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IrishMaths Series

PHOTOCOPY MASTERS

Maths: 3rd Class

- number and algebra
- measurement and geometry
- statistics and probability

3

By Lisa Craig

PHOTOCOPY MASTERS

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Maths: Third Class

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Teachers' Notes

This book is part of the *IrishMaths Series* which comprises seven books altogether. The activities have been designed to develop mathematical skills and reasoning in a creative way that is often connected to solving problems in real-life contexts. Students will be asked to reflect upon the strategies used to problem-solve effectively in familiar situations and expand their ideas to realise that mathematical understanding has an important role in other subject areas. Answers and additional teaching information are included at the back of the book. This book is divided into three sections as detailed below.

Section One: Number and Algebra
In this section, students will engage in a variety of activities that require them to demonstrate ever-increasing capability using mental and written strategies to explore number relationships and patterns. Tasks include: identifying the attributes of even and odd numbers using students' own examples; having a race against the clock counting back in a designated number; conquering division facts in the fish tank and solving and creating problems involving wonders of the natural world.

Section Two: Measurement and Geometry
This section draws students' attention to the value and beauty of mathematics in the world around them. Students will be asked to consider symmetry in the natural and built environment through observing marine life, Australian indigenous art and the façade of Luna Park. Following an intrepid explorer across an island will help students understand the use of grid reference and scale. The importance of using standard units of measurement is explored through activities such as: estimating the mass of iconic Australian wildlife, making up milk formulae for bush babies and applying measurement in our daily lives.

Section Three: Statistics and Probability
Students will develop skills in collecting, organising and representing data in this section. Students will categorise images of Great Barrier Reef marine life and label a column graph based on their decisions. The concept of probability is explained through activities ranking the likeliness of events occurring and carrying out a chance experiment with a deck of cards to test predictions and discuss variability in results.

Section 1:
Number and Algebra

My numbers

Use the counting grid to help you to complete the questions which follow. Keep this grid to help you with other number facts.

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

Box 1
Shade in red on the grid:

1. Your age now.
2. The last two digits of this year.
3. The first two digits of the Eircode of your school.
4. The number of children in your class.
5. The number of eyes in the class now.

Box 2
Shade in blue on the grid:

1. Your age five years ago.
2. The last two digits of the year in ten years' time
3. The last two digits of the Eircode of your school.
4. The number of children if three new children join the class.
5. The number of eyes in the class if five children leave the room.

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Which number comes next?

Add numbers to complete the patterns.

1 25 26 27 28 29 ◯ ◯ ◯ ◯ ◯

2 18 17 16 15 14 ⬡ ⬡ ⬡ ⬡ ⬡

3 78 77 76 75 74 ☐ ☐ ☐ ☐ ☐

4 48 50 52 54 56 ◇ ◇ ◇ ◇ ◇

5 95 90 85 80 75 ◯ ◯ ◯ ◯ ◯

6 12 15 18 21 24 ⬡ ⬡ ⬡ ⬡ ⬡

7 49 51 53 55 57 ☐ ☐ ☐ ☐ ☐

8 4 14 34 64 104 154 ◇ ◇ ◇ ◇

How was the number pattern made in sequence 8?

_____

Make your own counting sequences for a classmate to complete.

9 ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯

10 ⬡ ⬡ ⬡ ⬡ ⬡ ⬡ ⬡ ⬡ ⬡ ⬡

Even or odd?

How can you tell when a number is even or odd? You can divide an even number by 2 and there will be no numbers left over.

REMEMBER

Even numbers end in the digits: 0, 2, 4, 6 and 8.
Odd numbers end in the digits: 1, 3, 5, 7 and 9.

1 Even or Odd Quiz

Take the quiz. Write E if the answer is an even number and O if the answer is an odd number.

1. Number of stars on the Australian flag.	6	**E**
2. The total number of your fingers and toes.	20	
3. Number of players on the field at the start of a cricket match.	13	
4. Number of tentacles an octopus has.	8	
5. Number of letters in the alphabet.	26	
6. The total number of letters in the names of months beginning with "J."	15	
7. Number of minutes in an hour.	60	
8. Number of bones in the adult human body.	206	
9. Number of wings on seven butterflies.	28	
10. The number many people believe is lucky.	7	
11. Number of rings in the Olympic logo.	5	
12. Number of metres high of Mt. Carrauntoohil.	1038	

2 What Happens?

Choose your own numbers to make odd and even sums below. Write the answer in blue if it is EVEN and the answer in green if it is ODD. Look at the example to help you.

