



# Maths

## Number and Place Value



# Need a coherently planned sequence of lessons to complement this resource?

**Assessment Statements**  
By the end of this unit:

**Children working towards the expected level will be able to:**

- continue number sequences;
- recognise numbers in a variety of ways;
- partition numbers into hundreds, tens and ones;
- read and write numbers up to 1000 in numerals and words;
- count in multiples of 4, 10, 50 and 100 from zero;
- find 10 more or less than a given number up to 1000;
- find 100 more or less than a given number up to 500;
- compare numbers using inequality and equality signs;
- order numbers up to 1000;
- solve simple problems involving place value of three digit numbers.

**Children working at the expected level will be able to:**

- read and write up to 1000 in numerals and words;
- recognise multiples of four;
- recognise multiples of eight;
- recognise multiples of 100;
- recognise multiples of 1000;
- find missing numbers in a given sequence;
- solve problems involving two, three, four and five digit numbers;
- solve problems involving place value;
- solve problems involving comparing numbers;
- solve problems involving numbers, measurement;
- solve place value problems involving money.

**Introduction**

In this unit, the children will read and write numbers up to 1000 in numerals and in words and continue to identify the value of individual digits in a three-digit number. They will identify, represent and estimate numbers using different representations and compare and order numbers up to 1000, using mathematical vocabulary and symbols. Children will focus on counting from 0 in multiples of 4, 5, 50 and 100 and find 10 or 100 more or less than a given number. Finally, children will have the opportunity to use all of their number and place value skills to solve a range of problems.

**Teacher Note:** The year 3 place value objective count from 0 in multiples of 4, 10, 50 and 100, find 10 or 100 more or less than a given number is closely linked to the Y3 Multiplication and Division objective read and use multiplication and division facts for the 3, 4 and 6 multiplication tables. Please head over to the Multiplication and Division topic area to find some more topic lessons to support counting in multiples of 4 and 10.

**Resources**

A range of practical apparatus to support children's understanding of place value, such as:

- base ten blocks
- interlocking cubes
- items which can be grouped into tens, such as straws
- place value grids
- place value flip charts
- place value counters
- ten frames

**Number and Place Value**  
Maths | Year 3 | Object to Progression Overview

The aim of this resource is to support teachers using White Rose to show the most coherent and progressive sequences to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within White Maths, wherever possible lesson packs have been matched to each of the annual steps on the White Rose Maths scheme of learning.

**Yearly Overview**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Number: Multiplication and Division			Consolidation	
Spring	Number: Multiplication and Division			Measurement: Money	Statistics		Measurement: Length and Perimeter		Number: Fractions		Consolidation	
Summer	Number: Fractions			Measurement: Time		Geometry: Properties of Shapes		Measurement: Mass and Capacity			Consolidation	





# Counting in Fours





# Aim

- To count in multiples of four.

# Success Criteria

- I can count forwards in steps of four.
- I can count backwards in steps of four.
- I can recognise multiples of four.



# Remember

How far can you count forwards in twos?  
Can you count to 40? 80? 100?

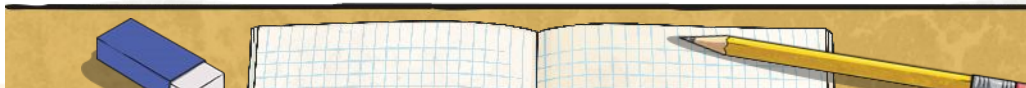
Can you count backwards in twos from 40? 80? 100?

If you count forwards in twos from 10, what will be the tenth number you say?

If you count forwards in twos from 30, what will be the eighth number you say?

If you count forwards in twos from 40, what will be the sixth number you say?

If you count forwards in twos from 50, what will be the twelfth number you say?

