Creating Equity with H5P Activities

Dr. Kim Johnson
Mathematics Department
Technology Showcase 2023

Drag and Drop

Create drag and drop tasks with images

Interactive Video

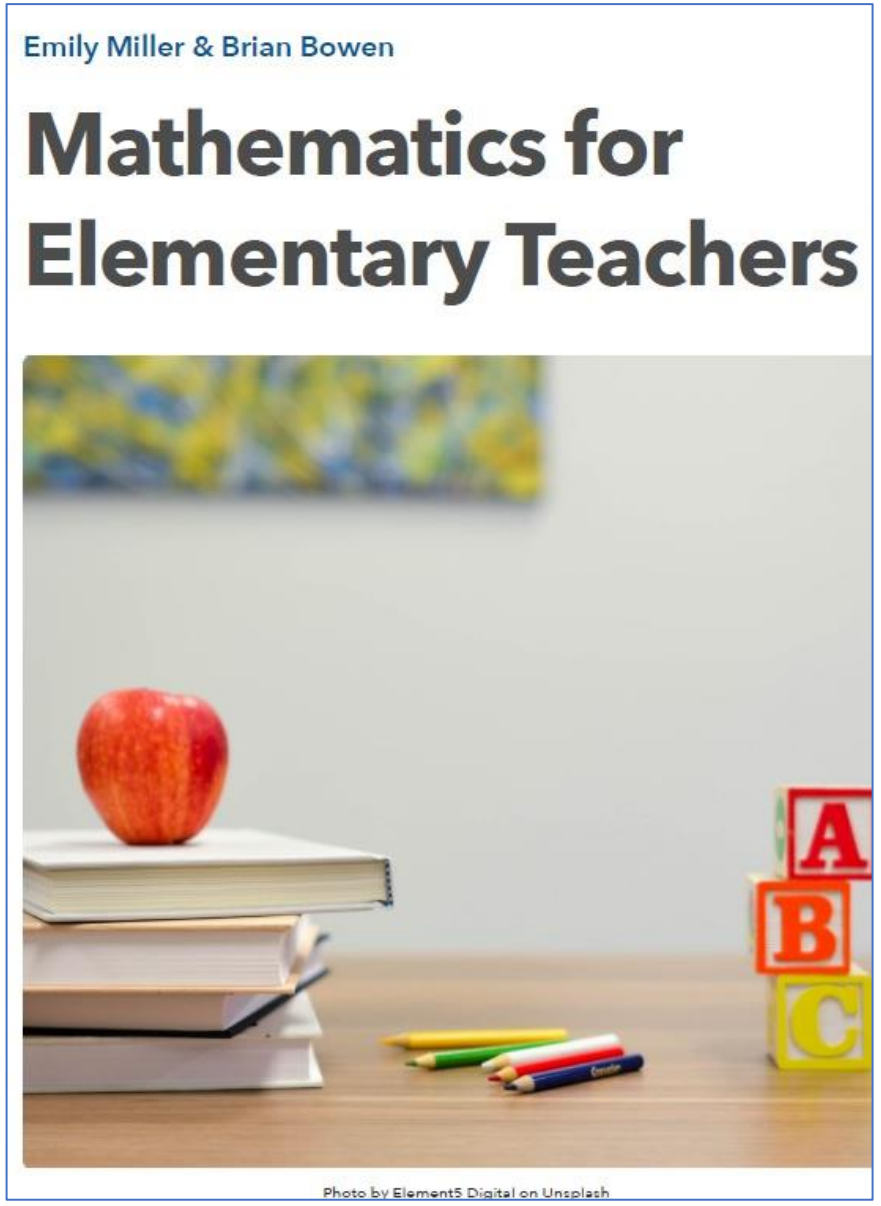
Create videos enriched with interactions

Background: Equity in Classroom with Open Education Resources (OER)

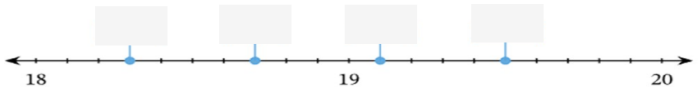
- Since 2017, it is estimated that students have saved **$9 million due** to the faculty's intentional use of OER in courses.
- A study as part of the Achieving the Dream OER Degree Initiative found that students enrolling in 1 or 2 OER courses on average attempted **2.05 more credits**
- At Montgomery College (MC) the estimated return on investment from combined increase in credit activity was **$518,000,** or 30% (ATD OER Degree Initiative ROI Analysis, 2018).

