

Maths

Addition, Subtraction,
Multiplication and Division

Marine Multiples

Aim

- I can identify common multiples.

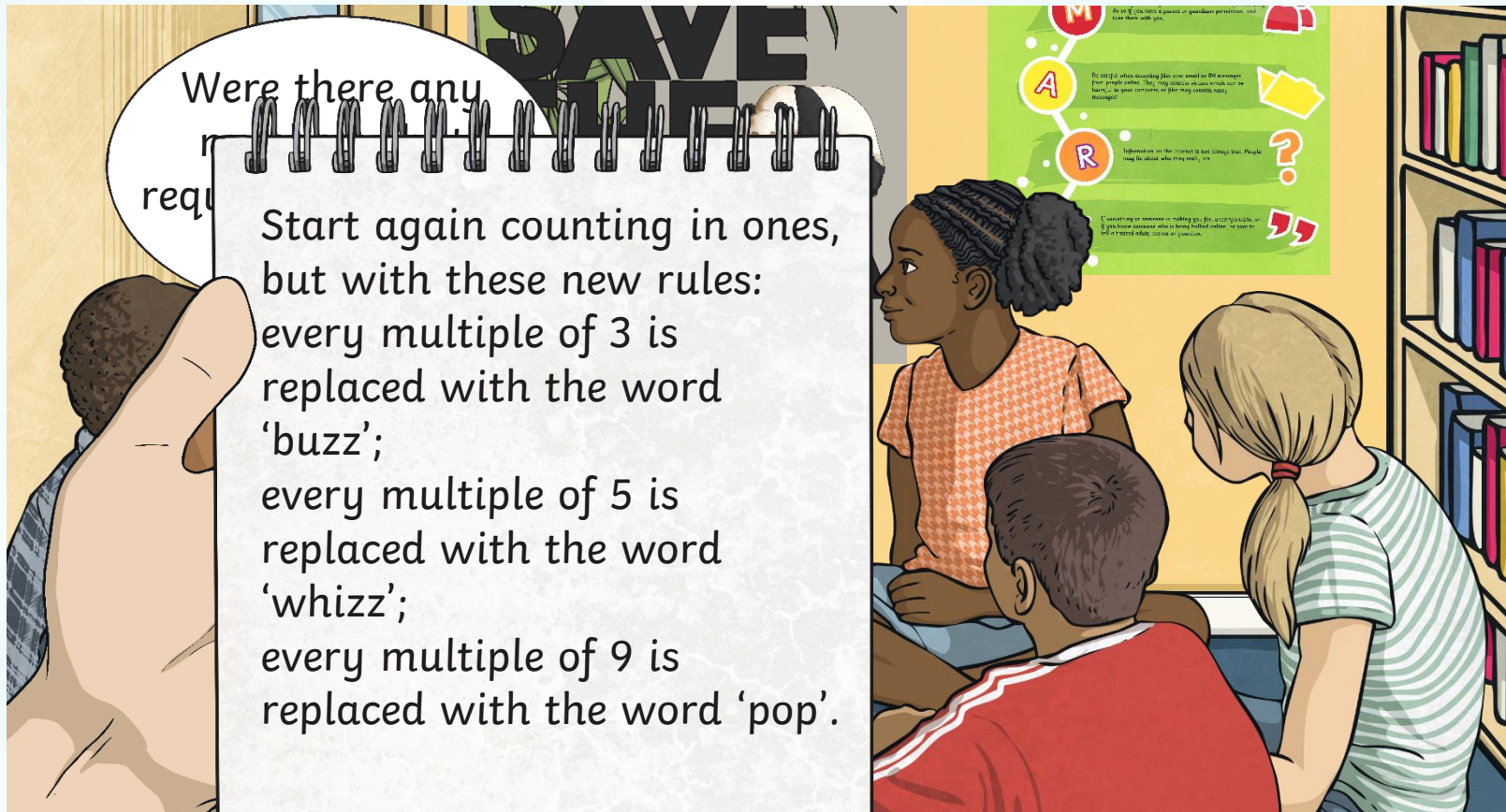
Success Criteria

- I know what 'common multiple' means.
- I can identify common multiples.