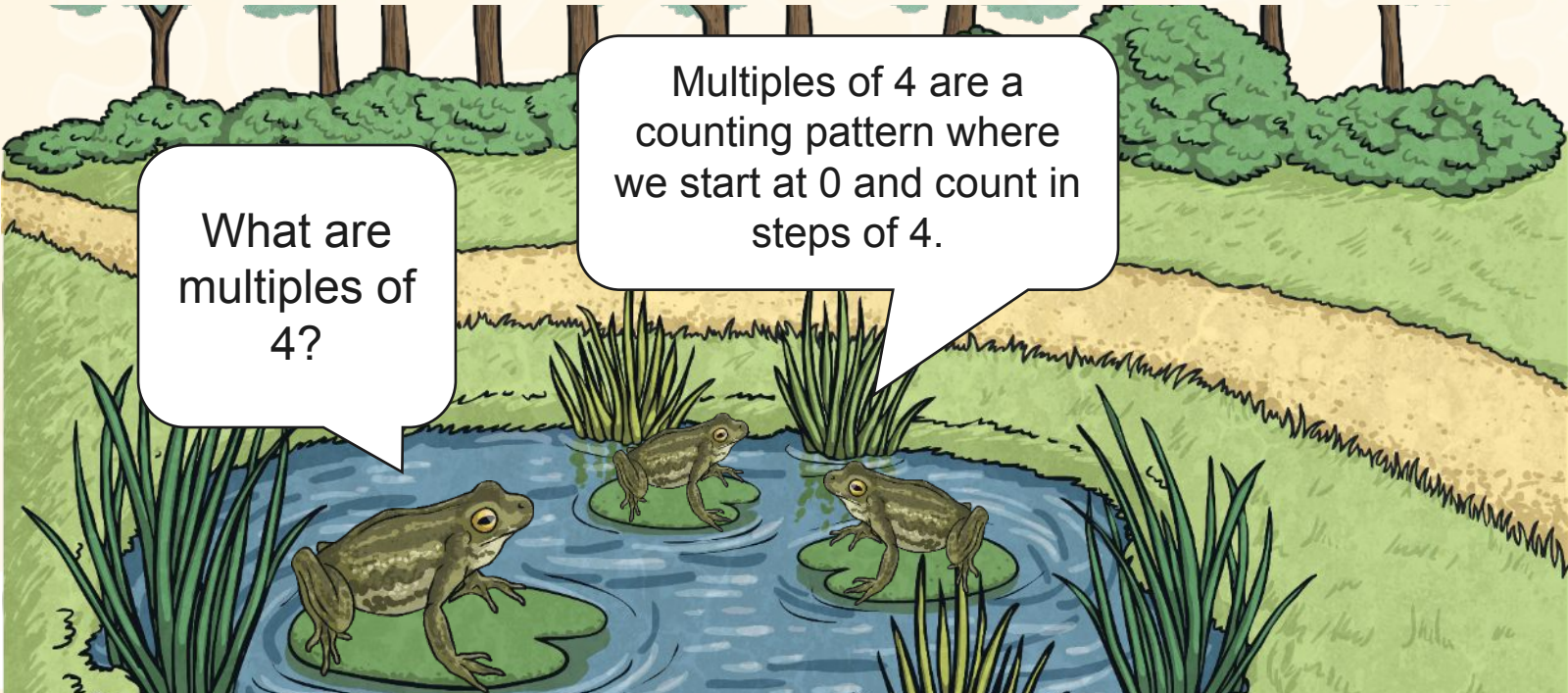




# Forward Frog

Tiddalick loves to count while he is jumping on the lily pads.

Today, he is going to count in multiples of 4.



What are  
multiples of  
4?

