Game 5N3: Fractions

Strand: Number **Strand Unit: Fractions**

Curriculum Objectives Covered:

- Compare and order fractions and identify equivalent forms of fractions with denominators 2-12
- Express improper fractions as mixed numbers and vice versa and position them on the number line
- Add and subtract simple fractions and simple mixed numbers
- Multiply a fraction by a whole number
- Express tenths, hundredths and thousandths in both fractional and decimal form

Name: "Fraction Card Races!"
Aim: To race to carry out a number of fraction-based tasks in order to win counters. Whoever has the most counters at the end of the four rounds is the overall winner.
Activity Area: Hall
Duration: 40 - 60 minutes.

Integration: Physical Education: Athletics, Games

Resources:

- At least 100 plastic counters
- 30 Fraction Cards, made up of simple fractions, mixed numbers and improper fractions (photocopiable cards attached)
- Consolation Questions (attached)
- A tub of pencils and a supply of rough work paper
- 1 whistle
- Stopwatch/Timer

Set Up:

1. Photocopy and cut out the 30 attached Fraction Cards.
2. Give each child one Fraction Card. (Any leftover cards need not be used.)
3. Put the tub of pencils and the rough work paper at one end of the hall, for the children to use if desired, to work out any answers.

Start Playing:
Round 1:

1. Split the class into approximately 4 or 5 equally sized teams, in separate areas of the hall, for the first round of the game.
2. Each child holds his/her Fraction Card in front of him/her with the fraction facing outwards

for everyone to see.

3. The teacher explains that when he/she blows the whistle, each team must order themselves to stand in a line, showing from their lowest to their highest value.
4. The first team to be lined up in their correct order and shout "Finished!" are the winners of the round. If a team shouts out "Finished!" but are actually showing an incorrect answer, they are disqualified from the remainder of the round and the other teams continue until there is a winning team.
5. Each member of the winning team receives one plastic counter and should hold onto this, or keep it in his/her pocket, until later.

Round 2:

1. For this round, the children are no longer in teams.
2. Each child chooses anywhere in the hall to stand with his/her card facing outwards.
3. When the teacher blows the whistle, the children must quickly find partners, add their two cards together and then run together to line up along a designated wall.
4. Paper and pencils are available at the other end of the hall to work out answers if needed.
5. As soon as a pair of children reaches the wall they must shout out their answer, and then line up along the wall in their order of reaching it and having shouted out their answer.
6. When all of the pairs of children are lined up along the wall, the teacher goes along the line from the beginning and the children show their cards and repeat the answers that they shouted out when they reached the wall.
7. Each pair of children in the line explains to the teacher and the rest of the class how they found their answer e.g. if a pair of children's cards showed '$^{1}/_{12}$' and '3 ½', they would have firstly found a common denominator, in this case 12, and then found the answer '$3^{7}/_{12}$'.
8. The first three pairs in the line who had correct answers each receive two counters for <u>each</u> child.
9. All other pairs of children in the line with correct answers win one counter for each child.

Round 3:

1. Round 3 is played in exactly the same way as Round 2 was played, except that this time the pairs of children must subtract their smaller fraction from their bigger fraction from their two cards, rather than add their fractions together. The designated wall should also be changed.

Round 4:

1. Before this round the teacher collects, shuffles and redistributes the fraction cards.
2. Each child takes a pencil and some rough work paper and sits on the floor anywhere in the hall.
3. The teacher explains that the children will have one minute to work out the answer to a multiplication question, write the answer on their paper and run and line up along a designated wall.
4. When everyone is sitting with their paper and pencils, the teacher calls out the following instruction and starts the stopwatch: *"Multiply the number on your card by 4, write the answer on your paper and then line up along the opposite wall to the wall we used in the previous round. Go!"* (If this round/game is repeated, the '4' should be changed to a different one-digit number each time.)
5. When the stopwatch reaches one minute the teacher blows the whistle and the children must stop what they are doing.

