


# Multiplication Problems

## Learning Objective:

To recognise and use multiples of three, four and eight.





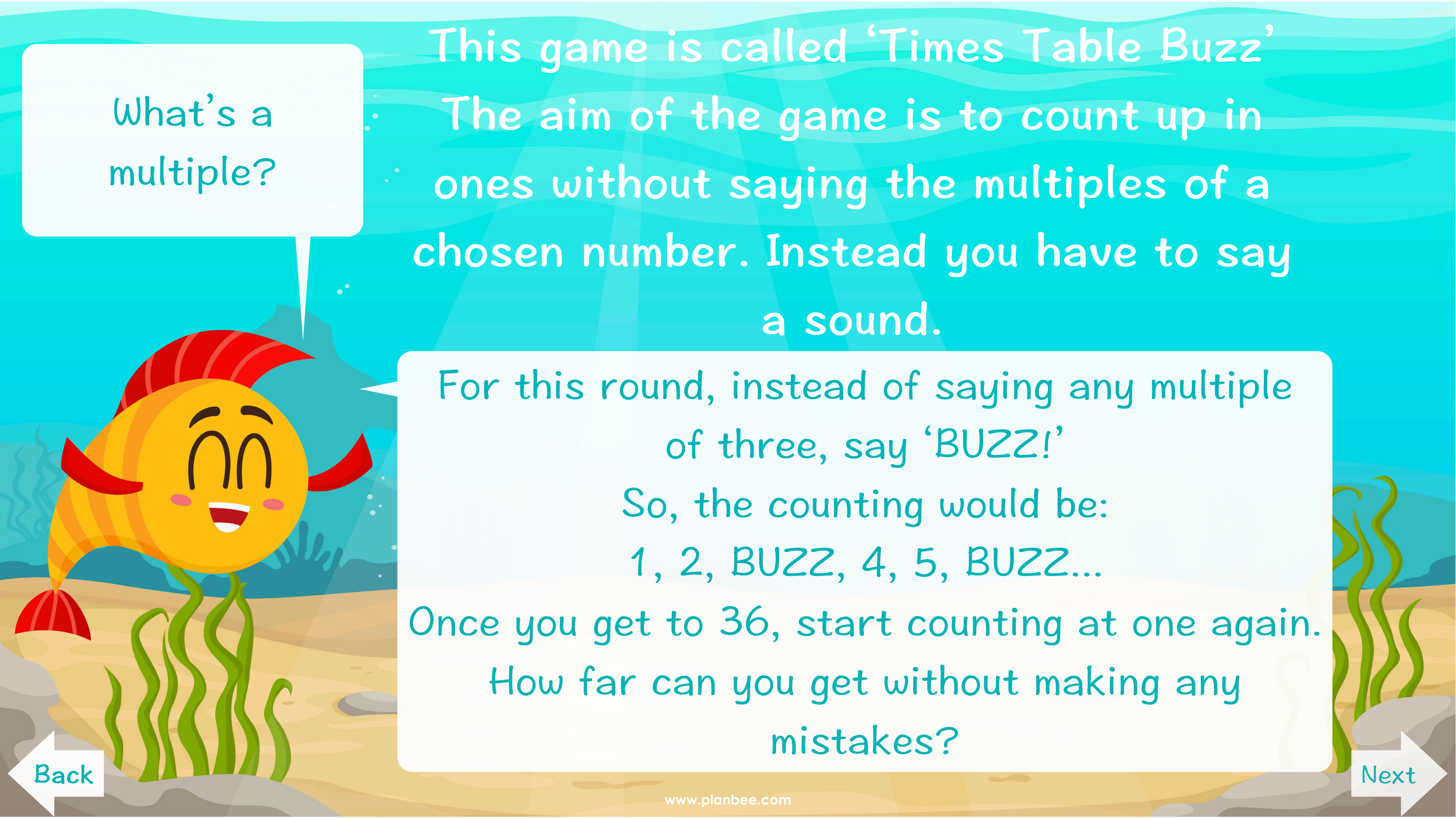
Hello! Are you ready to come  
and visit me and my aquarium?

Me and my friends are going to need  
lots of help solving problems around  
the aquarium and its visitors.  
But first let's play a game!

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What's a multiple?

This game is called 'Times Table Buzz'  
The aim of the game is to count up in ones without saying the multiples of a chosen number. Instead you have to say a sound.

For this round, instead of saying any multiple of three, say 'BUZZ!'

So, the counting would be:

1, 2, BUZZ, 4, 5, BUZZ...

Once you get to 36, start counting at one again.

How far can you get without making any mistakes?

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Great job guys!

Time for a new round!

This time, you can't say any multiples of four. Instead you have to say 'ZAPP!'


Once you get to 48, start counting at one again.

How far can you get without making any mistakes?

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Let's make  
it really  
tough!

Okay try this!

Now, you can't say any multiples of four OR three.  
Instead you have to say 'ZAPP!' for a multiple of  
four and 'BUZZ!' for a multiple of three. If it is a  
multiple of both, you have to say 'PING!'