Why E-Textbook + online h5p activities?

- H5P replaces a suite of fee-based practice activities
- H5P allows for activities that align BETTER with the new textbook content
- H5P allows for activities that can BETTER prepare the students for the future careers as teachers
- H5P allows for activities that are more visual and hands-on problems
- H5P allows for everything to be all in one place (d2l)



Drag & Drop the Decimal in the Correct location on the Number Line:



18.1 | 18.2 | 18.3 | 18.4 | 18.5 | 18.6 | 18.7 | 18.8 | 18.9 | 19

19.1 | 19.2 | 19.3 | 19.4 | 19.5 | 19.6 | 19.7 | 19.8 | 19.9

SET MODELS

If this Represents $\frac{3}{7}$:

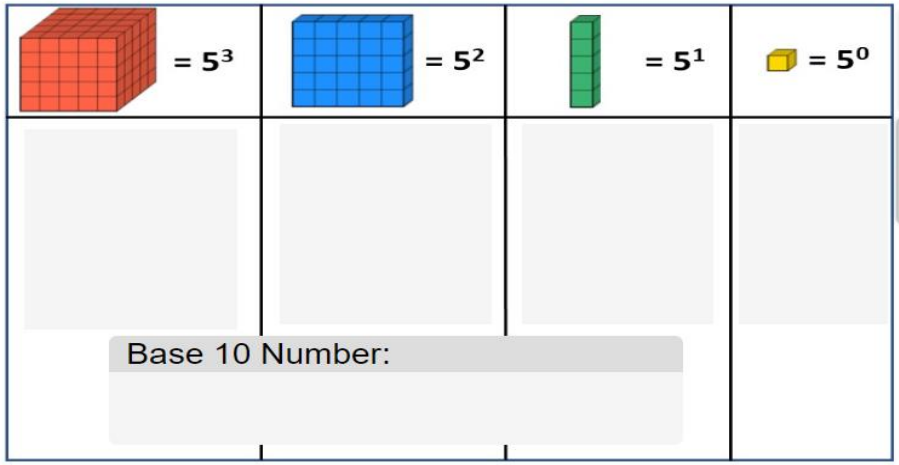
1. Create **1**:
2. Create $\frac{1}{2}$:
3. Create $\frac{5}{14}$:

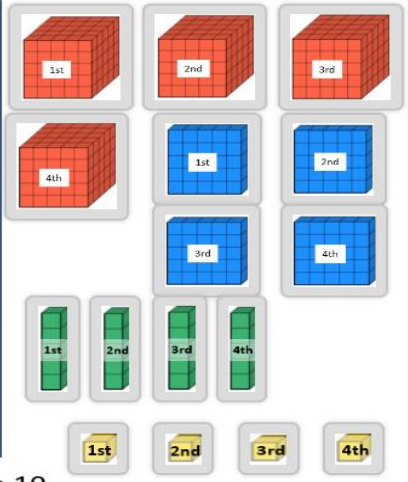
Drag the words into the correct boxes

1. 5/9 _____ 5/13 using the _____ because each fraction has the _____ but 5/13ths fraction has _____ making it the smaller fraction.
2. 5/9 _____ 8/9 using the _____ because each fraction has the _____ since the denominators are equal but 5/9ths has _____ making it the smaller fraction.
3. 8/9 _____ 12/13 using the _____ because each fraction is _____ but 12/13ths has _____ making it "closer to 1" and a larger fraction.
4. 5/8 _____ 3/14 using the _____ because 5/8 is _____ and 3/14 is _____ making 5/8 _____

same number of pieces | a larger fraction | smaller pieces | < | more than ½ | a smaller missing piece | larger sized pieces | Common Numerator Strategy | same sized of pieces | less than 1 | greater | > | Benchmark of 1 Strategy | less than ½ | greater | >

