Fraction, Decimals and Percentages Prior Assessment Question 2:

Objective: I can order and compare fractions with different denominators and numerators, including fractions greater than 1 whole

NC: NFDP2 compare and order fractions, including fractions > 1

Teacher Input Ideas:

This lesson is to help the children to compare fractions with different numerators and denominators and to be able to explain this using practical and visual resources such as pizzas, cakes, fraction circles or fraction towers. Lessons for Q3 and Q5 look at finding equivalent fractions to help compare in more depth using knowledge of multiples and factors to help.

Place 5/7 and $\frac{1}{2}$ on the board. Ask the children to say which they feel is the larger fraction. Encourage time for the children to explain how they worked this out to other children. Model the use of resources to help. Circle fraction templates or fraction towers could be used to help compare. Colour in 5/7 on one and $\frac{1}{2}$ on the other. Discuss how this has helped to see that 5/7 is larger than $\frac{1}{2}$.

Look at 4/6 and 3/5, 5/12 and $\frac{1}{4}$ and 2/3 and 4/5. Encourage children to find the smaller or larger fraction of each pair and the use of resources to help. Allow children time to explain their choice and prove this.

Practice Activities

Purple Practice: Most suited for children that made errors in **Question 2** and demonstrate little understanding of fractions.

Practical: Use pizzas or cakes that are all the same size already pre-cut into different fractions with different denominators. These could be used from lesson Q1. Or alternatively fraction circles or fraction towers can be used. This time look at the role of the numerator and ensure that the numerators are larger than 1. For example: 3/7 2/4 5/6

Write some fractions down for the children to show practically with the cakes/towers. When all the fractions have been made, compare the size and encourage the children to order. Pick two fractions and compare the size of the fractions. Children could have < and > cards to place in between the cakes/ pizzas/towers.

Key Questions: What do you notice? How did you know how to order them? What helped you to compare the fractions?

Green Practice: Most suited for children that **made errors in Question 2** and found it hard to compare fractions, but do not require as much teacher guidance.

Alongside the Green Practice sheet, children could be given fraction towers, or pre-measured fraction circle templates. Children could colour these in to help compare the fractions when looking at each question. Additionally, these images or resources will help the children to explain and prove that the statements are true or false.

This activity also provides opportunity for the children to apply their knowledge of < and > symbols and opportunity for you to ensure that the vocabulary is used accurately.

Yellow Practice: This activity provides children with the opportunity to find their own fractions to help them to compare the number of vowels in words.

Display the words on the blocks (if you wanted these could be created out of magnetic letters so that the children can sort the vowels and consonants in each word). Pose the question: "Which word has the most vowels?" Discuss children's initial answers. Why have you made that choice? Look at 'improve' and 'because' 4/7 and 3/7 so is easy to compare. Now look at 'audio' which has 4 vowels but 'because' has 4 too. How could we compare them? Let's work these out as fractions to help. 'Audio' is 4/5 let's show this with a fraction tower or a fraction circle shared equally into 5. 'Because' is 4/7 now show this as a fraction. Talk about the proportion of the whole 4/5 is larger than 4/7. Fraction towers and circles will benefit some children in comparing the fraction sizes.

Children that are ready to find equivalent fractions to help compare, could look at this. What if we made both words the same length to help compare. 5 and 7 both have 35 as a common multiple – so let's turn 4/5 into 28/35 and 4/7 into 20/35. They are both out of 35 now so it's easier to compare (may want to show this alongside a cake or circle fraction template to help explain visually).

Mastery This activity could be completed practically with the class or small groups, using 4 pizzas to show the real-life scenario.

Children will need to use the information that is provided to work out who ordered each pizza. Encourage the children to make jottings or diagrams and discuss their thought process when working it out.

To further challenge children, a link to algebra could be made. (For example) $g = \frac{1}{2}$ pizza $n = g \times 2$

Key questions: Where will you start?

- What clues do you have that are most useful initially?
- How can you prove that you are right?

Answers:

Green:

Q1) True	Q2) False	Q3) True	Q4) True
Q5) False	Q6) True	Q7) False	Q8) True
Q9) True	Q10) True	Q11) False	Q12) True

Yellow:

You are looking for the children to compare different fractions and explain how they can show which is larger by either using fraction circles or towers or some children may begin to find alternative fractions.

