

**YEAR 7**

**LEARNING**

**- FROM -**

**HOME**

 **teachstarter**

## **ABOUT THIS PACK**

This teaching resource pack has been handpicked by the Teach Starter team to include a range of resources that can be completed at home by children with the assistance of their parents or guardians.

The pack includes resources covering the key learning areas of English, Maths and Science, along with some additional craft and mindfulness activities - all for free!

In the rare event of a school closure or if a student needs to work remotely, this pack can be sent home with students or passed on directly to parents and guardians digitally to allow for students to complete the work with minimal preparation and supervision.

The pack is designed to allow for non-teachers to understand and implement the activities in a home environment without requiring additional resources found in a classroom. The pack can be completed digitally on a tablet/iPad or with pen and paper when printed.

### **For Teachers**

#### **Can I share this pack with parents, students and other teachers?**

Of course! This pack has been created specifically for this purpose. Please feel free to share this pack digitally with your students, their parents or guardians, or other teachers.

You can share by copying the URL in the address bar of your browser, or simply clicking on the envelope icon above to send to an email address. You can also download the pack, and email the PDF document itself.

Please feel free to bundle this pack with your own home learning activities to extend or reinforce particular concepts for your students. You may also like to add specific activities such as reading, outdoor play, fine motor skills etc.

### **For Parents**

#### **How can I teach my child if their school closes?**

By downloading this free resource pack, you will be equipped with a wide range of activities to share with your child while their school is closed.

We have ensured that this pack can be delivered by non-teachers by providing a helpful table of contents and activity overviews. All activities are age-appropriate and most will relate to work that your child has experienced in the classroom.

The activities can be completed in any order and have been selected to allow parents and guardians to easily implement them.

# YEAR 7

## CONTENTS

### English

#### **2 x Editing Worksheets - Why Our Bodies Need Water and Bees**

Students are required to edit the pieces of text using the provided editing symbols and then re-write the text correctly. There are 20 errors in each piece of text.

#### **Bloom's Taxonomy Task Cards**

Select a text and complete the activities provided on the 44 Bloom's Taxonomy Task Cards. You could instruct students on how many task cards to complete per day or allow them to work through the task cards at their own pace.

#### **Multiple Intelligences Grid - Reading Activities (A)**

Use this grid in conjunction with a novel of the student's choice. Students can choose activities from each of the columns or work their way through all the activities.

#### **Comprehension Text - The History of Codes**

Students are required to read through the piece of text and then answer the questions. They can answer the questions on the sheet provided or in a workbook.

#### **Comprehension Text - Flying High**

Students are required to read through the piece of text and then answer the questions. They can answer the questions on the sheet provided or in a workbook.

#### **Homophones Crossword**

Students can complete this Homophones Crossword using the words down the side as the answers to the clues.

### Maths

#### **Adding Fractions with Common Denominators**

Students are required to answer each of the sums in order to reveal the answer to the joke.

#### **Rounding Decimals**

These 2 decimal worksheets provide students with opportunities to round decimals to the nearest tenth, hundredth, thousandth and whole.

#### **Integers Polygon Puzzle**

Students are required to cut the polygons out. They are jumbled up, so they will need to put the puzzle back together by matching the correct number sentence to the correct answer. Students can stick the puzzle back together in a workbook.

## **2D and 3D Shape Crossword**

Students can complete this 2D and 3D Shape Crossword using the words down the side as the answers to the clues.

## **Maths Brain Teasers**

A set of 10 maths brain teasers. You could instruct your students to work through one each day as a way to warm-up before completing any other Maths activities.

## **Percentages, Fractions and Decimals Match-Up**

Students are required to draw up a table in their books with the headings Percentage, Decimal and Fraction. They then need to cut out the values and match them up under the headings.

## **Dan's Digital World**

This activity includes a brochure and then a set of questions relating to products found in the brochure. Students can answer the questions on the sheet provided or in a workbook.

## **Chance and Data Maths Investigation - Roll Me a Six!**

In this investigation, students must conduct a comprehensive chance experiment to test the following statement: If you whisper Roll me a six! to a dice before rolling it, you have a higher chance of getting a six. Students will require a dice for this activity.