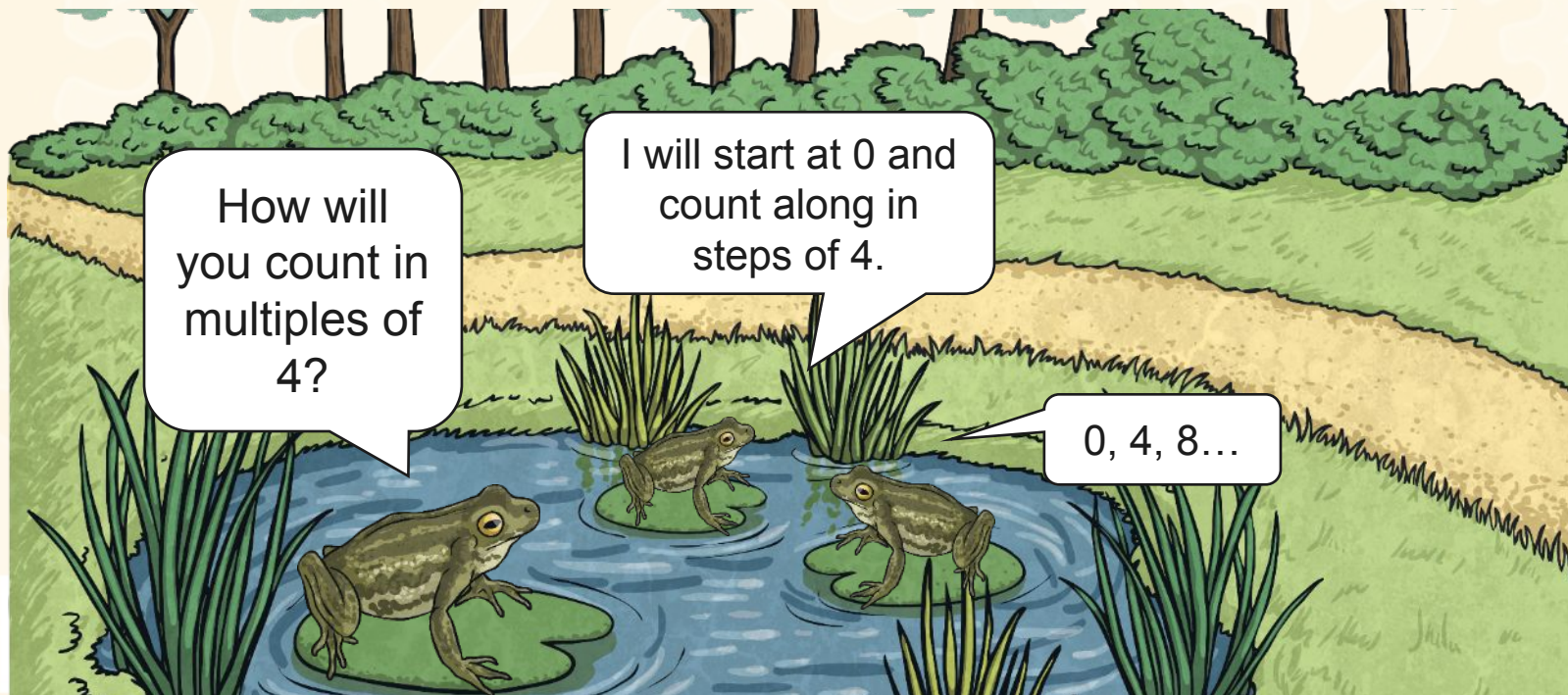
Multiples of 4 are a  
counting pattern where  
we start at 0 and count in  
steps of 4.



# Forward Frog

Tiddalick loves to count while he is jumping on the lily pads.

Today, he is going to count in multiples of 4.



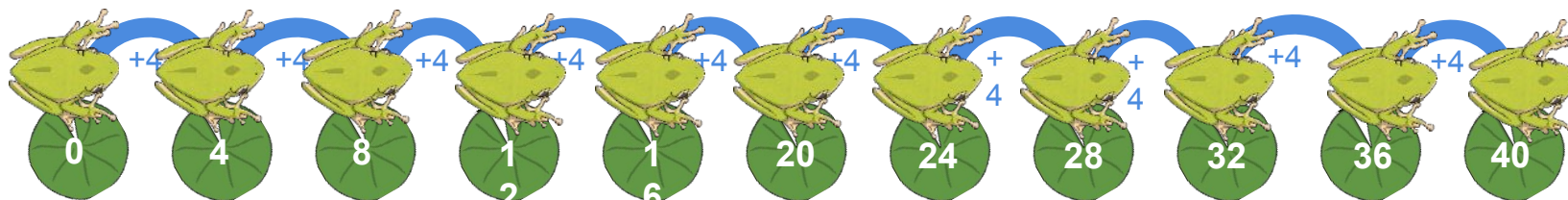


# Forward Frog



Tiddalick wants to count in multiples of 4 from zero.

Let's help him!



To count in multiples of 4, Tiddalick adds four on each jump.