So it will go:

1, 2, BUZZ, ZAPP, 5, BUZZ, 7...

Once you get to 48, start counting at one again.

How far can you get without making any  
mistakes? Can you speed up the counting?

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2 4 6 8 10 12

14 16 18 20 22 24

How do you know if a number is a multiple of two?

Think, pair, share...

Is 83 a multiple of 2?  
How do you know?

It is a multiple of two if..



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It is a multiple of two if.. 

So 83 is NOT a multiple of 2!

- It is an even number.
- Its ones digit is a 0, 2, 4, 6 or an 8.

83 is not an even number,  
and it doesn't have 0, 2, 4,  
6 or 8 as its ones digit!



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5 10 15 20 25 30

35 40 45 50 55 60

How do you know if a number is a multiple of five?

Think, pair, share...

Is 450 a multiple of 5?  
How do you know?

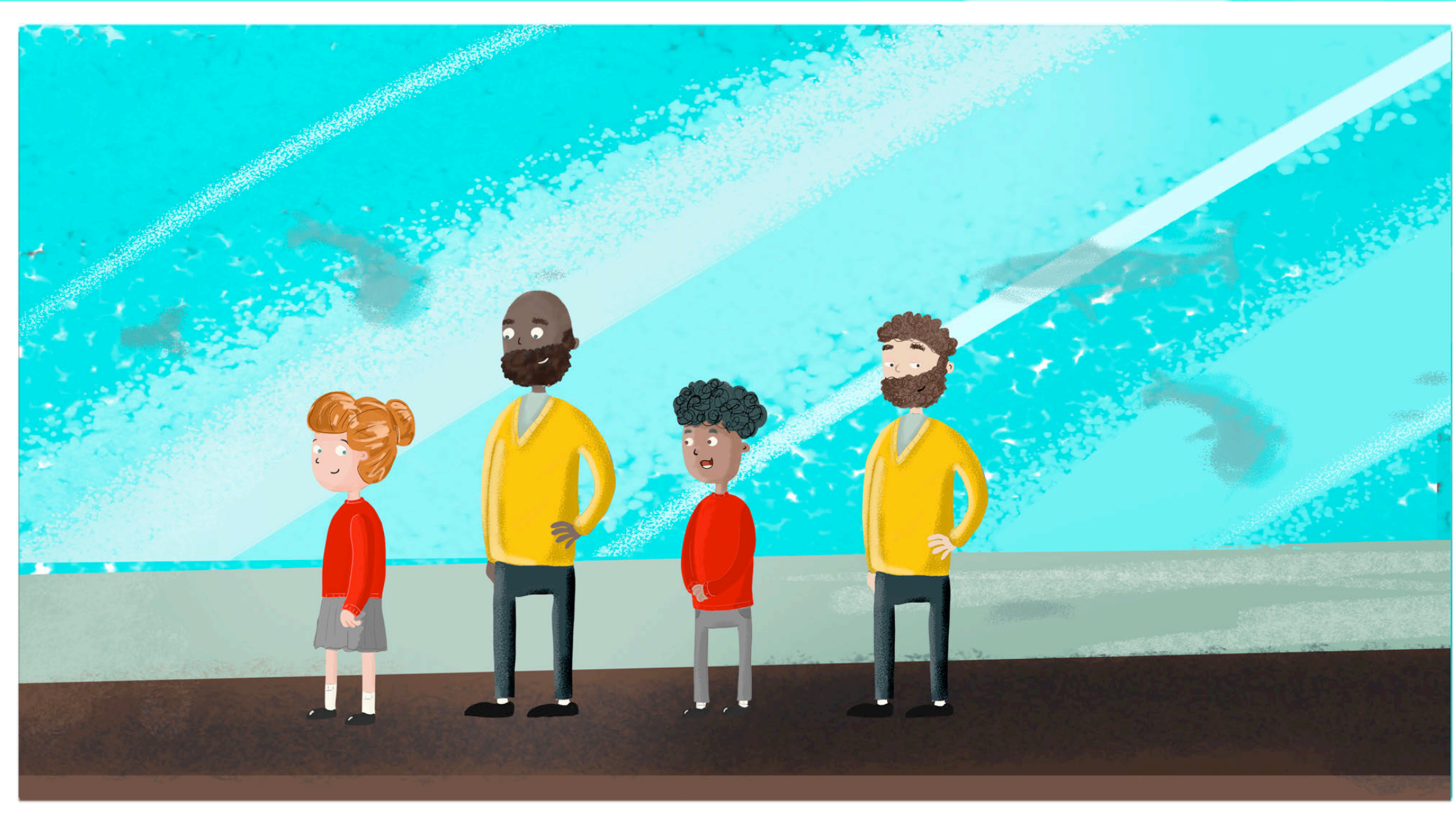
It is a multiple of five if..



