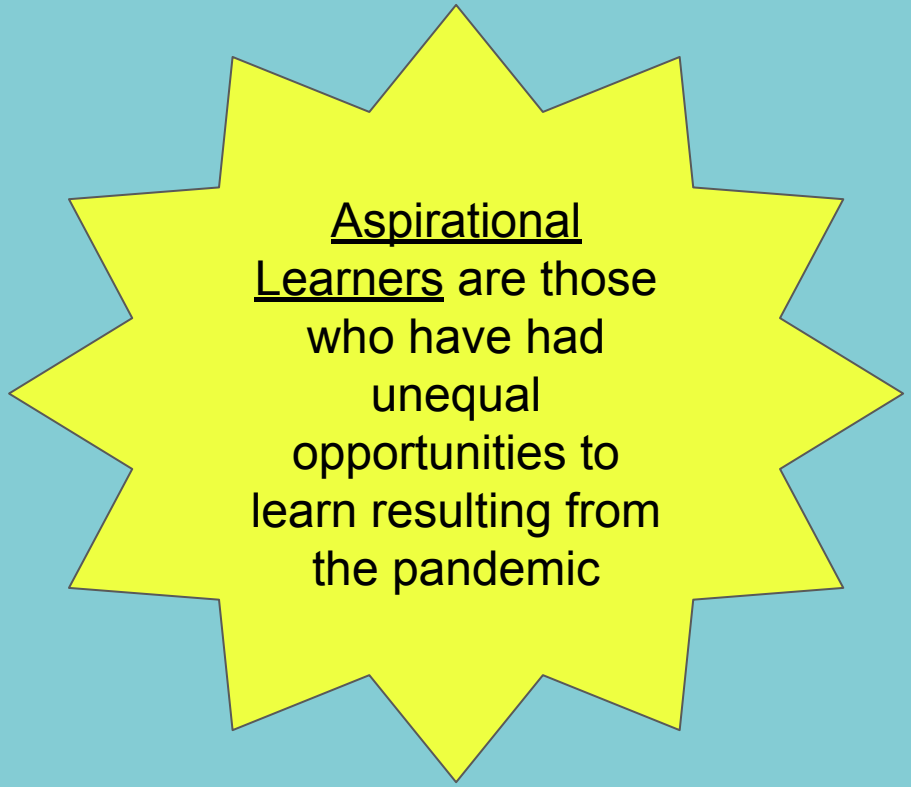
Getting REAL **R**e-**E**ngaging **A**spirational **L**earners



Upcoming Facilitator Training & Information Sessions K-8

https://crr.math.arizona.edu/events-0

Registration at:

https://forms.gle/re51oLirrLcWjpEo9

April 20

5:30-6:30 PM

May 4 & 18

8-9 AM or 5:30-6:30 PM

As many as 54,000 Arizona students were unable to attend school regularly during the 2020-2021 school year. More students report struggling to learn based on learning environment, curriculum, instrucitonal delivery, etc.
Students, parents, and teachers are looking for ways to help learners develop the understnadings necessary for successful progress through grade levels.

Our Goal

The CRR will provide schools with evidence-based program materials and training to
(1) re-engage these learners in exciting mathematics experiences, while
(2) meeting basic and social-emotional needs and
(3) intentionally developing connections to engage learners in their school community.
The program can serve as a **summer school** as well as an **after/before school** program.
The program meets requirements for 21st Century Learning, Tutoring grants, and ESSER/ARPA funding

Program Structures

70 min	90 min
20 min Snack and Community Activity	25 min Snack and Community Activity
10 min Instructional Build	10 min Instructional Build
30 min Experience and Exploration with Discussion	40 min Experience and Exploration with Discussion
10 min Capture/Package the Learning	15 min Capture/Package the Learning
Grade band structure works best	Grade band or grade specific structure works

Summer school
70-90 min 3-5 times a week for 1-6 weeks, a total of 30 sessions *possible*

After/Before school
70-90 min 3 times a week for 108 sessions *possible*

SAMPLE summer schedule (90)

8:00-8:25 Nutritious snack and community activity

8:25-8:35 Instructional Build

8:35-9:15 Exploration Series

9:15-9:30 Capture and Package the Learning

9:30-11:30 Additional content instruction (ELA, Science, Art, etc.)

