Crayon Craze
Grades K-2

The Big Idea

We're all crazy about crayons, but today we're not going to use them for coloring or drawing. Instead, we're going to do colorful math to **count**, **sort**, and size up the **hottest crayon colors**!

Supplies You Provide

★ Crayons: 10-12 per kid (about 200 total)
★ Pencils: 1 per kid
★ Paper: 1 per kid
★ Sticky notes, any color: 8 (or use masking tape)
★ Writing surface, like a large sheet of paper or whiteboard

Key Prep

★ Be sure to gather as many new and/or used crayons as you can in a bucket or container. You can ask the kids ahead of time to bring in approximately 12 <u>unwanted</u> crayons from home.

What's the Math?

★ Addition and subtraction
★ Estimation
★ Skip counting
★ Bonus: Bar graphing

Kickoff

Intro to the kids: "Crayons come in all different shapes, sizes and colors, and they're really fun to draw with. But they're also great for **counting** and **sorting**. Today, we're going to explore different ways to count with crayons, and we'll do some fun math to uncover the most popular crayon colors."

Getting Your Cray-on! (10 minutes)

Intro to the kids: "First we're going to have some colorful fun with our crayons, and warm up our counting fingers!"

1. Dump all of the crayons onto the floor.
2. Have the kids compare sizes of crayons.

Ask the kids: "Which crayons are the smallest? Which ones are the biggest?"

3. Have the kids put crayons into **groups of 5** and count by 5s. Next put them into **groups of 10** and count by 10s. See how high they can count!
4. Finally, have the kids create shapes by laying out crayons. See what kinds of geometric patterns they can come up with!

The Odd Couple (20-25 minutes)

Intro to the kids: "Now we're going to play a game called The Odd Couple. Does anyone know what **odd** and **even** numbers are?" (Discuss.) "An even number is any whole number that can be cut into 2 equal parts. For example, 2, 4, 6, 8 and 10 are all even numbers. Odd numbers are not divisible by 2, such as 1, 3, 5, 7 and 9." (Discuss. Show groups of crayons that can be split evenly and groups that cannot; Write odd and even numbers 1-10 on the large writing surface to serve as a reminder.) "Now that we know the difference, let's see who can stay in the game the longest. As you'll find out, it's all in the numbers!"

1. Put the bucket of crayons in the center of the room.
2. **Pair off** the kids. If you have an odd number of kids, you can make a group of 3.
3. Have each kid grab a **handful of crayons** and count them.

Ask the kids: "Count the crayons you and your partner have altogether. How many do you have? If it's an even number, you're out. **Odd totals stay in**!"

4. Kids who are still in the game return their crayons to the bucket, then grab a **new handful** of crayons.

Ask the kids: "How many crayons do you and your partner have now? **This time**, **even totals stay in**!" (Change up the rule each time so they don't game the system!)

5. The remaining kids in the game return their crayons to the bucket and grab a new handful of crayons. If **all remaining pairs** are knocked out, they all get to stay in for another round.

Ask the kids: "Compare your crayon count with your partner's, then **subtract** the smaller number from the larger. Odd answers stay in!"

6. Play multiple rounds alternating the rules above until just one pair remains – the winners! If you like, divide the club into two groups to play the initial rounds – then have the winners of each group face off in an Odd Couple Tournament!

A Touch of Class: "We just had some colorful fun adding up our crayons! We also learned about even and odd numbers, just like in math class."

Size It Up! (20-25 minutes)

Intro to the kids: "Now that we're expert counters, we're going to estimate how many crayons we have – then count to see who's right!"

1. Make sure all crayons are returned to the bucket in the center of the room.

Ask the kids: "How many crayons do you think are in the bucket?"

2. Have the kids **estimate** and write down their guesses or write them on your large sheet of paper or whiteboard.

Ask the kids: "Are your guesses close to each other or far apart?" (Discuss.)

3. Now, have the kids **count** the crayons in the bucket.

Ask the kids: "Which method of estimating led to the **best guess**?" (Discuss.)

Ask the kids: "Which color do you think is most popular?"

4. Kids decide how they are going to **sort** the crayons into color groups (red, yellow, green, etc…) You may also want to include a "One Hit Wonders" for colors that don't fall neatly into any category.
5. Have the kids write down which color they think is most common or help them record guesses on large writing surface.
6. Have the kids **sort** the crayons into the color groups you chose above.

Ask the kids: "Which pile is the smallest?"

7. First, have kids guess how many crayons are in the smallest pile.
8. Then count to see how close they came!

Ask the kids: "Now that you know how many are in the smallest pile, can you guess how many are in the biggest pile? Try it and see if you're right!"

9. Explore different ways of counting – by 10s, by 100s – to help kids estimate.

Have the kids make a **colorful bar graph** on the floor to show how many crayons the kids collected. For each bar, have kids place one crayon for every 5 crayons in the pile. Put sticky notes as labels for the start of each color's bar:

Ask the kids: "Which color category has the most crayons? Which one has the least? How does the graph help us figure that out?"

Party Fun Fact: "All of these used crayons can be melted down to make brand new crayons! More than half a million crayons get thrown out every year. 25 pounds of used crayons can be made into 1,000 new ones!"

NOTE TO COACH: When you're done, you can send unwanted crayons to a great nonprofit, **The Crayon Initiative. For years they've been melting down old crayons and recycling them into new ones for kids in need and children in hospitals. So, they're saving the planet and helping kids! See their website for more info: **http://thecrayoninitiative.org/**