EVEN + ODD → 6 + 13 = 19 (ODD)

EVEN + ODD → _____

EVEN + EVEN → _____

ODD + ODD → _____

What happens when you add 10 to an even number? _____

What happens when you add 100 to an odd number? _____

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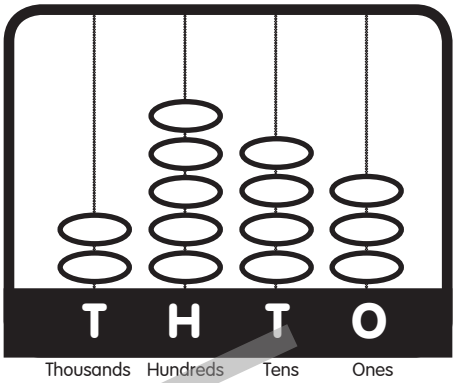
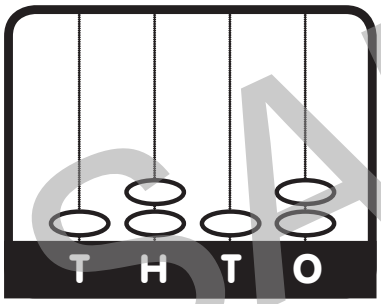
Abacus fun

MISCHIEVOUS MONKEY

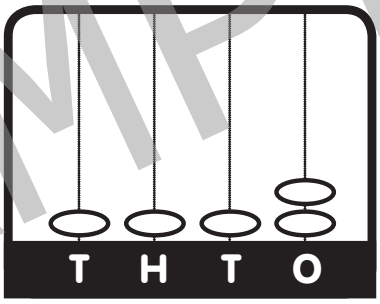
The abacus below represents the number 2543 (two thousand five hundred and forty-three).



1. The mischievous monkey has taken some of the beads from the abacuses below! Can you draw the missing beads in each abacus so that it represents the same number in the box underneath? Colour the beads that you have added.



a. 4263



b. 2155

c. 1402

2. Write the numbers below in order from smallest to largest.

3190	4658	1179	1091	4925

3. Put a < (smaller than) or > (greater than) sign in the stars.

a. 1742 ☆ 1752

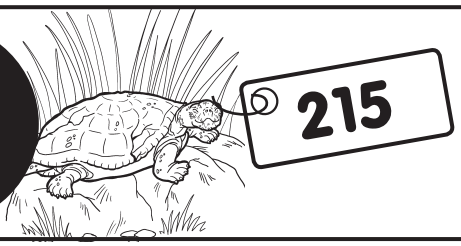
b. 5020 ☆ 5030

c. 875 ☆ 885

d. 634 ☆ 614

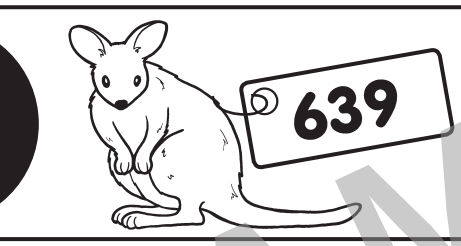
Writing numbers in words

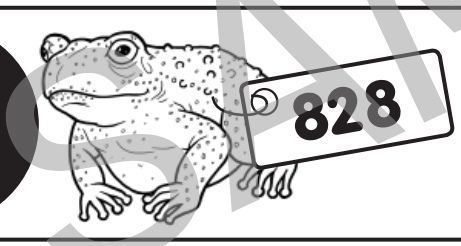
Read the identification numbers on the tagged animals. Write the numbers of the tags in words. Look at the example to help you.