They are enrolled in K-1

Instructional Build: Counting collections

Necessary Tools:
KP tiles, color tiles or linking cubes, and counting collections

They are enrolled in 2-3

Instructional Build: Place Value

Necessary Tools:
KP tiles, color tiles, & polygon power kit

They are enrolled in 4-6

Instructional Build: Fractions & Decimals

Necessary Tools:
KP tiles, pattern blocks (inc fraction PBs), cuisenaire rods, Polygon Power pack, & multi-colored counters

They are enrolled in 7-8

Instructional Build: Algebra

Necessary Tools:
pattern blocks (inc fraction PB), cuisenaire rods, geometric solids, and algebra tiles (can use the tiles for 2 color counters)

SAMPLE Before school (70)

7:00-7:20 Nutritious snack and community activity

7:20-7:30 Instrucitonal Build

7:30-8:00 Exploration Series

8:00-8:10 Capture and Package the Learning

SAMPLE After school (90)

3:00-3:25 Nutritious snack and community activity

3:25-3:35 Instructional Build

3:35-4:15 Exploration Series based on the BIG Ideas, aligned to the clusters

4:15-4:30 Capture and Package the Learning

K-1 Grade band

K.CC.A/ ECE S1 QTY 15 Week 1-5	K.CC.B/ ECE S1 QTY 15 Week 6-10	K.CC.B & K.MD.B/ ECE S1 QTY 18 Week 11-16	K.MD.A/ ECE S3 QTY 9 Week 17-19	K.G.A & K.G.B/ ECE S4 QTY 12 Week 20-2	K.NBT.A/ ECE S1 QTY 14 Week 24-28b	K.OA.A/ ECE S2 QTY 12 Week 28c-32b	K.CC.C/ ECE S1 QTY 13 Week 32c-36

2-3 Grade band

1.NBT.A & 1.MD.A QTY 12 Week 1-4	1.NBT.B/ 2.NBT.A QTY 12 Week 5-8	1.OA.A & 1. MD.C/ 2.OA.A & 2MD.D QTY 17 Week 9-14b	1.OA.B/ 2.MD.A & 2.MD.B QTY 15 Week 14c-19b	1.OA.D QTY 8 Week 19c-22a	1.NBT.C/ 2.NBT.B QTY 12 Week 22b-26a	1.G.A 2.G.A QTY 8 Week 26b-28	1.MD.B/ 2.MD.C QTY 9 Week 29-31	1.OA.C/ 2.OA.B QTY 8 Week 32-34b	2.OA.C QTY 7 Week 34c-36

4-6 Grade band

3.NF.A QTY 8 Week 1-3b	4.NF.A QTY 6 Week 3c-5b	4.NF.C QTY 5 Week 5c-7a	3.NBT.A & 3.MD.A& 3.MD.B(4)/ 4.NBT.B(4) QTY 10 Week 7b-10b	3.OA.A QTY 5 Week 10c-12a	3.MD.B(3)/ 4.OA.A & 4.MD.A(1)/ 5.NBT.A(1,2) QTY 8 Week 12b-14	4.NBT.A(1, 2) 5.NBT.A(3) QTY 8 Week 15-17b	3.OA.B & 3.OA.C & 3.MD.C/ 5.MD.C QTY 9 Week 17c-20b	4.NBT.B(5,6) 4.MD.A (3)/ 5.OA.A(2) & 5.NBT.B(6,7) QTY 7 Week 20c-22

2.MD.C/ 3.MD.A/ 4.MD.A(2)/ 5.MD.A QTY 6 Week 23 - 24	3.MD.D/ 4.OA.A & 4.OA.B QTY 5 Week 25 - 26b	4.NF.B & 4.MD.B/ 5.MD.B & 5.NF.A & 5.NF.B QTY 6 Week 26c - 28b	3.OA.D/ 4.OA.C/ 5.OA.B QTY 6 Week 28c - 30b	ROUNDING 4.NBT.A(3)/ 5.NBT.A(4) QTY 5 Week 30c - 32a	3.G.A/ 4.G.A & 4.MD.C/ 5.G.B QTY 11 Week 32b - 35	5.G.A QTY 3 Week 36

