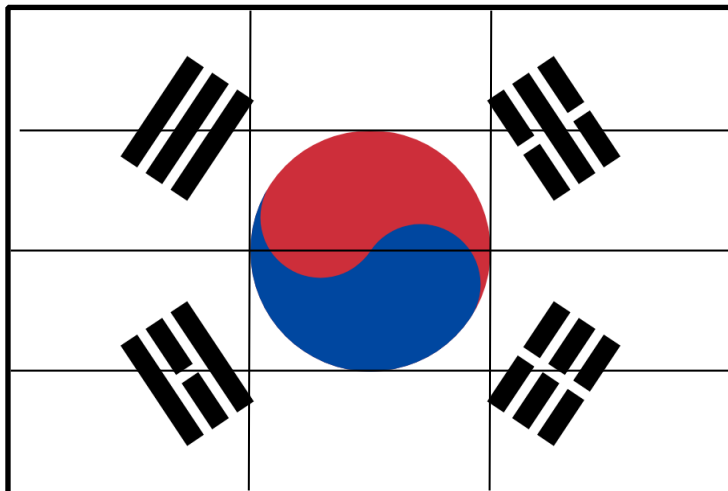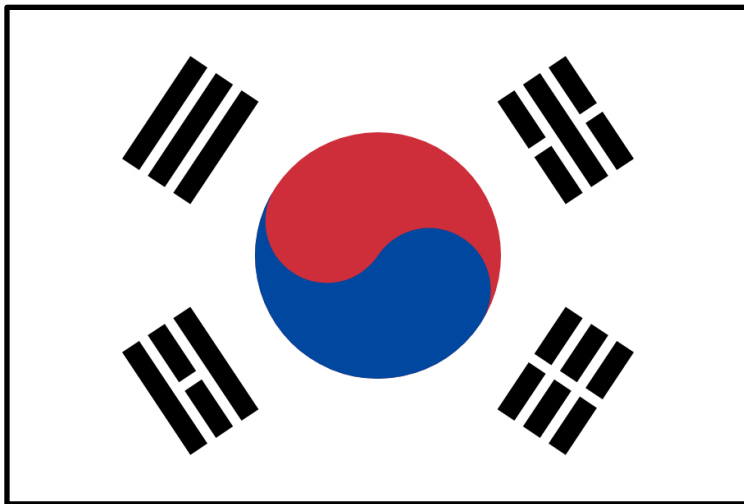**Check that the fractions add up to 1!**

Activity #2: Your Ancestors' Flag (10 minutes)

Look up the flag of the country where you were born, the country or countries where your parents were from, or the flag where your *ancestors (*grandparents, great-grandparents, or other relatives) are from.

On a separate piece of blank paper, draw this flag for yourself!

Challenge: *Determine* (figure out) or *estimate* (make a good guess) at what fraction of the flag is which colors? Check that your fractions add up to 1 in total.

For example, Ms. Chaelee was born in South Korea. Here is the South Korean flag:

Ms. Chaelee first divides the flag up into 12 different equal sections. From there, she can estimate that :

1/12 of the flag is red
1/12 of the flag is blue
1/12 of the flag is black
3/4 of the flag is white.

Ms. Chaelee checks that her fractions equal 1:

1/12+1/12+1/12+ 3/4 =?

Now, looking at the flag of your ancestors, write on a separate piece of paper:

I/my ancestors are from _____.

Then, depending on the type of flag, *determine* (figure out) or estimate (make a good guess) on what fraction of your flag is what color.

If you need to *estimate*, try dividing your flag into equal sections (like Ms. Chaelee did) and then counting how many of the sections are mostly 1 color.

On the flag,

_____ (fraction) is _____ (color)

_____ (fraction) is _____ (color)

_____ (fraction) is _____ (color)

_____ (fraction) is _____ (color)

_____ (fraction) + _____ (fraction) + _____ (fraction) + _____ (fraction) = ? (should equal 1)

Activity #3: Design Your Own Flag (15 min)

First, read the Flag Color Guide to see what colors often represent in different flags:
https://www.kids-world-travel-guide.com/flag-colors.html

Using a new blank piece of paper, design your own flag with different colors. If you don't have colored pencils, crayons, or markers, label each section by the color.

Write down what fractions of what colors you used (for example, I used 1/3 red, 1/3 green, and 1/3 purple).

Check to make sure these fractions add up to 1:

Exit Survey (10 min)
Based on your study, fill out your exit survey here:
https://forms.gle/VBXhxX7Dpuuzv1sZ8
. Make sure to have your maps and the answers to your question nearby!