

Lesson Plan: Using Straws to Understand Place Value

Materials:

- Straws
- Small and big rubber bands
- Boxes without lids
- Adhesive tape
- "Handout: Using Straws to Understand Place Value"

2 Guided Practice:

- Place students in groups of two to four.
- Take the time to **group, de-group, and re-group**: "You see this little bundle of straws? Can you tell me how many straws there are in this bundle? Now, let's undo the bundle and count them to be sure."
- **Gradually give more autonomy** to the students in terms of communication and the coding of information, before arriving at the point where the quantity of objects is written in the form of a number.
- Show students how to **write the number of objects**, using the handout "Using Straws to Understand Place Value"

1 Modelling:

- Count straws and always stop at 10. When you have counted 10 straws, secure them with a small rubber band: that makes **one small bundle**. When you have counted 10 small bundles, bundle them together with a big rubber band: that makes **one big bundle**. When you have counted 10 big bundles, put them in a **box**.
- Always place items on the table in the same way: boxes, big bundles, little bundles, and straws laid out on the table from **left to right** (from the perspective of the students). All of the straws, even those that are secured with rubber bands, must remain **visible at all times** and they must be easy to count.
- Coloured adhesive tape can be used to separate the different "classes".

3 Independent Practice:

- Students work with their partners/groups to count straws, small bundles, big bundles, and boxes. They may progress from counting individual straws, to **skip-counting** by tens, and finally to **writing multi-digit numbers**.
- To help consolidate the principle of tens, this process can be practiced in **reverse**. For example, a student chooses the number 205 and their partner demonstrates what this looks like using straws.

Handout: Using Straws to Understand Place Value

Name: _____

Date: _____

Instructions:

1. Work with your partner to count straws, small bundles, and big bundles.
2. Draw how many straws, small bundles, and big bundles you see in the big boxes below
3. Write down the number of straws, small bundles, and big bundles you see in the small boxes below.
4. Write down how many straws there are in all.

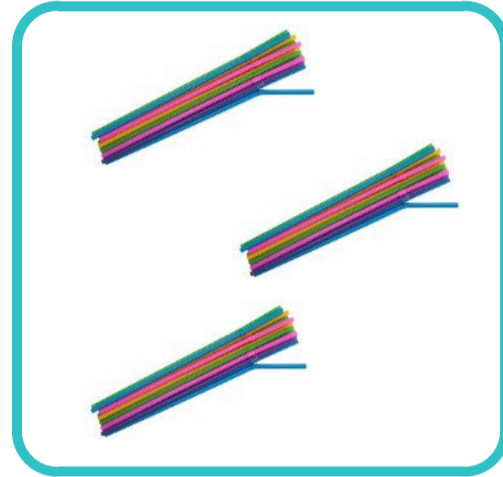
Example:

Big Bundles



I see:

Small Bundles



I write:

2

Straws



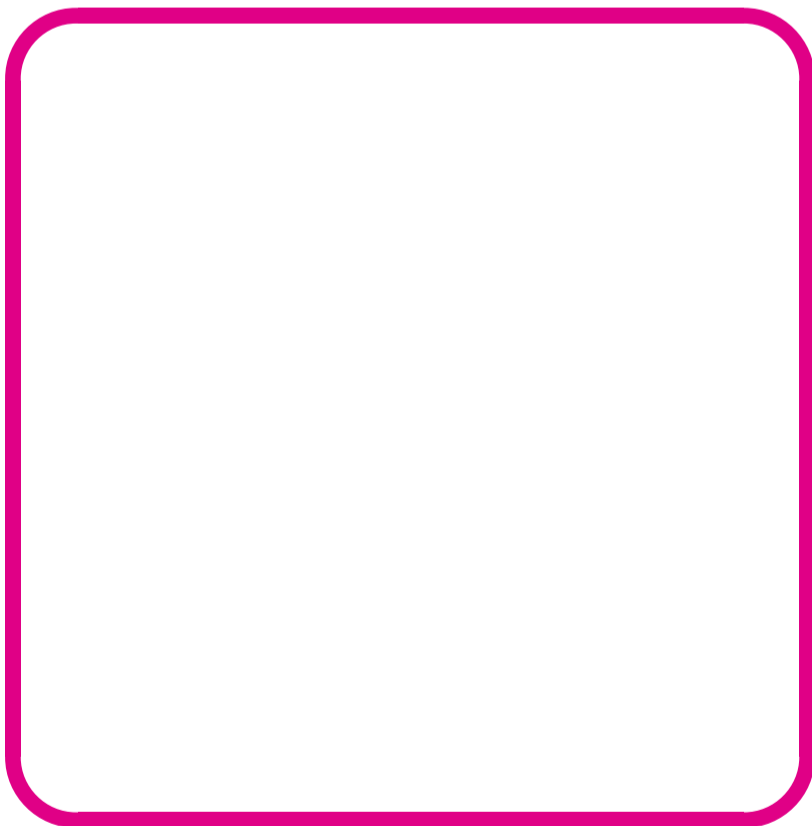
3

5

How many straws in all?