6. Any children who managed to work out their answers and line up along the wall within the one minute time limit, now, one by one, show their cards and answers to the class.
7. Each child in the line also explains how he/she found his/her answer e.g. if a child's card showed '$^{2}/_{6}$', they would have multiplied that fraction by 4 (or $^{4}/_{1}$) and then found their answer to be $^{8}/_{6}$ or $1^{2}/_{6}$'.
8. The first three children in the line with correct answers each receive three counters.
9. Any other children in the line with correct answers each receive two counters.
10. Any children who did not make it to the line within the time limit, or who did not find the correct answer, still, however, have the opportunity to win one counter, by correctly answering one of the Consolation Questions below. They should write their answers on their rough work paper if necessary.

- If desired, the children's cards can be collected and redistributed at any time and any or all of the above rounds can be played again for more practice with fractions.

- After all rounds of the game have been played, each child counts up his/her counters and the child/children with the most counters are the winners.

Fraction Cards (photocopy and cut out):

$\frac{1}{8}$	$1\frac{1}{2}$
$\frac{2}{5}$	$\frac{5}{10}$
$\frac{10}{3}$	$\frac{7}{2}$

$2/6$	$1/12$
$12/4$	$2\frac{1}{2}$
$3/9$	$6/4$

$\frac{4}{12}$	$1\frac{3}{4}$
$\frac{4}{10}$	$\frac{2}{8}$
$\frac{12}{9}$	$1\frac{1}{3}$

$8/4$	$5/2$
$2\frac{3}{4}$	$1\frac{3}{5}$
$8/6$	$2\frac{4}{5}$

$12/8$	$1\,1/4$
$7/4$	$3\,1/3$
$3/12$	$3\,1/2$

Consolation Questions:

1. What is $^{369}/_{1000}$ as a decimal? (Answer = 0.369)
2. How would you write the fraction 'seven tenths'? (Answer = "seven *over* ten", or $^{7}/_{10}$)
3. What is $^{35}/_{100}$ as a decimal? (Answer = 0.35)
4. How would you write $^{4}/_{100}$ as a decimal? (Answer = 0.04)
5. How would you write the fraction 'seventy nine hundredths'? (Answer = "seventy nine *over* a hundred", or $^{79}/_{100}$)
6. How would you write $^{74}/_{10}$ as a decimal? (Answer = 7.4)
7. How would you write $^{23}/_{1000}$ as a decimal? (Answer = 0.023)
8. How would you write the mixed fraction 'three and forty four thousandths'? (Answer = "three and forty four *over* a thousand", or $3^{44}/_{1000}$ or $^{3044}/_{1000}$)
9. How would you write the mixed fraction 'three and forty four thousandths' as a decimal? (Answer = 3.044)
10. What is $^{105}/_{1000}$ as a decimal? (Answer = 0.105)
11. How would you write the fraction 'nine tenths'? (Answer = "nine *over* ten", or $^{9}/_{10}$)
12. What is $^{5}/_{100}$ as a decimal? (Answer = 0.05)
13. How would you write $1^{14}/_{100}$ as a decimal? (Answer = 1.14)
14. How would you write the fraction 'fifty hundredths'? (Answer = "fifty *over* a hundred", or $^{50}/_{100}$)
15. How would you write $^{41}/_{10}$ as a decimal? (Answer = 4.1)
16. How would you write $^{2}/_{1000}$ as a decimal? (Answer = 0.002)
17. How would you write the mixed fraction 'six and two thousandths'? (Answer = "six and two *over* a thousand", or $6^{2}/_{1000}$ or $^{6002}/_{1000}$)
18. How would you write the mixed fraction 'six and three tenths' as a decimal? (Answer = 6.3)
19. How would you write the fraction 'sixteen tenths'? (Answer = "sixteen *over* ten" or $^{16}/_{10}$ or $1^{6}/_{10}$)
20. How would you say $^{56}/_{10}$ as a mixed fraction and how would you say it as a decimal? (Answer = $5^{6}/_{10}$ or 5.6)

* More Consolation Questions, similar to the questions above, should be made up if necessary. They should be based on expressing tenths, hundredths and thousandths in both fractional and decimal form.