

Partitioning exploration activities



1 Show a combination

Tell a some-and-some story and give each student that many counters: 6 eggs, some have pepper and some don't.

"Show me a combination. Say it as the story."

Students split their counters and say the sentence with their numbers: 4 eggs have pepper, 2 eggs don't.

"Show me a different combination. What changed? What stayed the same?"

2 How many combinations can we make?

Keep one story with a small collection: 3 toys, some have been lost, some are still in the toy box. Students find as many different combinations as they can, showing each with counters.

"How many combinations can we make? How do you know you have found them all?"

Say each combination aloud in the sentence frame as it is found, with both numbers.

3 All or none

Stay with the story and ask directly for the edge combinations.

"Show me a combination where no toys are lost. Show me a combination where all of the toys are lost."

Students show both and say the sentences with zero said as a number: 0 toys are lost, 3 toys are still in the toy box.

"Is that still a combination? How many altogether?"

4 Non-example: the group that changed

Show a combination of 8 penguins, then rearrange into a new combination while quietly removing one counter: 4 jumped and 3 stayed.

"Some penguins jumped and some stayed. Is this a combination of our 8 penguins?"

Students count altogether, find only 7, and explain what went wrong: a combination changes the groups, never how many altogether.

"What must stay the same every time?"