7-8 Grade band

6.RP.A/ 7.RP.A & 7.G.A.1 QTY 15 Week 1-5	6.NS.C QTY 12 Week 6-9	6.NS.A & 6.NS.B/ 7.NS.A QTY 12 Week 10-13	6.EE.A QTY 9 Week 14-16	6.EE.B/ 7.EE.A & 7.EE.B QTY 14 Week 17-21b	6.EE.C & 6.G.A/ 6.EE.B & 7.G.A & 7.G.B QTY 17 Week 21c-27a	6.SP.A & 6.SP.B QTY 11 Week 27b-30	7.SP.A & 7.SP.B QTY 10 Week 31-34a	7.SP.C QTY 8 Week 34b-36

**Clusters are aligned to PREVIOUS year's standards
**Clusters are mapped to unfold a story across the year

Enrichment grade bands:
K
1-2
3-5
6-7

The way I feel about school is:

The way I feel about coming to the program is:

The way I feel about learning math is:

The way I feel about me is:

The way I feel about asking questions in school is:

Questions	Never	Seldom	Often	Usually
I feel confident enough to ask questions in my mathematics class.				
I get nervous when asking questions in class.				
I am afraid to give an incorrect answer during my mathematics class.				
I believe I can understand the content in a mathematics course.				
I worry I will not be able to understand mathematics.				
I believe I can learn well in a mathematics course.				
I worry that I will not be able to learn well in my mathematics course.				
I feel that I will be able to do well in future mathematics courses.				
I worry that I will not be able to do well in future mathematics courses.				

I want to tell you _____

Next steps

Inform the CRR that you will be participating in the program. https://docs.google.com/spreadsheets/d/1N8TbzaWZ6J2ULXl8c1kvkYZq0AdhigQNwnXbdJ0OLBk/edit?usp=sharing

Provide the facilitator names and email addresses.

Sign up for the rest of the training. Begin the process of structuring the program for your context, purchasing the manipulatives, and promoting the program.

What questions do you have?

Manipulative Costs

KP Mathematics:

KP Tiles Build to 1000 set $317.60 if the purchaser states that this is for the Getting REAL program

ETA Hand2Mind:

K-1: $90.40 per class of 20

2-3: $149.50 per class of 20

4-6: $369.30 per class of 20

7-8: $280.00 per class of 25

Free shipping

EAI:

K-1: $148.43 per class of 20

2-3: $170.35 per class of 20

4-6: $1273.48 per class of 20

7-8: $796.94 per class of 25

Free shipping

**See slide notes for more information regarding counts.

SAMPLE SESSIONS

Session 5 of 15
6 RP.A/ 7 RP. A & 7 G.A.

7-8

Group Table

Name of student that did the search:				Name of group members:					
Actual Categories									
Actual Count									
Example Categories	Cottage Core	Grunge	Retro	Dark academia	Light academia	E-Girl	E-Boy	Steam Punk	Witch
Example count	4	1	3	5	4	5	4	2	2

Community Activity

As we eat our snack I want you to think about and be ready to finish the prompt:

Share one object that is most like you and why.

Let's go around and share, I will go first.

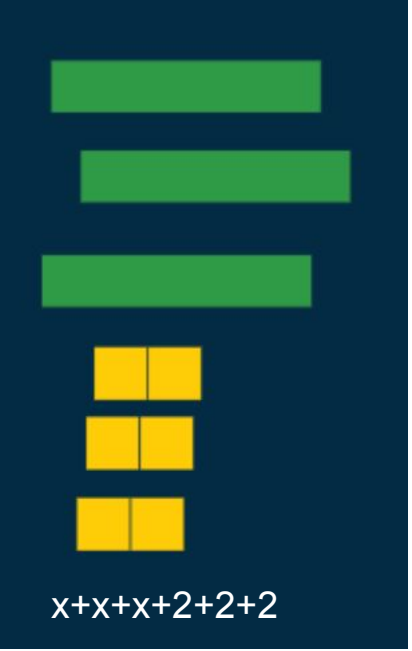
Possible facilitator response: A cloud is most like me because it is always changing and I change a lot and have my whole life. Also, sometimes a cloud is loud and angry but sometimes it is soft and peaceful, floating through the sky. Sometimes I feel stormy, while other times I feel like I am just floating through life.