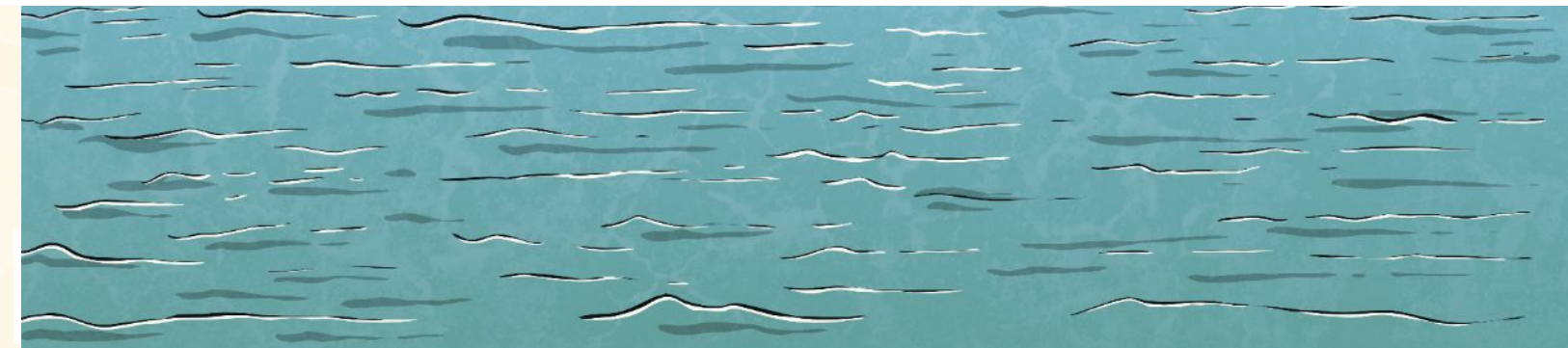
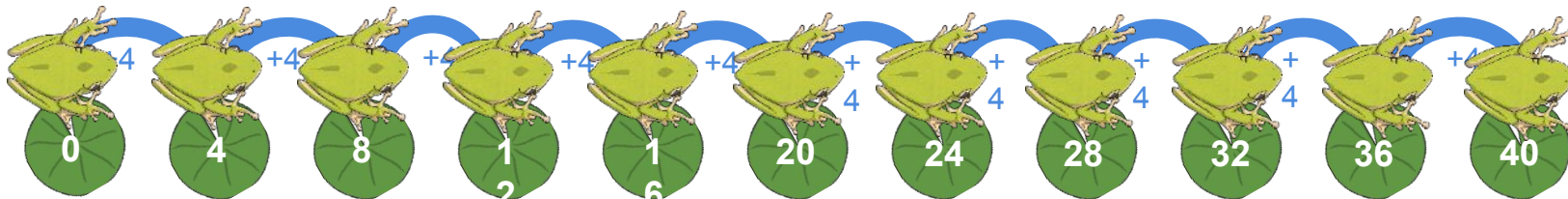




# Forward Frog



Let's have a go again but this time, Tiddalick wants you to predict the next number before he jumps.





# Forward Frog



Tiddalick wants you to practise counting up in 4s in your quietest voice.





# Forward Frog



Tiddalick wants you to practise counting up in 4s in your squeakiest voice.





# Forward Frog



Tiddalick wants you to practise counting up in 4s in your deepest voice.





# Forward Frog



Tiddalick wants you to practise counting up in 4s while jumping like a frog.





# Forward Frog



Oh no! Tiddalick has lost some of the numbers.  
How could he find out the missing numbers?



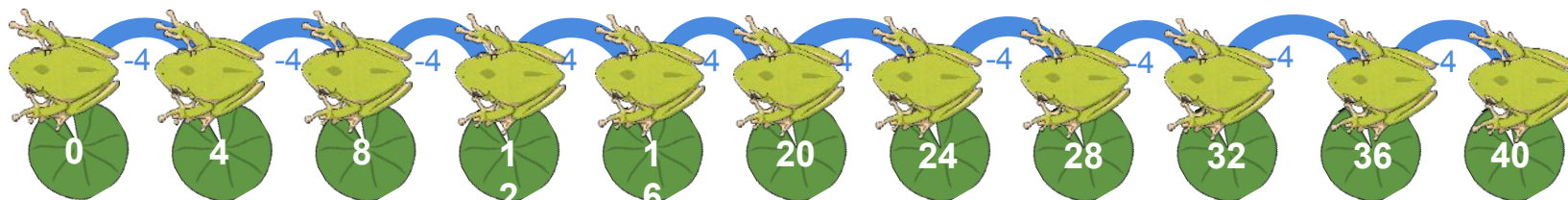


# Backward Frog



Now, Tiddalick will count back in steps of four!