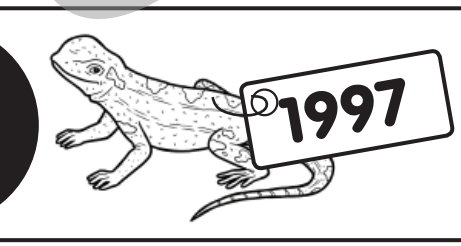
1 

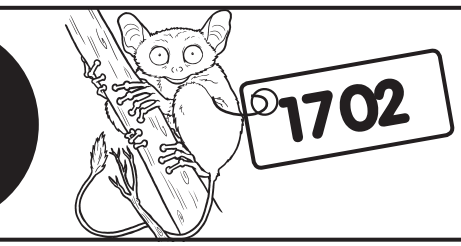
two hundred and fifteen

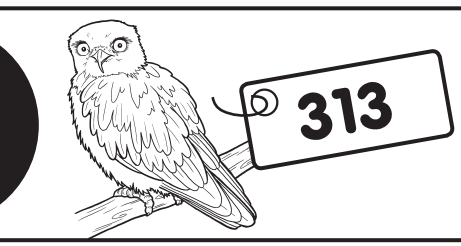
2 

3 

4 

5 

6 

7 

Colour in the animals that have even tag numbers.

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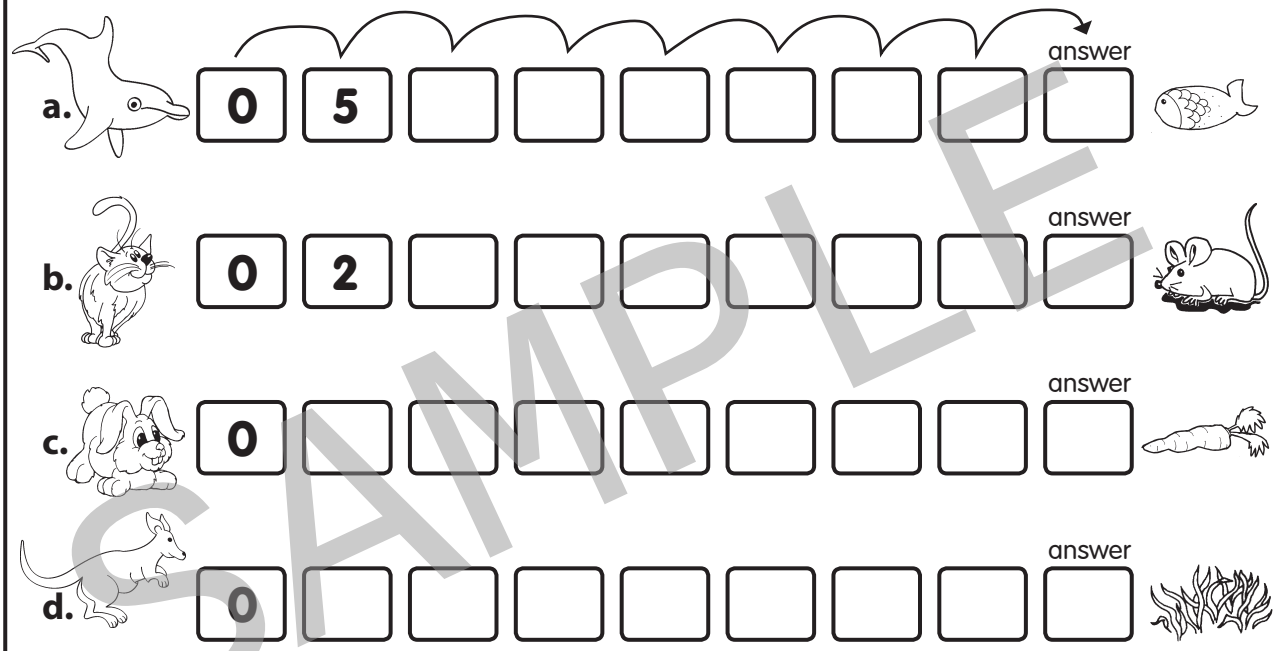
Counting on

JUMPING ANIMALS

1. How many metres will the animals below jump to reach their food? Use the information below to help you count on.

INFORMATION

A dolphin can travel 5 metres in a single jump.
A cat can jump 2 metres in one pounce.
A rabbit can spring 3 metres in one jump.
A red kangaroo can cover 10 metres in one bound.