## **Bobby's Board Games - Maths Design Pitch**

Students must identify a maths concept and make a board game to help their fellow classmates better understand it. Concepts might include: operations (addition, subtraction, multiplication and division), percentages, decimals, fractions, place value, or large numbers.

## **Other**

### *Mindfulness*

#### **2 x Mindfulness Colouring Sheets**

Students can use these sheets when they require a brain break or at the end of the day.










# Why Our Bodies Need Water - Editing

Add editing marks to text. There are 20 errors.

H2O, commonly known as water, is esential for the human body too function and vital to hour Survival Although we can last week's without food, we can only survive a matter days without water. it is important for us to re-plenish our supply of Fresh Water every day, as we regularly loose liquid from our lungs skin urine and faeces!

All though our bodies are made up of 50 to 75 percent water, One of our most important organs, our Brain, is made up of 73% water. We need to stay hidrated to make sure our "brain cells" can function at the optimal level.

## Editing Marks:

Capital letter	
End punctuation	
Insert a word	
Change to lower case	
Take something out	
Check spelling	
New paragraph	

Re-write the text correctly:

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# Bees - Editing

**Add editing marks to text. There are 20 errors.**

there are about 20 000 species of Bees in the world  
 Bees live together in groups called colonys. There  
 three types of bees in each colony! There is The  
 queen bee the worker bee and the "drone".

The queen is, the largest bee in the colony she is  
 the only won that lays eggs. Drones are mail bees,  
 Their only job is to mate with the queen-bee so  
 that she can lay eggs. Worker bees are Female and  
 they do all the work. They clean and protect the  
 hive. collect the pollen and necta to feed the  
 colony and take care of the offspring.

Editing Marks:	
Capital letter	≡
End punctuation	◦ ! ?
Insert a word	^
Change to lower case	/l.c.
Take something out	↵
Check spelling	SP ◯
New paragraph	¶

**Re-write the text correctly:**

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## Remembering

### A-Z

Make an A-Z list using words from the text.



## Remembering

### Main Events

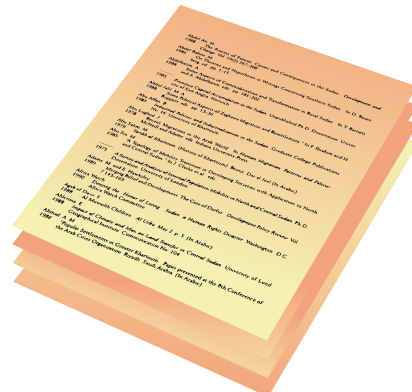
Make a list of the main events in the text.



## Remembering

### Keeping Time

Make a timeline of the events in the text.



## Remembering

### People Power

Make a list of all of the people in the text.



## Remembering

### Facts

Make a facts chart about the text.



## Remembering

### I'm a Poet...

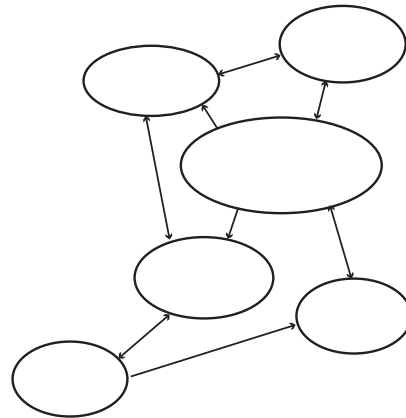
Write an acrostic poem about the text.



## Remembering

### Concept Map

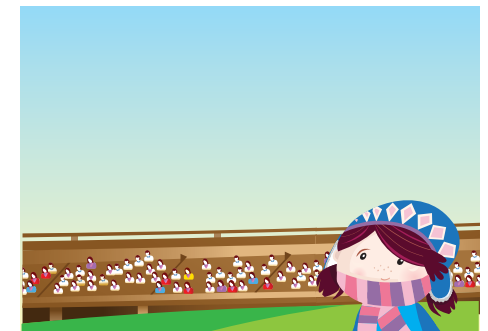
Create a concept map of one of the topics in the story.



## Remembering

### There's a Time and a Place!

Write about where and when the text took place.