Let's help him. He is going to start at 40.



To count in multiples of 4, Tiddalick subtracts 4 on each jump.

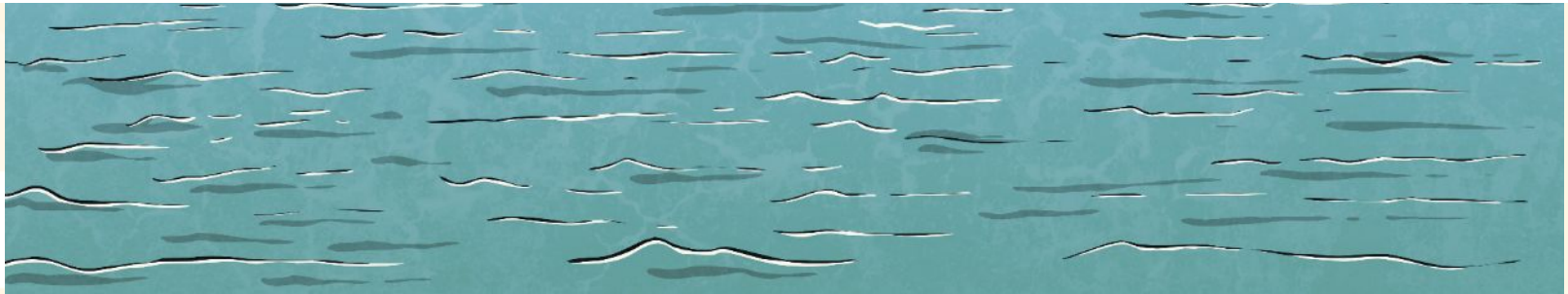
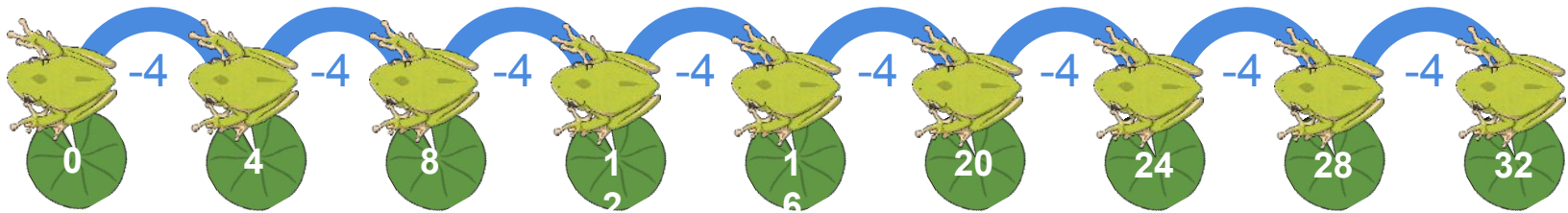


# Backward Frog



Tiddalick is still counting backwards.

This time, he starts at 32. Help him to count backwards.





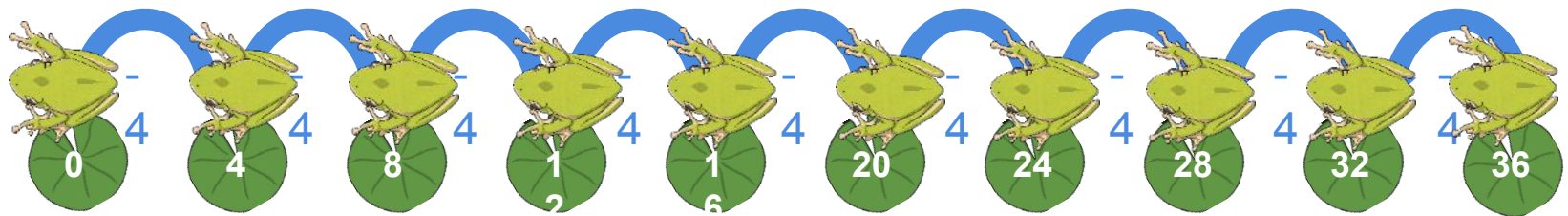


# Backward Frog



This time he is starting at 36.