CHALLENGE

2. Circle the numbers that don't fit the **counting on in 4s** sequence.

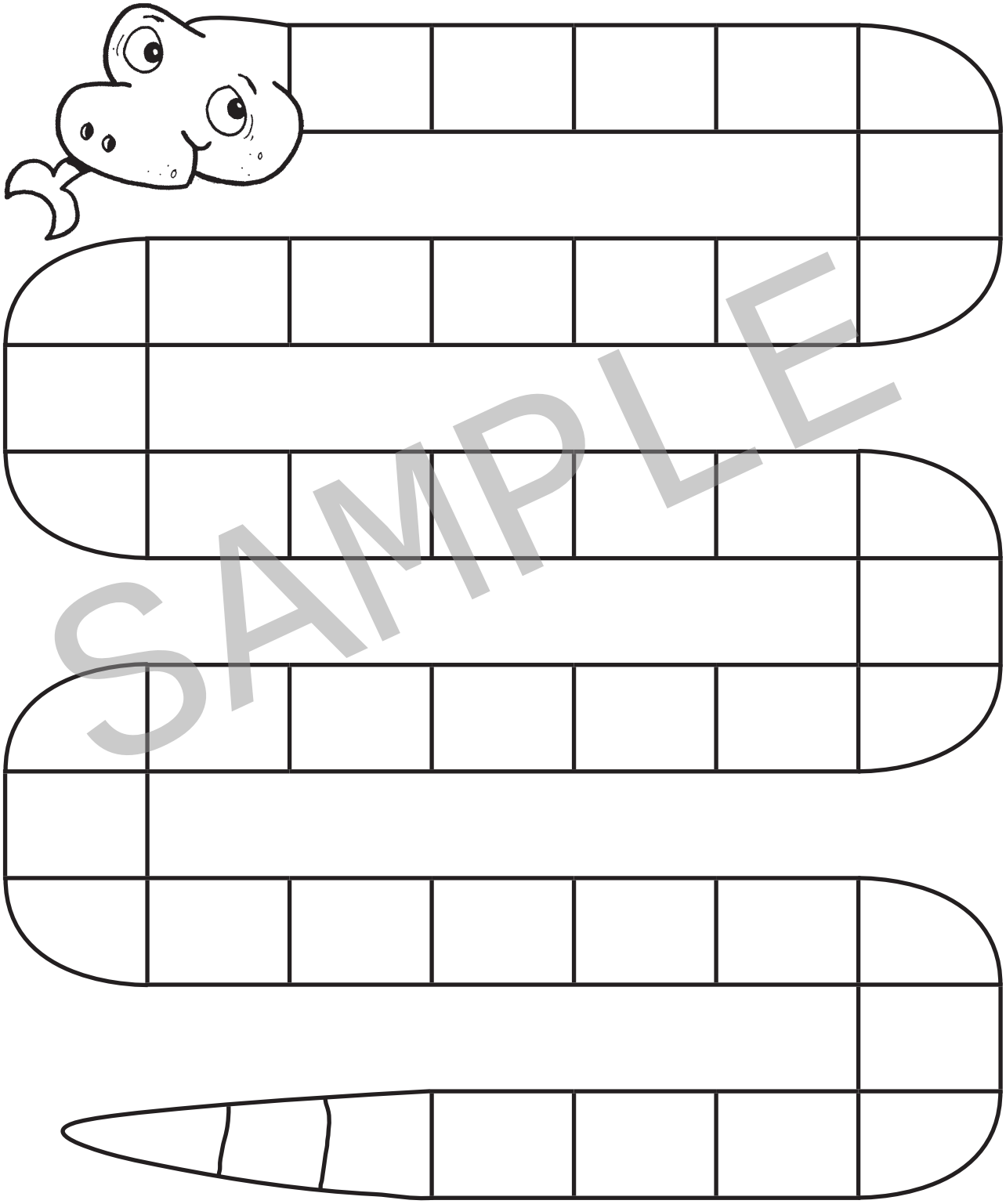
120	124	128	130	132	136
140	142	144	148	150	152

3. Circle the numbers that don't fit the **counting on in 6s** sequence.

300	306	312	318	324	326
330	336	340	342	348	354

Counting back

How far can you go back? Choose a number between 100 and 200. Write that number in the first segment of the snake. Your teacher will give you a time limit and a number to count back in, for example, "Count back in 6s."



What do you notice about the numbers in your counting back sequence?

_____