## Understanding

### Picture it!

Cut out or draw pictures to show an important event in the text.



## Understanding

### Drawing the Main Idea

Draw what you think the main idea in the text is.



## Understanding

### Cartoon Strip

Draw a cartoon strip showing one of the main events in the text.



## Understanding

### Summary Report

Write a summary report of the text.



## Understanding

### Act it Out!

Write and perform a play about one of the main events in the text.



## Understanding

### Comparing

Compare this text with another text that you have read recently.



## Understanding

### You're a Reporter!

Write a newspaper article about the text.



## Understanding

### Flow Chart

Create a flow chart to show the sequence of the text.





## Applying

### Story Map

Draw a story map to show what happened in the text.



## Applying

### Why Did They Do That?

Explain why a particular character acted the way they did.



## Applying

### Display it!

Make a display using any materials available to you to illustrate one of the main events in the text.

## Applying

### People Power

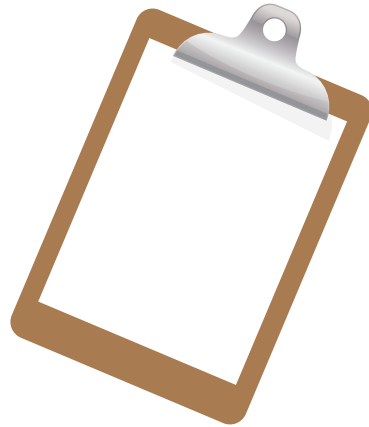
Construct a flowchart to show all of the main events in the text.



## Applying

### Rhyme Time

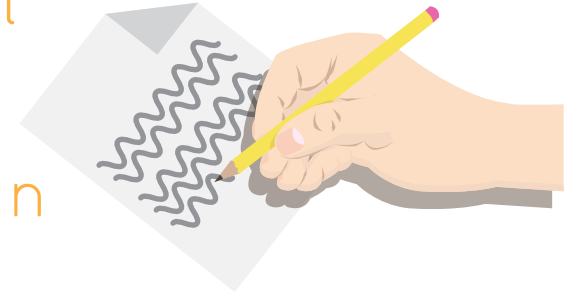
Make up a rhyme about one of the characters in the text.



## Applying

### Author

Write a short book about one of the main topics in the text.



## Applying

### Dear Diary

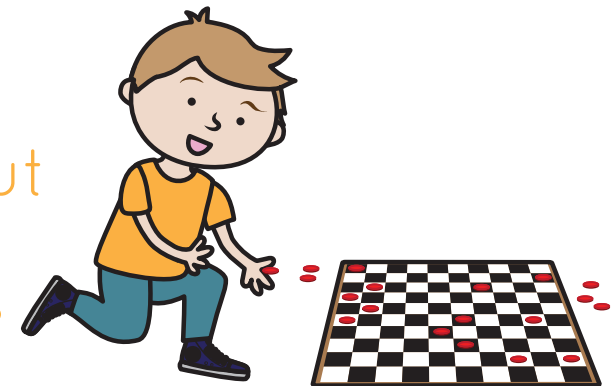
Write a diary entry pretending to be one of the characters from the text.



## Applying

### Fun Times!

Make a game or puzzle about one of the main topics in the text.



## Analysing

### Questions

Design a questionnaire about one of the main topics in the text.



## Analysing

### Graphing

Construct a graph to represent something that happens in the text.



## Analysing

### Biography

Write a biography about one of the characters in the text.



## Analysing

### Family Tree

Make a family tree showing the relationships between the characters in the text.



## Analysing

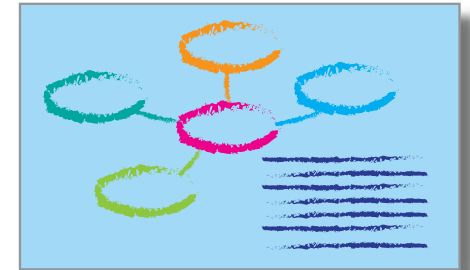
### Venn Diagram

Use a Venn Diagram to show the similarities and differences between this text and another text that you have recently read.