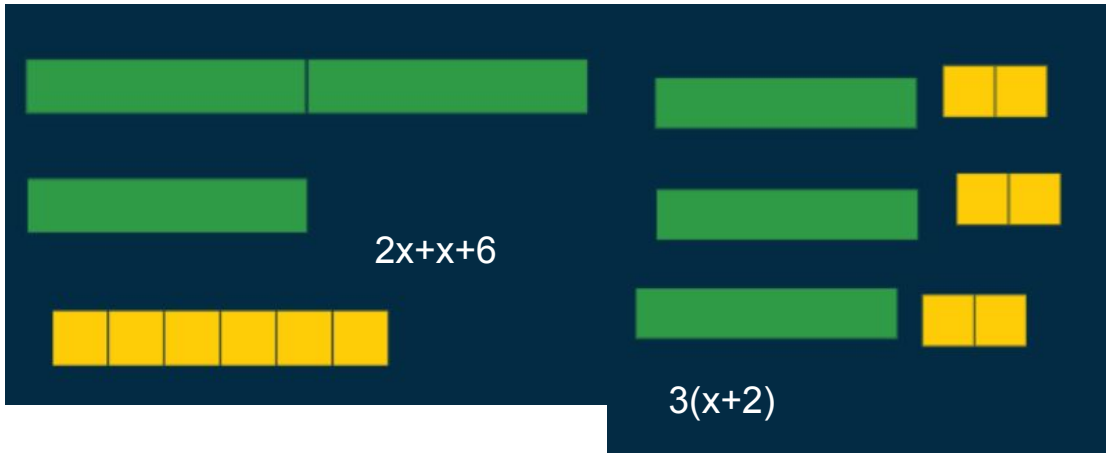
Instructional Launch

Elizabeth is certain there are only 2 equivalent expressions to the following expression:

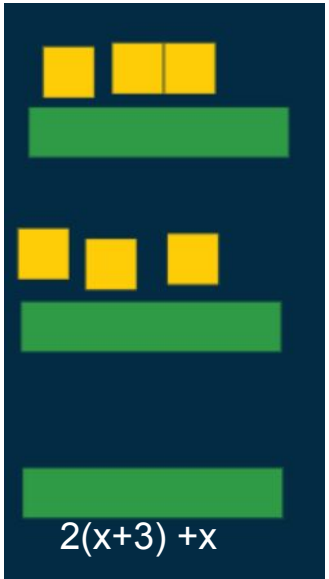
$$3x + 6$$

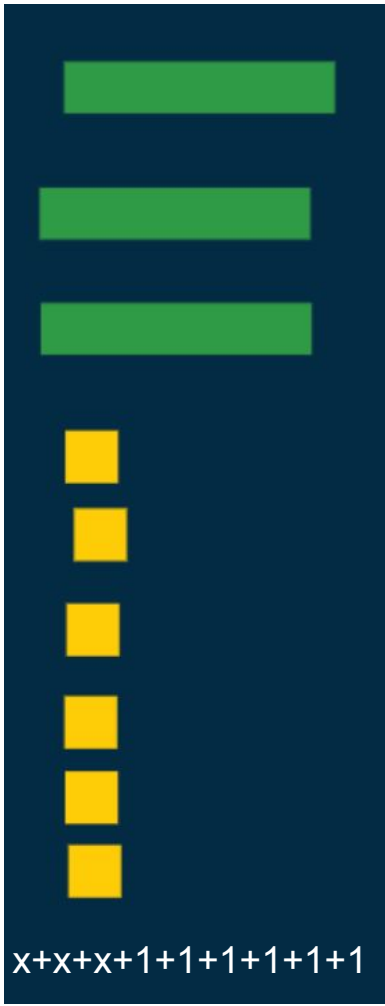
Using your Algebra Tiles, prove Elizabeth right or wrong.





EXAMPLE builds





Instructional Launch- EXAMPLE RESPONSES

Elizabeth is certain there are only 2 equivalent equations to the following equation:

$$3x + 6$$

$x + x + x + 2 + 2 + 2$

$2x + x + 6$

$3(x + 2)$

Elizabeth is wrong. Above are at least 3 possible responses. Students should make the original expression with their Algebra Tiles then rearrange the tiles to make equivalent expressions.

Exploration

Big Idea: A ratio is a multiplicative comparison of two quantities, or it is a joining of two quantities in a composed unit. Reasoning with ratios involves attending to and coordinating two quantities.