Audio is the largest fraction :4/5

Children may have found next closest to compare: evacuee 5/7, iguana 4/6 or 2/3 and area/audience $\frac{3}{4}$

Mastery

Darcy = Cheese Feast

Nathan = Pepperoni

Grace = Hawaiian

Sarah and Andrea= Vegetable Feast

BRICKWORK Mathematics

Green practice

LO: To compare fractions less than and greater than 1.

Look at each question below. Work out if the statement is true or false.

You may want to use images, fraction towers or your knowledge of number relationships to help you to compare the fractions.

1) $\frac{1}{2} = \frac{3}{6}$

2) $\frac{1}{2} > \frac{2}{5}$

3) $\frac{3}{4} < \frac{1}{6}$

4) $\frac{3}{4} > \frac{1}{2}$

5) $\frac{3}{12} < \frac{1}{4}$

6) $\frac{4}{5} > \frac{2}{3}$

7) $\frac{5}{4} = 1$

8) $\frac{4}{6} < \frac{3}{4}$

9) $\frac{1}{3} = \frac{3}{9}$

10) $\frac{7}{14} < \frac{3}{4}$

11) $\frac{4}{3} > \frac{12}{9}$

12) $1\frac{4}{6} = \frac{5}{6} + \frac{5}{6}$

Extension

a) Prove to your friend that the statements are true or false What will you use to help you to explain?

b) Change the false statements so that they are true?

BRICKWORK Mathematics

Yellow Practice

Lo: To compare fractions by looking at their size and proportion.

Most of the words written on the blocks below contain vowels. Which word has the most vowels?
Work out the fraction of vowels in each word. Then use this to help you to compare which words have the most vowels based on the size of the fraction.

area	Hawaiian	adjustment
please	beautiful	because
pie	letter	comfort
fly	audio	iguana
evacuee	audience	improve

Tips:
Use fraction strips, circles or towers to help compare fractions.

BRICKWORK Mathematics

Mastery

Problem solving

The Roberts family went out for a meal to a pizza restaurant. At the end of the meal there was some pizza left over.

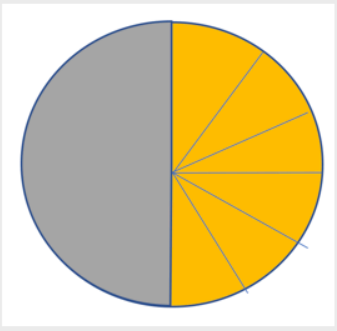
Grace left $\frac{1}{2}$ of her pizza.

Andrea and Sarah shared a pizza. Sarah ate 1/6 and Andrea ate half.

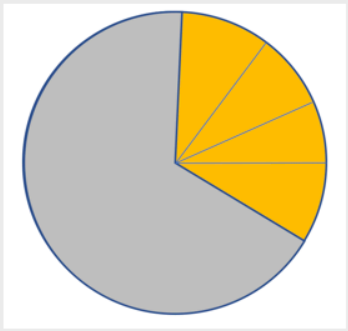
Nathan ate double the number of slices than Grace.

Darcy has a $\frac{1}{4}$ of her pizza left.

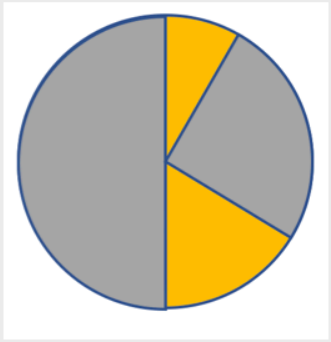
Work out who ordered which pizza.



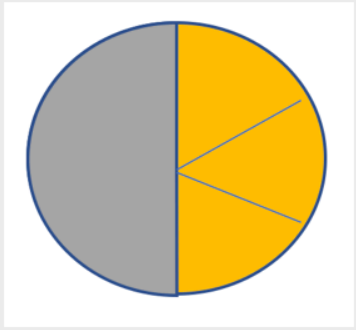
Pepperoni



Vegetable Feast



Cheese Feast



Hawaiian