## Analysing

### Flow Chart

Make a flow chart to show the different interactions between the characters.



## Analysing

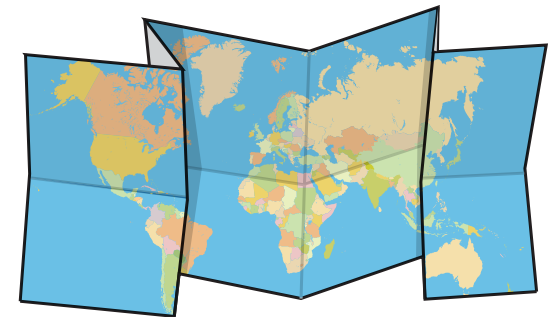
### Similarities

Make a list of any other texts that you have read that are similar to this text. Write all of the ways that they are similar.

## Analysing

### International Travel

How would the text change if it was set in a different country?



## Creating

### Sing it!

Compose a song, jingle or rap about the text.



## Creating

### Magazine Cover

Design a magazine cover to persuade more people to read the text.



## Creating

### Book Cover

Re-design or design the book cover for the text.



## Creating

### Artist

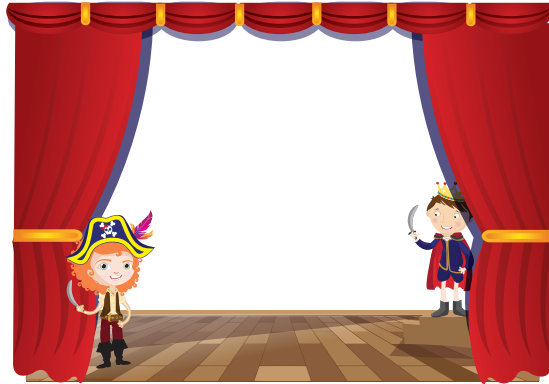
Paint one of the scenes from the text.



## Creating

### Puppets

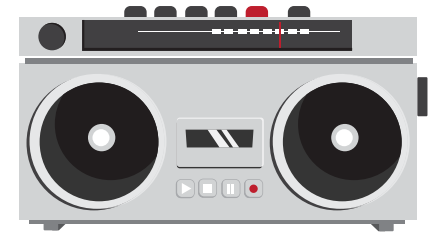
Write a puppet show for a scene in the text.



## Creating

### Sell it!

Write a radio advertisement to try and persuade more people to read the text.



## Creating

### Inventor

Invent a new product that you think one of the characters in the text would like.



## Creating

### Problem Solver

Brainstorm the problems in the text and design a product that could solve one of them.



## Evaluating

### Debating

Conduct a debate with another class member about one of the main topics in the text.



## Evaluating

### Letters

Write a letter to the editor of your local newspaper about one of the main topics in the text.



## Evaluating

### Persuade Me

Write a persuasive speech arguing for or against one of the main topics in the text.



## Evaluating

### Reactions

Evaluate one of the character's reactions in the story and write about how they could have reacted differently.

## Reading Activities – Multiple Intelligences (A)

<b>Logical - Mathematical</b>	<b>Verbal - Linguistic</b>	<b>Interpersonal</b>	<b>Intrapersonal</b>	<b>Naturalist</b>	<b>Visual – Spatial</b>	<b>Musical – Rhythmic and Harmonic</b>	<b>Bodily - Kinaesthetic</b>
Construct a timeline relating to events in the text.	Retell an interesting part of the text in your own words.	In a group, make a list of the five most important parts in the text.	Explain in a diary entry how the text makes you feel.	Draw a landscape/animal/plant described in the text.	Make a collage using images, words, topics from the text.	Make a playlist for the text – assign songs that would suit the different parts in your text.	Write and present a play or skit about the text.
Draw a plan/map to scale relating to a room or scene in the text.	Write a newspaper article about a topic from the text.	Conduct an interview with another person who has read the text. Use the questions you asked to write a magazine article.	Make a mind map about yourself in relation to the topic/characters in the text.	Find photos from magazines of scenes that could be in the text. Write a description about how they are related.	Design a bookmark about the text. Include the title, author and a summary of the text. Decorate it with pictures about the text.	Choose a passage from the text. Read aloud and make sound effects with different objects.	Act out a section of the text – do what the character would be doing.
Design a survey and graph the results relating to an issue in the text.	Write a radio advertisement for the text telling people why they should read it.	Plan a pamphlet to promote reading. Mention the text as a good book for students to read.	Make some predictions about what types of books students will read in the future.	Draw and write attributes for an animal that could be found in the text.	Draw and label a map of one of the areas, rooms or landscapes in your text.	Make up a song about the text.	Make a model of one of the characters from the text.
Create a code relating to the text. Use numbers or design your own symbols to represent the letters.	Make a list of words relating to the text using all of the letters from A-Z.	Write a biography about one of the characters. Mention personal qualities, achievements, challenges etc.	List positive information or interactions between characters in the text.	Create a manual about how to care for/live with one of the plants/animals in the text.	Design a new front cover for the text. Make it visually appealing and related to the text.	Make a list of the music genres each of the main characters would like. Decide who their favourite artist would be and why.	Use your face to create some of the emotions portrayed by characters. Take pictures and label the emotions.