Cluster: Understand ratio concepts and use ratio reasoning to solve problems.

Math Goal: This is the fifth session that is working with ratios. The goal is for students to work with ratios and talk about ratios in order to build a sense of what a ratio is and the multiplicative relationship of a ratio.

Is Google showing you what it thinks you care about?

Recently a middle school class investigated results from a common Google search. They claim that Google is filtering the results according to what Google thinks the person likes.

Let's investigate that claim.

The class asked students to do a Google Image Search on "clothing aesthetics". Students were asked to locate the first 20 images and classify them by aesthetic type. The class then analyzed the results.

Note: if an image is or depicts a broad range of aesthetics it is eliminated (as it cannot be classified) and the next image replaces it.

Note: some images show as many as three specific aesthetics. In this case, three different tallies are marked (one for each category).

Work in groups of 3 [or 4], using ONE group member's results, Record your data on the group table.

After you have categorized each, please record your results on the class table.

Class Table

Categories													
Group 1 Counts													
Group 2 Counts													
Group 3 Counts													
Group 4 Counts													

Analysis Discussion

What do we notice about the number of results in the different categories? [list on the board]

Can you write your results as ratios? For example, Team 3 found 2 Steam Punk images and 4 Cottage Core images. The ratio would be 2 to 4.

Do you see any other interesting ratios in our results? [list them on the board]

What do these ratios make you wonder? [list on board]

What do you notice about the ratios? [list on the board]

Can we draw a fair conclusion yet based on our analysis?

Something I am beginning to understand about ratios is

A picture of that is:

The best part of today's session was

K.OA.A Session 3 of 12

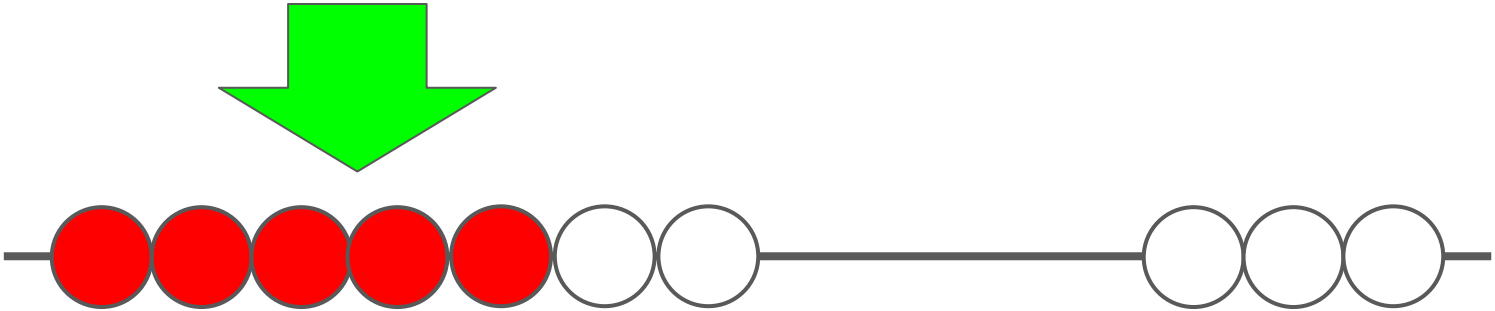
K-1

Community Activity

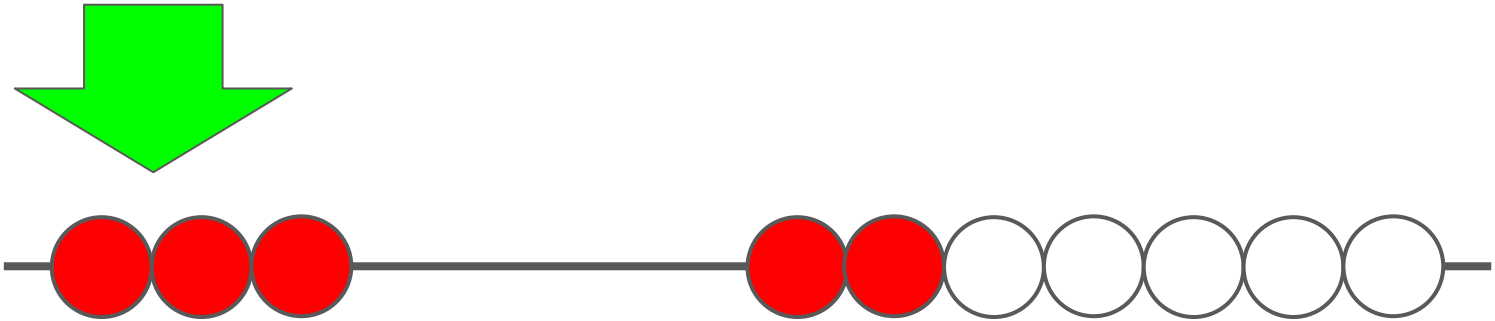
I got in trouble yesterday because I was running around the house and my baby brother was taking a nap. I didn't even know that my brother was sleeping. Have you ever **not** known something that was going on around you? What was it and how did you handle it?