Help him to count backwards.





# Help Tiddalick

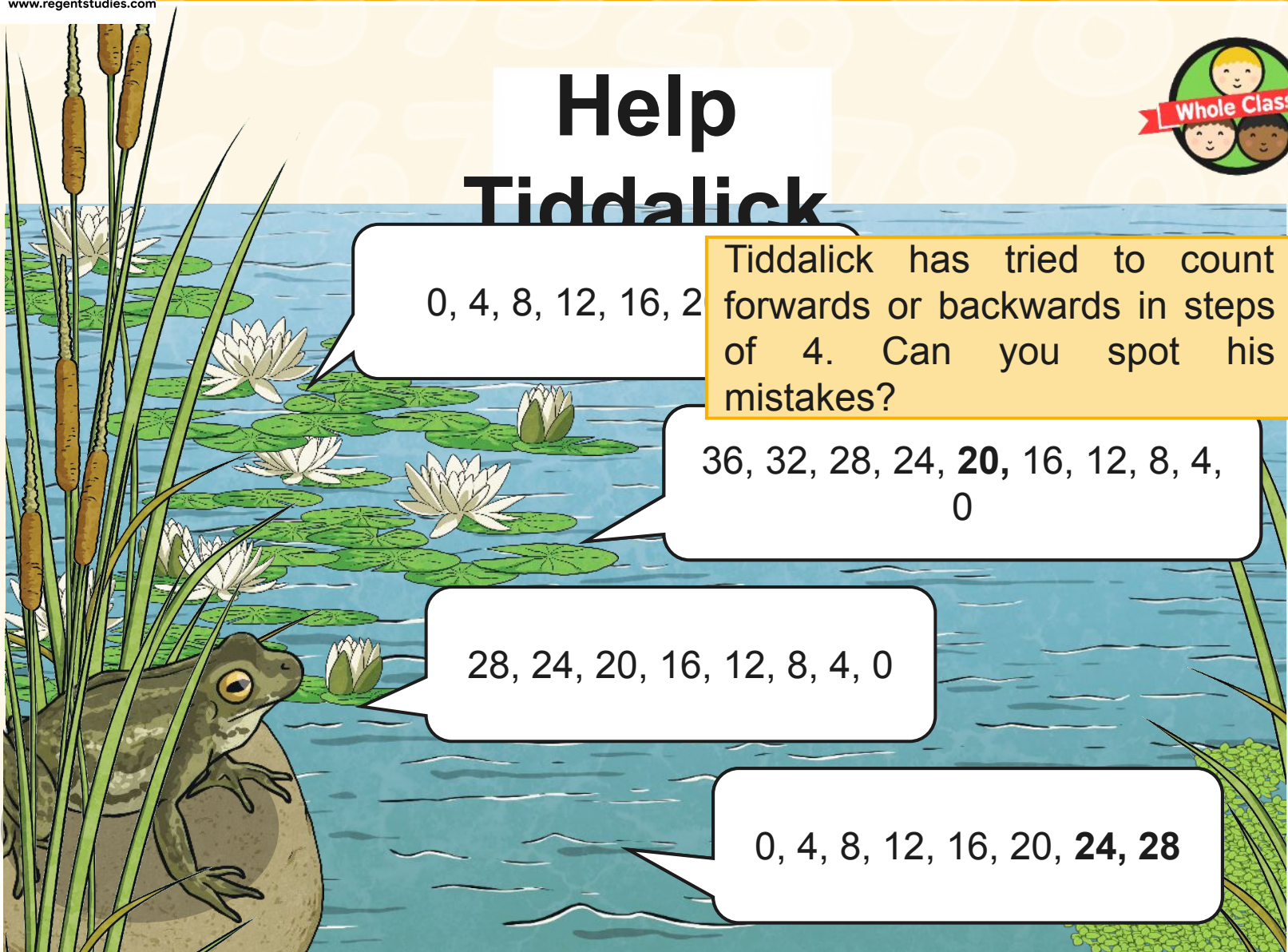
0, 4, 8, 12, 16, 2

Tiddalick has tried to count forwards or backwards in steps of 4. Can you spot his mistakes?