# THE HISTORY OF CODES

Codes have traditionally been used to communicate with others in many ways and for a variety of different reasons. A code can be used to communicate a word, sentence or instruction for someone or something else, like a computer, to understand and follow. A code can be communicated across great distances, or without either person having to actually be in the same city, state or country. It can be a secret code, which is unable to be read by anyone who doesn't have the 'key' or understands that specific coding language. One of the most famous historical codes is Morse code.

## Morse Code

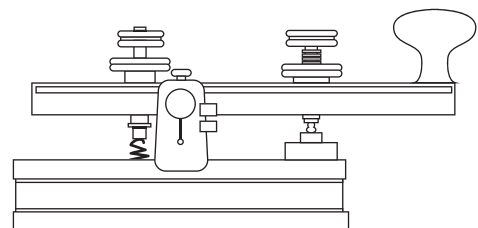
The telegraph was invented in the 1830's and 40's. This form of communication used the power of electricity to send pulses along wire cables. It was the first time in history that a message could be sent faster than the speed that a horse and messenger could ride (or sail!). The telegraph device worked by pushing a key down to complete the electric circuit of the battery. This action sent an electric signal across a wire to a receiver at the other end. It required a physical wire to send the electric signal (or pulse). As the distance increased between the sender and the receiver, a code was needed to understand the signals. Otherwise, the receiver didn't know if a series of frantic pulses meant 'Help, come quickly! The house is burning down' or 'Don't come home unless you want to help clean the bathrooms'.

Samuel Morse developed this code which assigned every letter of the alphabet a different combination of dots (dits) and dashes (dahs). The sender could hold the key down to send a long dash or a quick tap for a dot. This was the first code that bridged the communication distance between people using the power of electricity.

Telegraphs are no longer used to communicate, but as radio communication grew and expanded from America, Morse code became the international mode of communication. Morse code allowed people to send messages all over the world using this common code of dots and dashes so that anyone with an understanding of how to read this code could interpret its messages.

Even today people still know and use some of these coded words and letters. The most famous sequence is o o o - - - o o o.

To 'read' this code, it is important to know that three dots (o o o) = S and three dashes (- - -) = O. So when reading this code as a whole it becomes S O S, which is still the international distress 'code' and most often used at sea by those in distress.



Name \_\_\_\_\_

Date \_\_\_\_\_

# The History of Codes - Questions

## 1. Literal Comprehension

a) In the first sentence, the author uses the word many. What other word is also used in this sentence that has a similar meaning?

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b) Which has the closest meaning to '*contribution to society*'?

- successfully helping a small group of people
- benefitting the wider community
- supporting your community.

## 2. Purpose for Reading

a) What is the purpose of this text? (circle the correct answer)

- to entertain
- to inform
- to persuade

Explain why you chose this purpose.

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## 3. Making Connections

a) Fill in the table below with a text-to-text, text-to-self and text-to-world connection that you can make to the text.