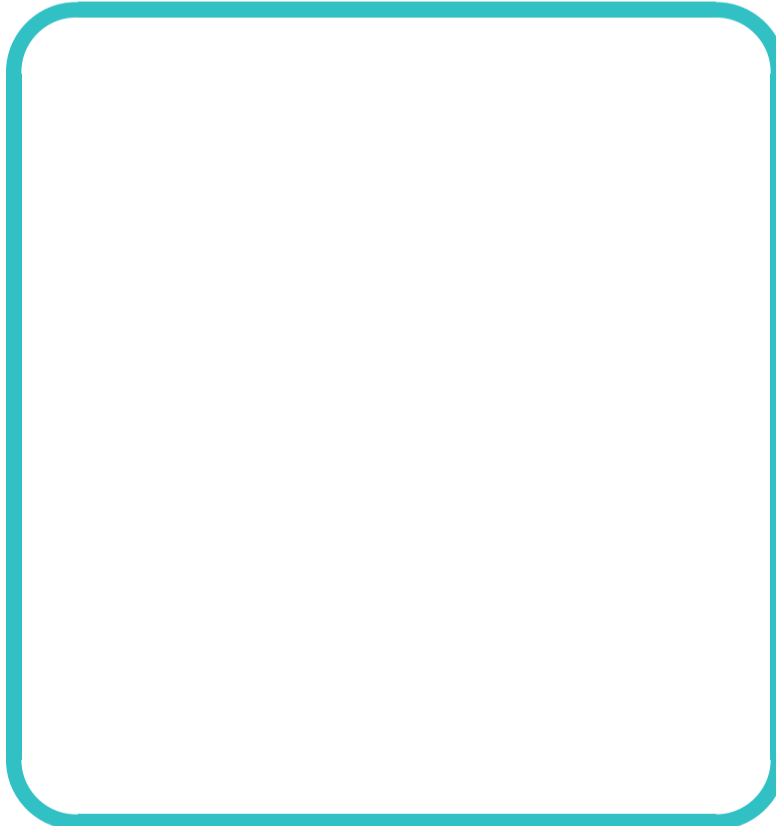
There are 235 straws in all.

Big Bundles



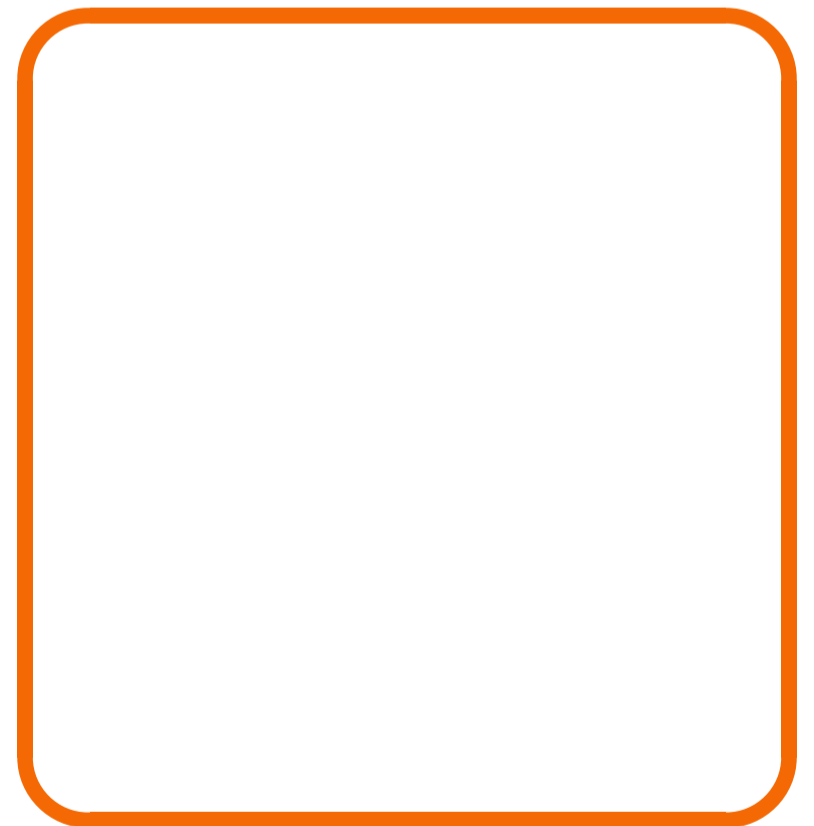
I see:

Small Bundles



I write:

Straws



How many straws in all?