Buzz, Whizz, Pop

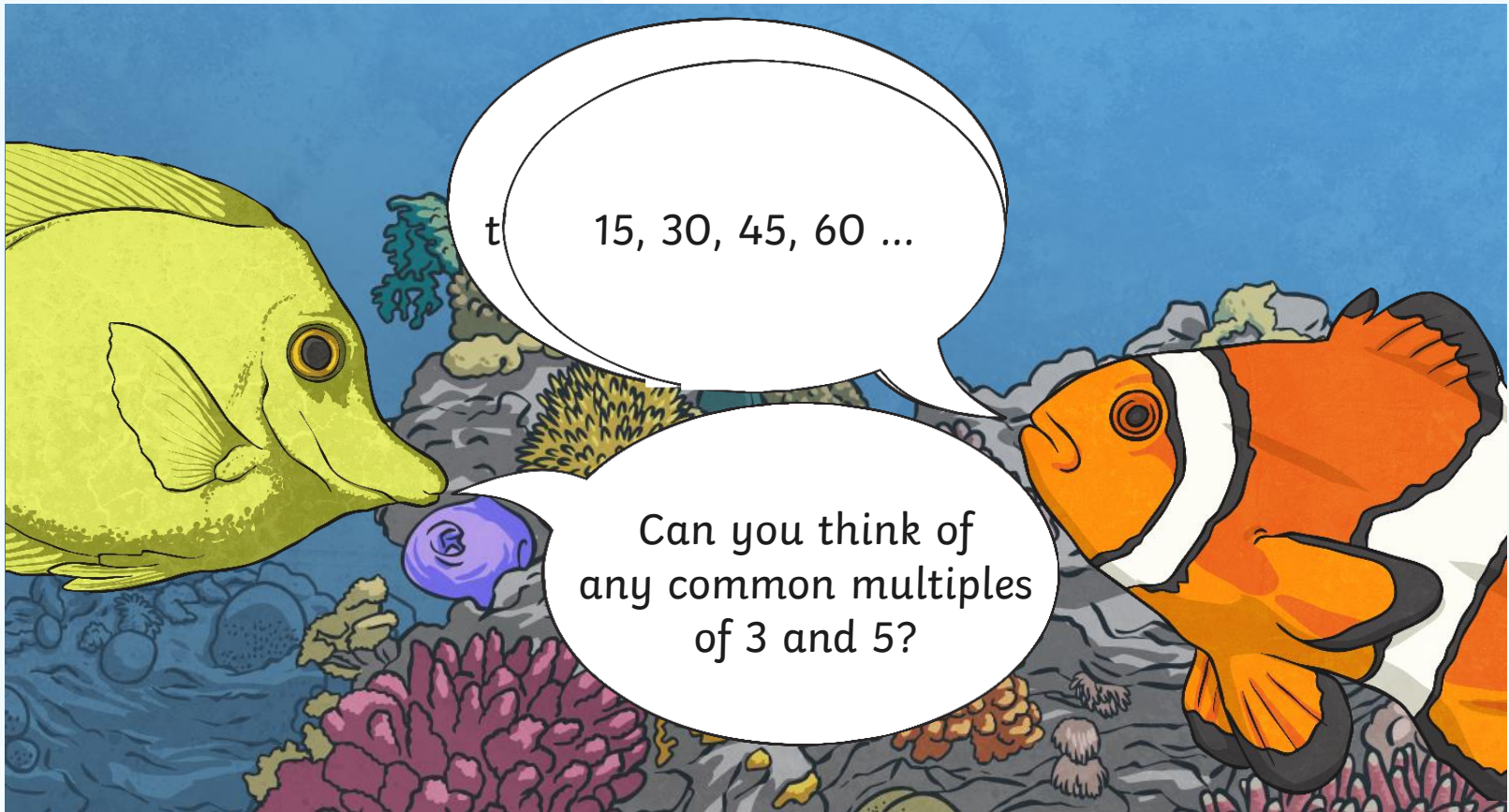


Arrange yourselves into two circles.