Who wants to share?

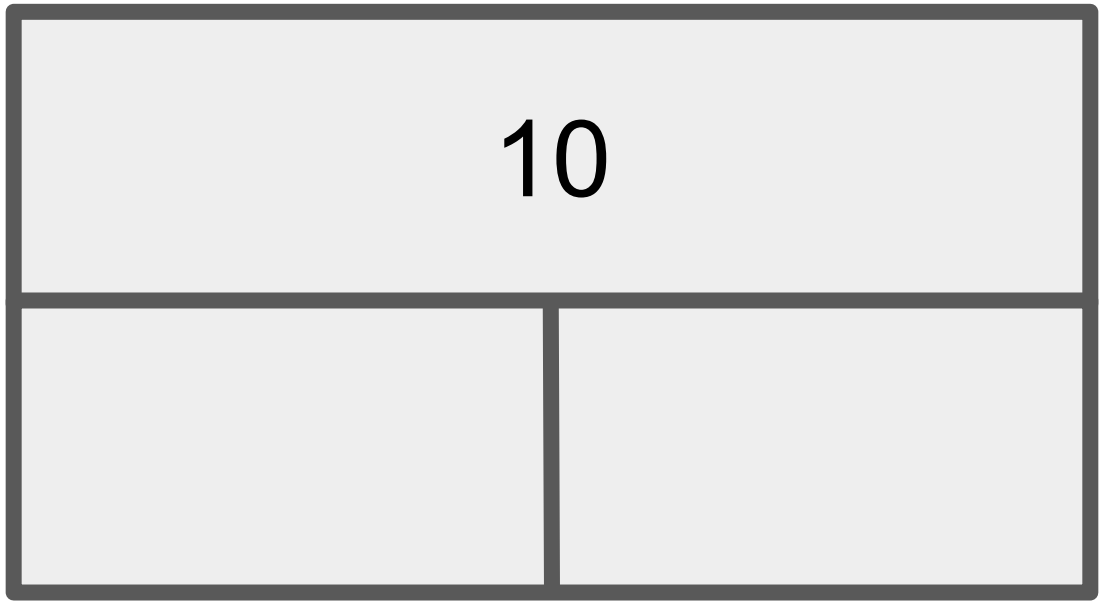
How many do you see and how do you see them?



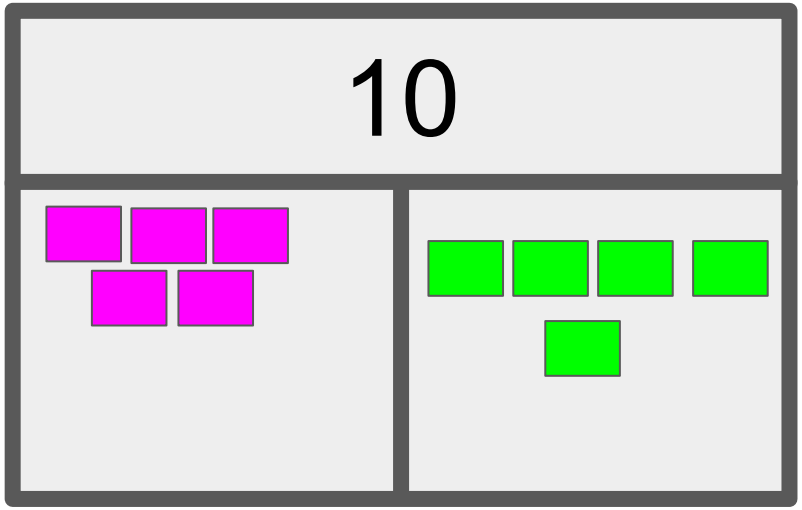
How many do you see and how do you see them?