Create a Number in Base 5 with Blocks #1





Create 2013_{five} with base 5 blocks then determine its value in Base 10

58 | 268 | 258 | 138 | 253 | 53

Check

Fill in the missing number

1. Convert 4420 BASE 5 to Base 10: _____ BASE 10

Check

Fill in the missing number

2. Convert 1104 BASE 5 to Base 10: _____ BASE 10

Check

Sample of Types Activities

RESULTS

Students Satisfaction

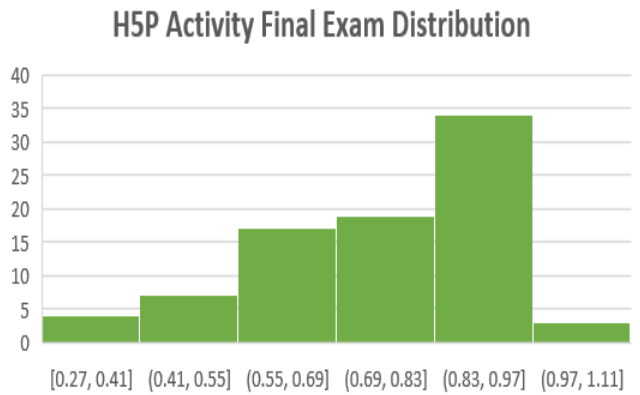
The following are comments from a student survey:

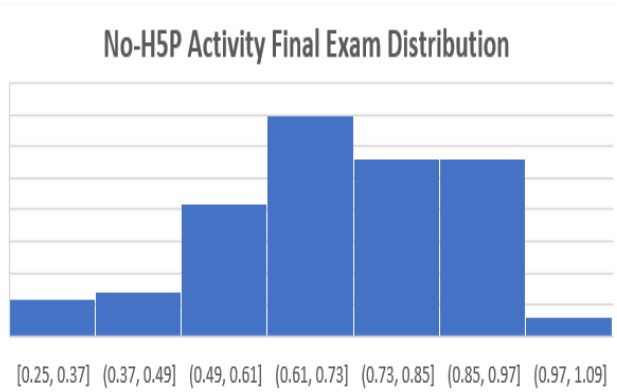
“I think the module work that I do outside of class is most beneficial. I think this because in class I fill out notes and do the problems, then I go home and apply what I learn to the module. I feel like it helps me really understand what I am learning; it is just extra practice that I can do to truly understand what I am learning in class.”

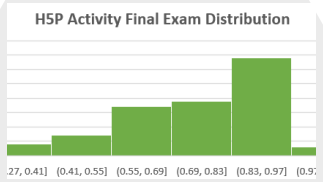
“I think the modules most beneficial for me because it allows me to practice and see what I know but also see what areas that I still need to work on. This is also a great way to get more practice in if needed.”

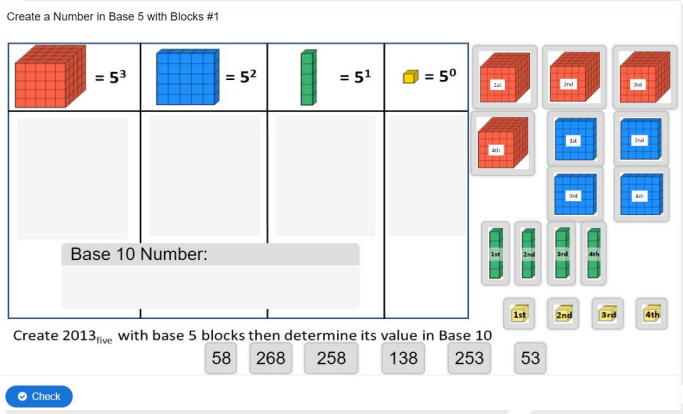
Academic PROFICIENCY

- Using a one tailed t-test of two independent means and level of significance of 0.05 and Comparing Common Final Exams.
- The results from test give a *t*-value of 1.74904. The *p*-value is .040872. The result is significant at $p < .05$









Dr. Kim Johnson

kjohnson2@wcupa.edu

Thank You