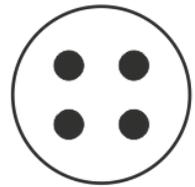


Dot Plate Activities

1. Basic Flash & Response

Flash plates for one to three seconds and ask students to respond with how many they saw. They can respond in several ways, all of which build different skills.

- a. As an introductory activity or for younger students, have students recreate the pattern on a blank plate on their desk.
- b. Oral response
- c. Students hold up number cards or number fans. This format allows all students to answer and allows the teacher to scan the responses held up.
- d. Students write responses on white boards.
- e. Students hold up the corresponding number of fingers. Have students share their finger representations and the differences. For example, for a plate showing 4 you could see some students with four fingers on one hand, or another with two fingers held up on each hand.



When students have explored part part whole relationships in other contexts, you can have them change their initial finger representation to another equivalent one.

- f. As in e, you can have students respond with fingers but they hold their hands up to either side of their head so they can't see their fingers. This is called bunny ears, and may initially be quite difficult for some students. The ability to visually picture your fingers is called *finger gnosis* and appears correlate to early math ability.

For any response method, discussion of what students saw is a critical component. Ask *How did you know that?* or *How did you see the 5?*

You should start with plates for 1 -3, and build up over time as students become proficient. Leave plates they have mastered in the mix.

2. Near Numbers

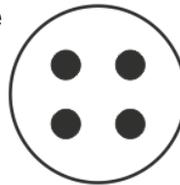
Dot plates are a great tool for exploring near numbers.

a. Near Number Flash

Tell the student ahead of time that you will be looking for *one more than* the number on the plate. Flash a dot plate for 1-3 seconds and use one of the response methods from part 1.

Once again, discussion is a critical part of the response.

For example, for one more than this plate



a student might say *I thought of a dot in the middle and it looked like the 5 on a dice* or *I added a dot on this side and it made 3 and 2*.

b. Make Near Numbers

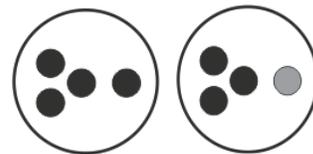
Give students two blank plates and two colour counter.

The teacher flashes a dot plate and students create one less than on the left plate and one more than on the right plate.

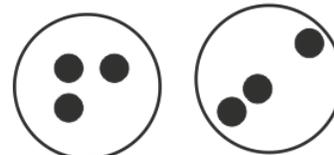
Key Points for Near Numbers

- i. Student should be familiar with different dot plate representations of the number being used. For example, if you are doing one more than and you show 4, they should know several dot plate patterns for 4 and 5.
- ii. Some plates should be made or selected ahead of time that scaffold the relationships. Other plates where the relationship is not as obvious can be mixed in.

For example, these plates are a good scaffold for one less.



While I might use these for one more.



- iii. You should usually approach the relationships in the order of one more, one less, two more, and then two less for each number.

Equality

a. **Same Same but Different**

Teacher flashes a dot plate. Students create a pattern on their blank plate that has the same number of dots but a different pattern or uses two colours. You can specify whether you want two colours on some days.

A variation is give the numeral orally or an a numeral card and students make their patterns.

b. **More & Less**

Teacher flashes two dot plates. Students put a thumb left or left to show which has more.

You should also ask which has less.

Have a fun routine for when they are equal - students get to make a wide leveling gesture with both arms, etc.

Odd or Even

Teacher flashes a dot plate. Students respond with odd or even orally or using a two sided card (word *odd* on one side, *even* on the other).

Be sure you select plates where pairs of dots can be seen.

Doubles

Teacher flashes a dot plate. Students respond with double the number of dots.

The number range should reflect the grade level, and I would normally avoid two colour plates.

Anchors

Teacher flashes a dot plate. Students respond with how far the number is from 5.

You should start numbers within two and then add other numbers less than 5 as students have explored *part part whole* for 5 in other contexts.

How far from 10 can be used for older students.

Both these activities should follow similar activities using 5 and 10 frames and after students have become familiar with the dot patterns being used.