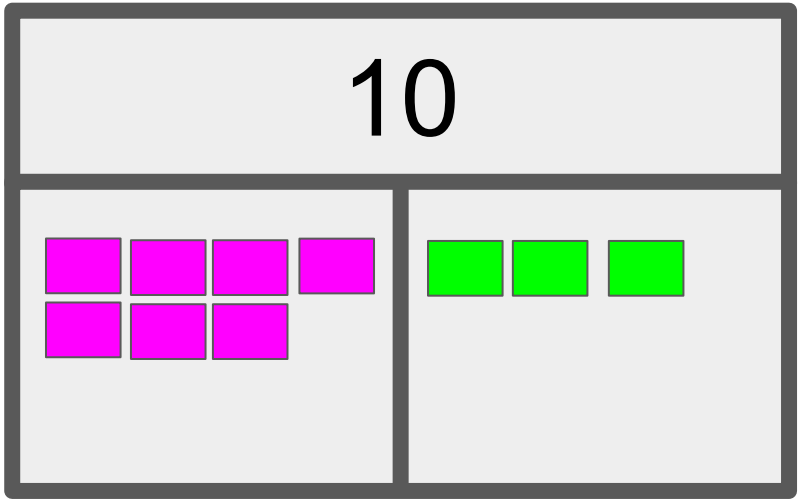


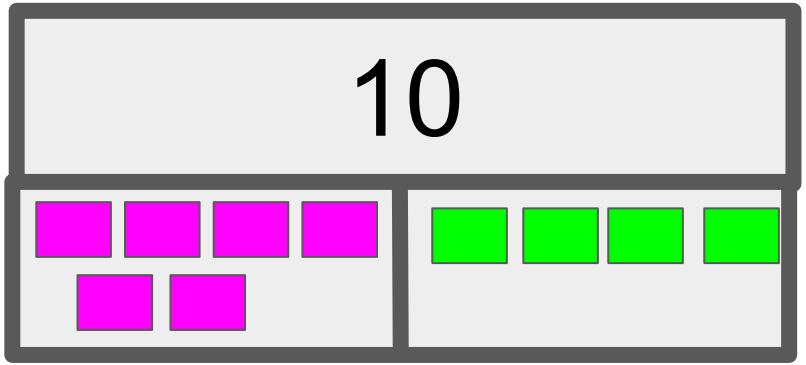
Build

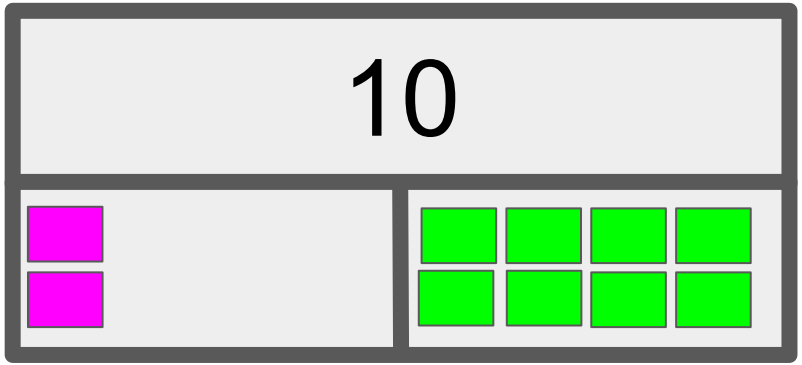


EXAMPLE









Exploration

Cluster: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Big Idea: Adding means putting together or joining. Subtracting means taking apart or unjoining.