Sea of Numbers

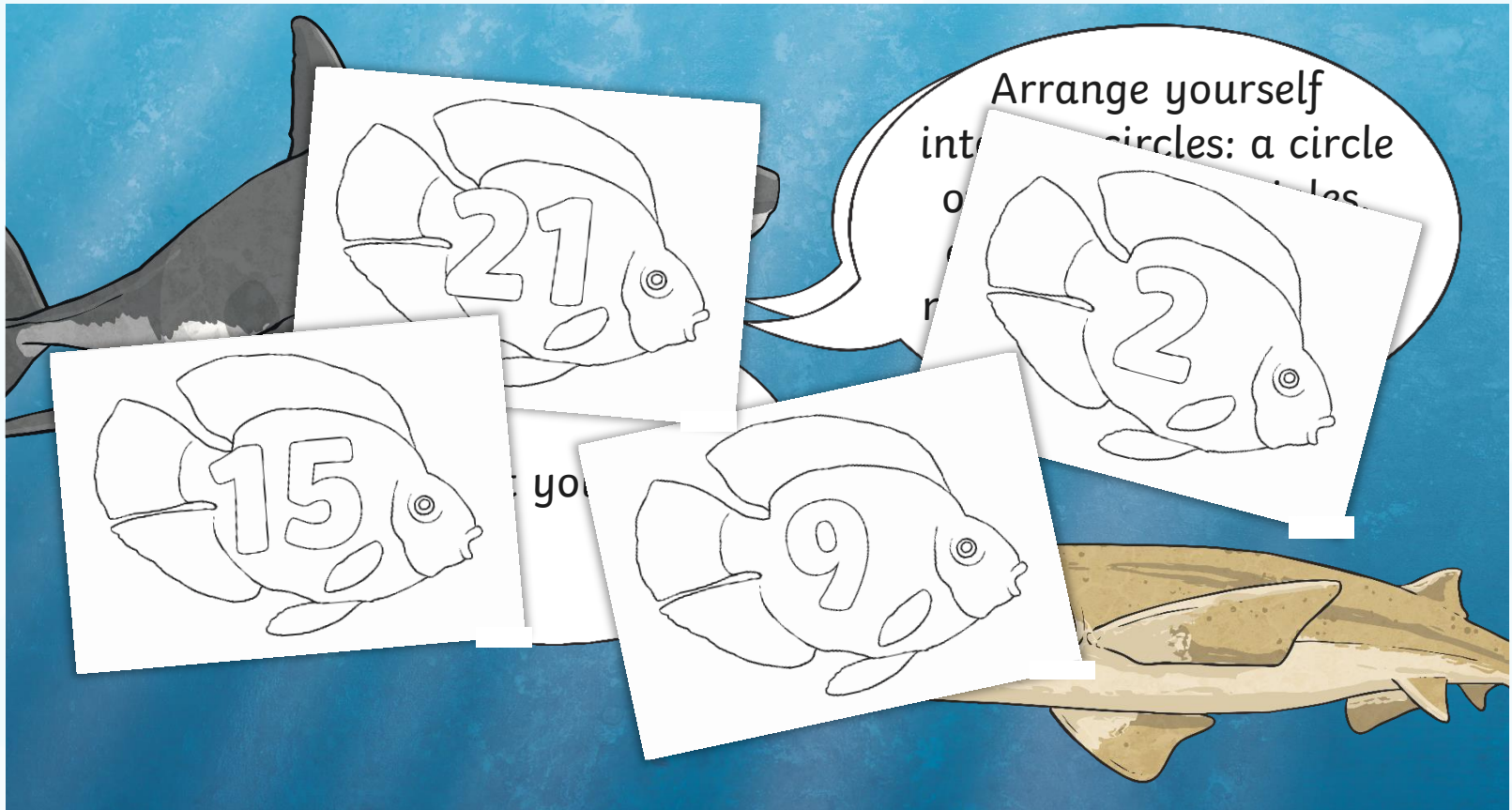
What does the term 'multiple' mean?



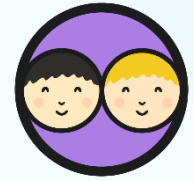
In the Deep Sea



Everybody needs a Multiple Card.



Marine Multiples



Taking turns, roll two dice.

Marine Multiples

I can identify common multiples.

Take turns to roll the two dice. Shade in any common multiples of the two generated numbers, e.g. If you rolled a 2 and a 3, you could shade 6, 12, 18 etc... in your chosen colour. If your partner has already shaded in a common multiple, you cannot have that number. The player with the most squares shaded in their colour at the end of the game wins!