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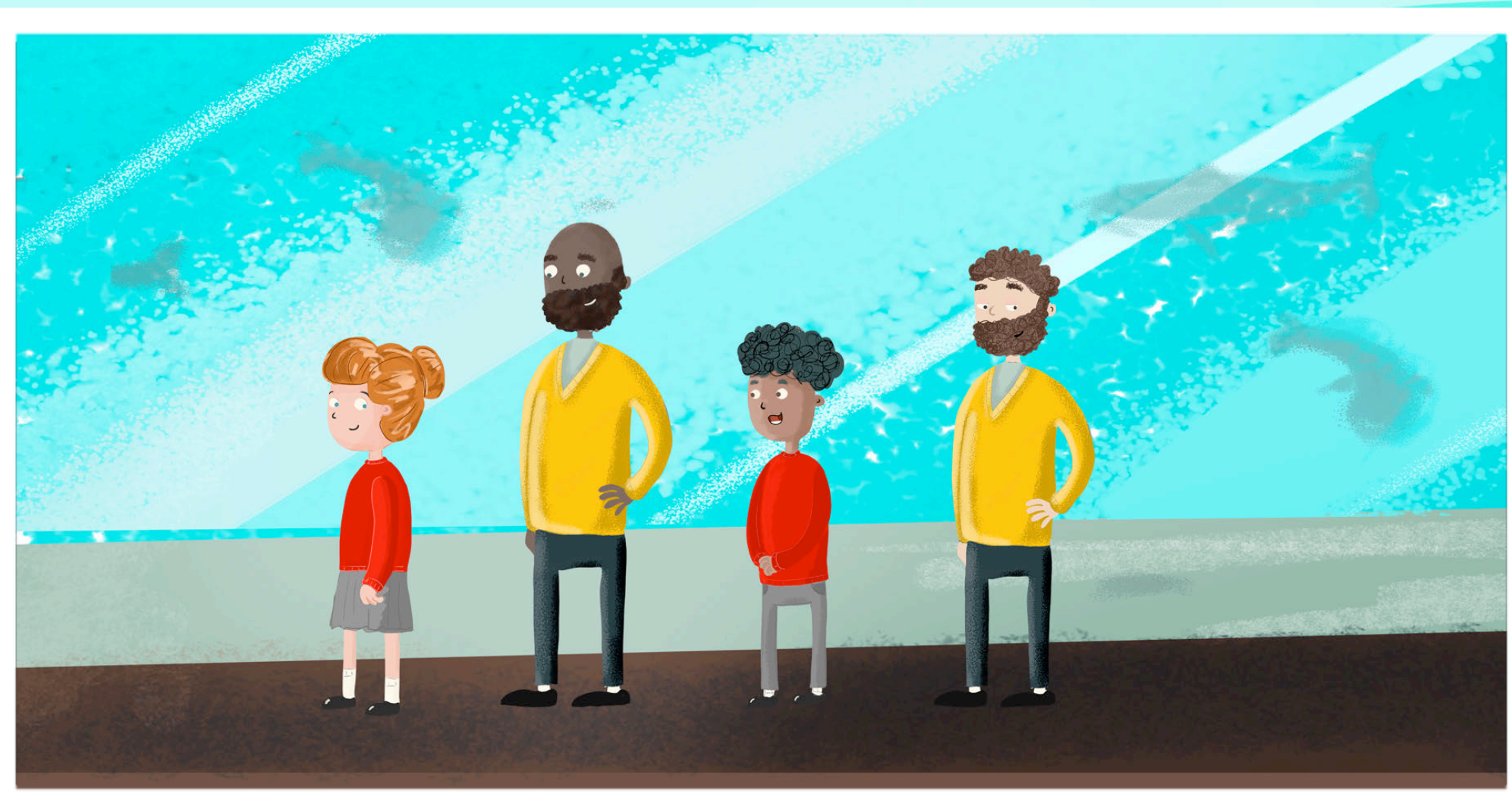
Look at this queue of people waiting to buy tickets to the aquarium. They're in a pattern. Can you describe the pattern?



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This queue carries on in the same pattern.  
Would the sixth person in the queue be an  
adult or a child? How do you know?

What about the tenth person?  
How old would the eleventh person be?  
How do you know?



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What do you notice about how the adults are stood in the queue?



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They're all stood in the positions which are multiples of two, or on all the even numbers!



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So, how old would the person who is in the 25th position be?  
What has told you that?



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Here is a different queue for the aquarium.

How would you describe this pattern?  
Where are the adults standing this time?



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Is the person who is 15th in the queue  
an adult or a child?  
Explain how you know.



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What about the 29th person?  
Explain how you know using the word  
'multiple' in your answer.



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Phew! This queue goes on for *AGES!*  
Would the 90th person in the queue be  
an adult or a child?  
How could we work this out?



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## Plenary

Use your whiteboards to show if these statements are  
always true,  
sometimes true,  
or never true.



Multiples of five end in five.

Multiples of four will be odd.

Multiples of eight will also be a multiple of four.