

Place Value Assessment Question 5:



Objective: I can make realistic estimates of amounts of objects.

NPV4: identify, represent and estimate numbers using different representations

Assessment Task:

Set up the tables with trays or piles of different objects. Ask the children to estimate how many are in each tray/pile. You may want to make a simple sheet/table for the children to record their estimations for each tray/pile of objects. Make sure you know the amount of each object so that you can reveal the answer to the children at the end of the task. Whilst the children are estimating, observe the children's predictions and the skills they are using. Look out for children who show very little understanding, rely on counting or make very unrealistic estimations. Also look out for children who show a good understanding and a variety of skills.

Prior Learning:

 Number + Place Value	Question 5: I can make realistic estimates of amounts .	I feel
Practical: Look at the groups of objects given to you . Estimate how many objects there are.		
		

Input:

It is important for children to understand what the word estimate means and why it is used. Give the children examples of when it is used such as estimating time, estimating how many people there are in the classroom, estimating money, estimating to help with calculating, etc. Explore the definition of estimate and display this around the classroom for future reference.

The assessment question and all of the activities are practical and hands on to help the children develop their understanding of estimate, making sensible guesses and understanding that an estimate does not need to be the actual answer; a close guess is still a good estimation. You will need to ensure there are lots of different objects and different sized objects such as buttons, paper clips, grains of rice, sugar cubes, milk lids, cotton reels etc for the activities. As a school you may want to create a central store of counting boxes for the children to explore with objects in the hundreds.

Explore demonstrating skills such as:

- Estimating with different sized objects.
- Using an example to help, such as I know there are 100 objects here. Now look at this pile of objects, should my estimation be higher or lower than 100. Encourage the children to explain their choice and why.
- Amending their estimate through trial and error as they explore more groups of objects.
- Deciding if it is a good estimate or not.

Practice Activities

Purple: Most suited for children who make unrealistic estimations and have little understanding of estimation.

Make a pile/group of the same objects so that the children can use this as a comparison/example, such as 100. Discuss that this is 100 of the objects. Discuss how this information can help them to estimate. Then show the children different groups of that same object to make estimates; such as groups of 60, 129, 187. Ask the children to think about the estimates they have made and discuss which were more accurate. How do they know? What is a good estimate? Do we want to get the exact amount? I guessed 195 but the amount was 180. Did I make a good estimate? Why? Why not?

Green: Most suited for children ready to apply estimation skills to different sized objects.

Children to have different sized and types of objects to develop their estimation skills. You could encourage children to record with photographs, their estimate and then the

amount. As a challenge the children can also write about their estimating skills and if their estimation was a good guess or not.

Yellow: Most suited for children who can make realistic estimations with objects presented in front of them.

Give the children a large piles of different objects and children to estimate picking up different amounts such as 90, 162, 170, 115, etc. Children to find that many, encouraging them not to count the items but to estimate. Once they have estimated they can then count them. You could encourage children to record their work with photographs and write about their estimating skills.

Mastery:

Children to present their learning from the lesson to others. This can be done in small groups. Alternatively, the children to write their own definition of estimation and explain how it can help them in life or maths.

Key questions:

What is a good estimate? Do we want to get the exact amount? Explain how you estimated? Were any of the objects harder to estimate than others? Why?