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



Sea of Numbers

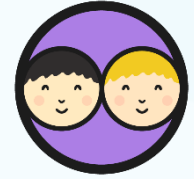
What does the term 'lowest common multiple (LCM)' mean?

Multiples of 3	Multiples of 5
3, 6, 9, 12, 15, 18, 21, 24, 27, 30	5, 10, 15, 20, 25, 30

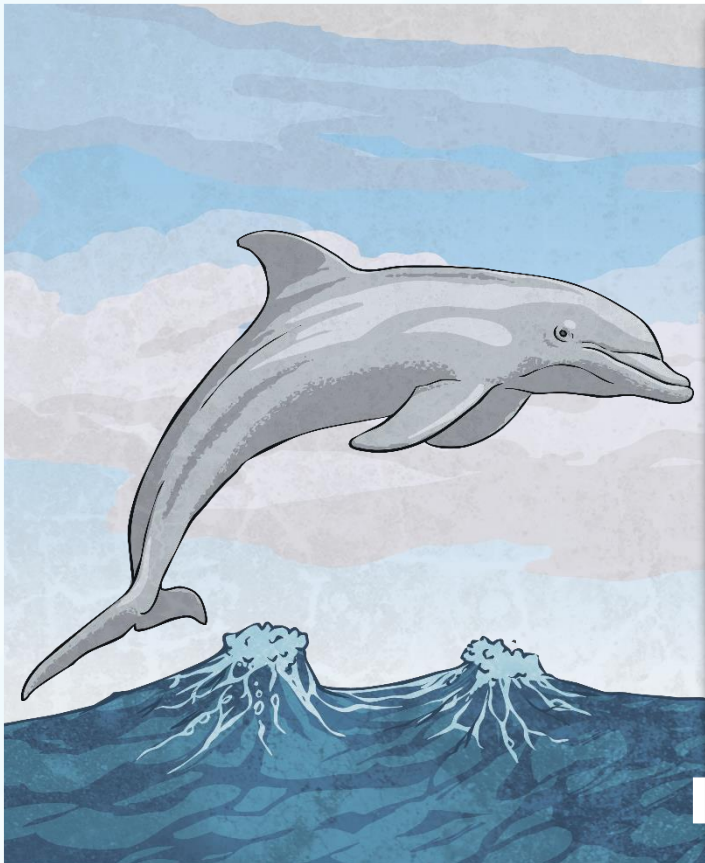
Which is the smallest number that is a multiple of both numbers?

15 is the lowest common multiple of 3 and 5.

Common Multiples



Use your marvellous maths skills to complete this activity sheet:



- 4) The marine biologists have been studying fish found in a certain group size. The size, including the lowest common group

groups of 12	
groups of seven	

- a) The lowest common group number is

groups of eight	
groups of 14	

- b) The lowest common group number is

groups of six	
groups of nine	
groups of 12	

- c) The lowest common group number is

groups of two	
groups of seven	
groups of eight	

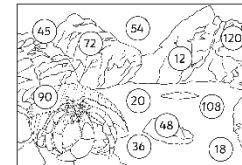
- d) The lowest common group number is

- e) The marine biologists have lost some fish. The lowest common multiple of two numbers is 36. If one number is 12, what is the other number?

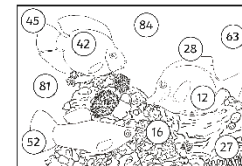
Common Multiples

I can identify common multiples.

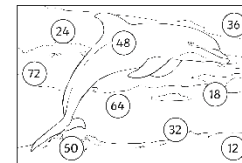
- 1) Colour the common multiples of four and nine.



- 2) Colour the common multiples of two, three and seven.