Math Goal: Students will explore subtraction in a story format

Explore

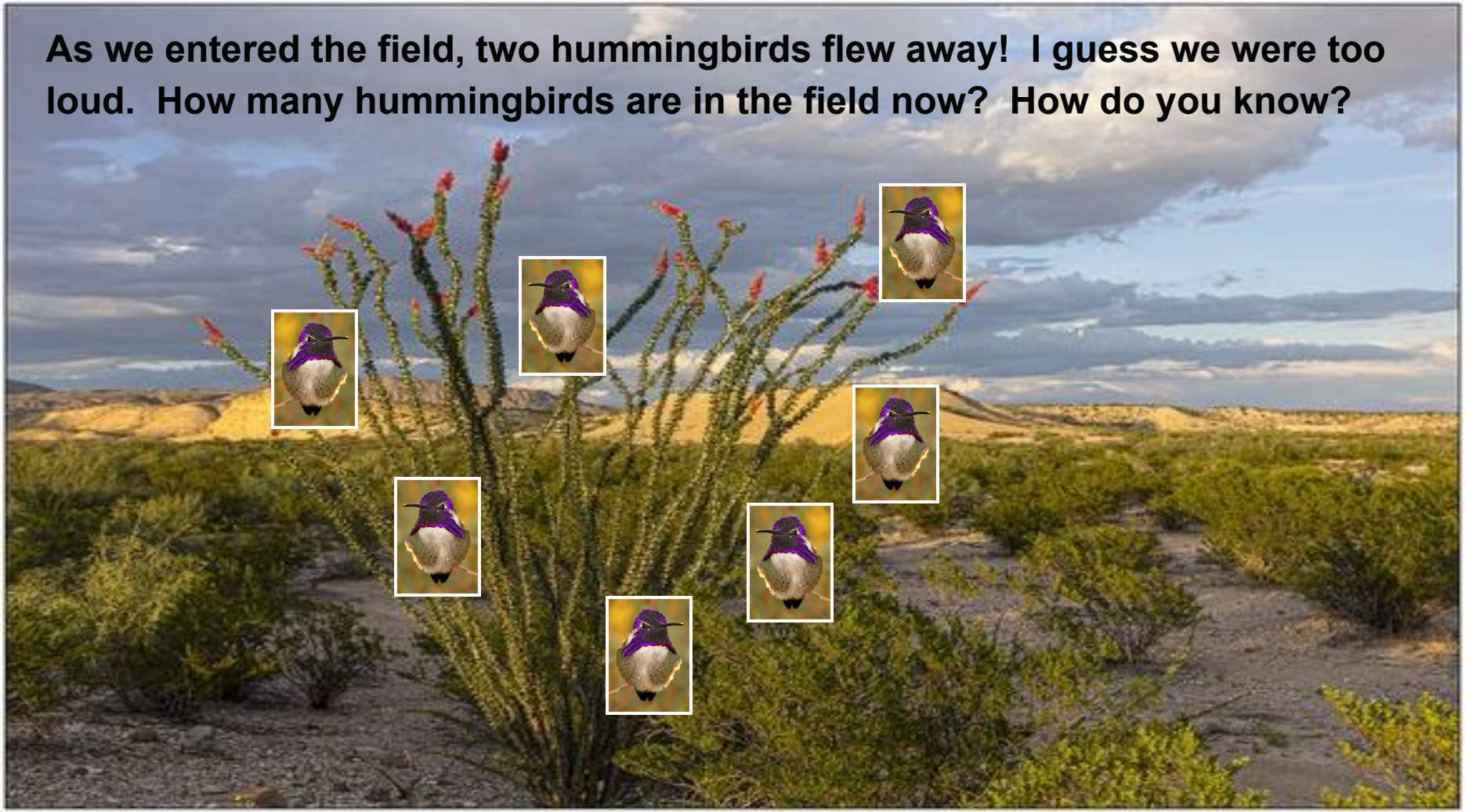
Last month I went with my family to visit my nana in Douglas. One of the coolest things we did while I was there was visit the San Bernardino Wildlife Refuge. We encountered the sweetest hummingbirds. These hummingbirds had purple heads! I learned that they feed off the flowers of ocotillos and other native desert plants. As we hiked around the refuge we came upon a field of ocotillos and hummingbirds. How many hummingbirds do you see?



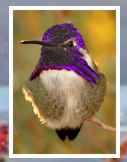




As we entered the field, two hummingbirds flew away! I guess we were too loud. How many hummingbirds are in the field now? How do you know?



A gust of wind kicked up a bunch of dust and I began sneezing. When I was able to look back at the ocotillo I only saw 2 hummingbirds. How many flew away? How do you know?


If there is time, have them make their own hummingbird subtraction story

Let’s move to our community circle. What did you learn about counting and subtraction?