36, 32, 28, 24, **20**, 16, 12, 8, 4,  
0

28, 24, 20, 16, 12, 8, 4, 0

0, 4, 8, 12, 16, 20, **24, 28**





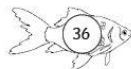
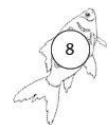
# Pond



Oh no! The multiples of 4

1	2	3
11		13
21	22	23
31		33

2. This pond only accepts fish which are allowed



3. How many legs are there

Count along in multiples of 4

3 frogs



4 frogs



5 frogs



6 frogs



Help Tiddalick to count



1. Help Tiddalick jump



2. Help Tiddalick jump



3. How could Tiddalick

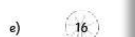
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4. Tiddalick has been trying to count in multiples of four. Something is wrong, write the correct answer



1. Help Tiddalick jump



2. In these sets of numbers, which one is not a multiple of four?

a) 16 28 40

b) 24 32 38

c) 32 24 33

d) 20 8 28

### Pond Dipping

3. Jay has been solving this problem:

In a box there are 4 pens. I have 6 boxes of pens. How many pens do I have?

Jay uses his knowledge of counting in multiples of four to answer the problems. He counted six multiples of four: 4, 8, 12, 16, 20, 24, Jay has 24 pens.

Use your knowledge of counting in multiples of four to answer these problems:

a) In my classroom, on a table there can be 4 children. If there are 7 tables, how many children could sit down?	b) How many legs are there on 5 cats?
c) Chocolate eggs come in packs of 4. How many eggs in total would there be in 6 packs?	d) In a PE lesson, the children are split into groups of 4. The total number of children in a class is not a multiple of 4. There are 5 groups with 4 children and 1 group with 3 children.

4. Write your own problem which involves calculating ten multiples of four.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Diving into Mastery



Dive in by completing your own activity!



1) Complete these number tracks, counting forwards and backwards in steps of 4:

a) 

4	8		16		24	
---	---	--	----	--	----	--

b) 

16	20		32	
----	----	--	----	--

c) 

32	28	20			8
----	----	----	--	--	---

d) 

40		32			20	
----	--	----	--	--	----	--

2) Tiddalick has sorted these numbers into multiples of 4 and not multiples of 4.

a) Tick the correct numbers and draw a circle around the incorrect ones.

Multiples of 4

Not Multiples of 4

b) Add 2 different correct numbers to each pond.

1) Complete these number tracks, counting forwards and backwards in steps of 4:

a) 

4	8		16		24	
---	---	--	----	--	----	--

b) 

16	20		32	
----	----	--	----	--

c) 

32	28	20			8
----	----	----	--	--	---

d) 

40		32			20	
----	--	----	--	--	----	--

2) Tiddalick has sorted these numbers into multiples of 4 and not multiples of 4.

a) Tick the correct numbers and draw a circle around the incorrect ones.

Multiples of 4

Not Multiples of 4

b) Add 2 different correct numbers to each pond.

es in a box. Khatija has  
 E. She thinks she will need  
 cakes.

est? Explain your answer  
 id/or pictures.  
 ad lots of experience of multiples

of the things he thinks he has  
 you agree? Explain your answers.

An odd number will never  
 be a multiple of 4.

All even numbers are  
 multiples of 4.

There are 10 multiples of  
 4 which are less than 45.



# Tiddalick's Thoughts

Do you agree with Tiddalick? Give examples to show why you agree or disagree with Tiddalick.



Multiples of four are also multiples of two.



# Aim



- To count in multiples of four.

# Success Criteria

- I can count forwards in steps of four.
- I can count backwards in steps of four.
- I can recognise multiples of four.