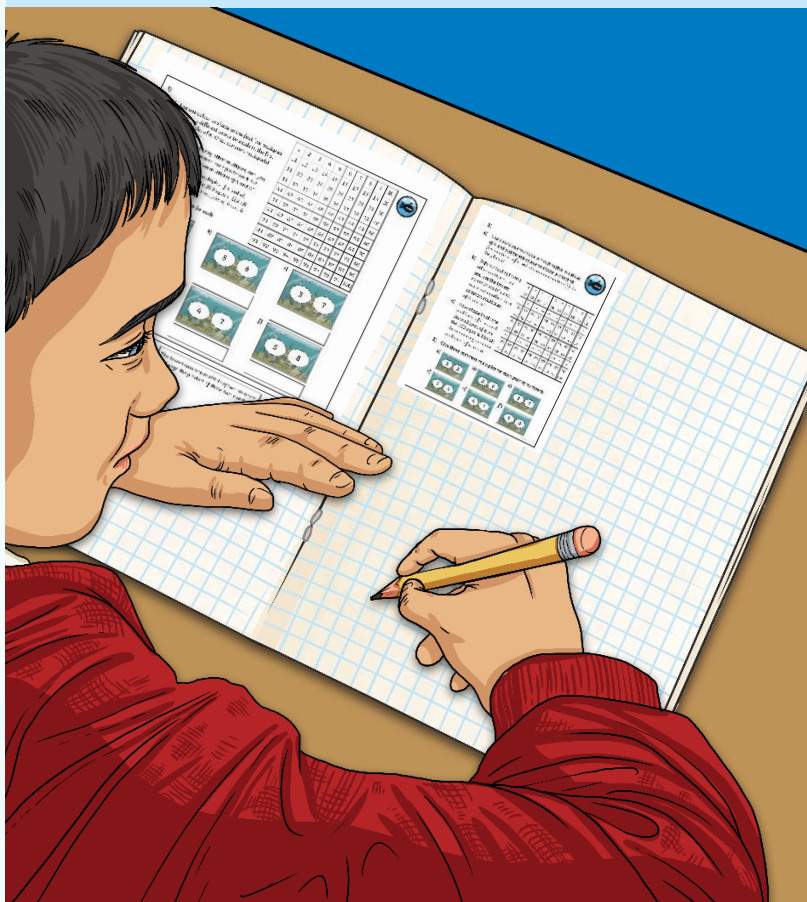


- 3) Colour the multiples of six, eight and 12.



Diving into Mastery

Dive in by completing your own activity!



1) Use one colour to shade in the first five multiples of 4 and a different colour to shade in the first five multiples of 6. What common multiple(s) do they have?

2) Before shading in any other multiples, can you use the lowest common multiple to work out another three common multiples of 4 and 6?

3) Now shade in all the multiples of 4 and all the multiples of 6 on the 100 square. List all the remaining common multiples of 4 and 6.

2) Give three common multiples for each pair of numbers.

a)

3	5
---	---

 b)

5	6
---	---

 c)

3	7
---	---

d)

2	5
---	---

 e)

4	7
---	---

 f)

5	8
---	---

3) Is Levi correct? Explain your reasoning and use examples to prove it.

The lowest common multiple of two numbers is always the product of those two numbers.

2) For each set of common multiples below, find a pair of numbers for which they could be the common multiples.

a) 12, 24 and 36 c) 21, 42 and 63 e) 18, 27 and 36
b) 15, 30 and 45 d) 10, 20 and 30 f) 36, 72 and 108

1) In Rose's submarine, the pressure gauge beeps every 3 minutes and the depth gauge beeps every 5 minutes. How many times in an hour will the two gauges beep at the same time? Provide examples to back up your answer.

2) Rose leads a team of two divers who send reports back to her monitor throughout the day, from 7 a.m. to 1 p.m. Caspar sends his reports back every 12 minutes. Ingrid sends her reports back every 18 minutes. How many times a day will their reports come into the monitor at exactly the same time? Explain your reasoning using examples.

Can you work out all the times that the reports will come in at the same time?

1) Use one colour to shade in the first five multiples of 4 and a different colour to shade in the first five multiples of 6. What common multiple(s) do they have?

2) Before shading in any other multiples, can you use the lowest common multiple to work out another three common multiples of 4 and 6?

3) Now shade in all the multiples of 4 and all the multiples of 6 on the 100 square. List all the remaining common multiples of 4 and 6.

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3	5
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Can you work out all the times that the reports will come in at the same time?

6 7 8 9 10
16 17 18 19 20
26 27 28 29 30
36 37 38 39 40
46 47 48 49 50
56 57 58 59 60
66 67 68 69 70
76 77 78 79 80
86 87 88 89 90
96 97 98 99 100

3 7

5 8

numbers.

Levi

could be the common numbers.

18, 27 and 36
36, 72 and 108

What Am I?



In pairs, think of two numbers and then write their highest common factor (HCF) and their lowest common multiple (LCM) on a whiteboard.



Aim



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