Connection	Words or idea from the text	What am I connecting it to?
Text-to-Text		
Text-to-Self		
Text-to-World		

Name \_\_\_\_\_

Date \_\_\_\_\_

**4. Predicting**

a) If this text was to continue for one more paragraph, what do you predict it would be about? (Choose the best answer)

- Where we see Morse code used in modern times.
- Morse codes use on land.
- How Morse code would be used in the future.

Explain why you chose this prediction.

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**5. Research Activity:** Some people mistakenly believe that S.O.S stands for 'Save our Ship' or 'Save our Souls'. Can you find out if the letters S.O.S really have a meaning?

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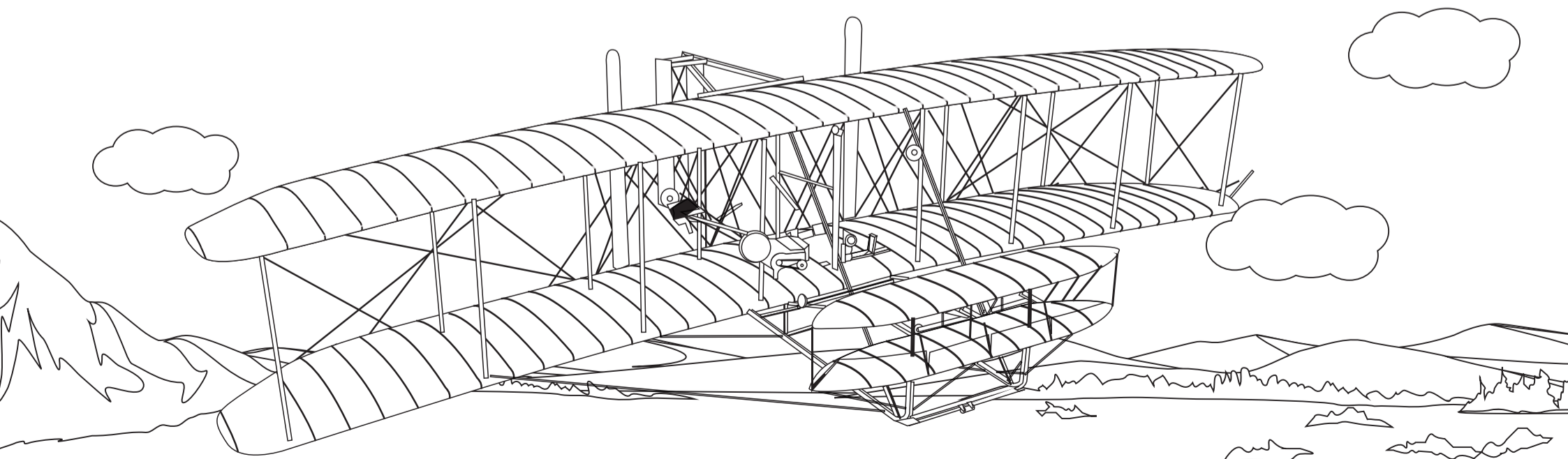
# Flying high

People have been fascinated by the concept of flight for centuries. Many different, and at times strange, flying contraptions have been designed and tested over the years. However, the concept of the aeroplane as we know it, has only been around for two centuries. Previously, people were trying to fly using designs that were based on the way birds fly. People built wings that were strapped to their arms and machines with flapping wings called ornithopters. Sadly, these designs did not work and people were forced to think of different ways to achieve flight.

Famous Italian artist, Leonardo da Vinci is credited as drawing some of the first plans for flying machines. As long ago as the 1500s, da Vinci was envisioning machines with wings that flap. Many aviation pioneers followed in his footsteps and planned, built and tested flying machines throughout the years. In 1783, two noblemen piloted the first hot-air balloon. Today we know that it is the heat that makes the balloon rise, but at the time, they mistakenly thought that it was the smoke from the burners that made the balloon take flight.

In 1903 Orville and Wilbur Wright, most famously known as the Wright Brothers, are credited as building the first powered aeroplane to take-off. The Wright Brothers managed to get their plane, the Wright Flyer, airborne for 12 seconds. After this accomplishment, aviation advancements were frequent. In 1909, French aviator Louis Bleriot flew across the English Channel and shortly afterwards, in 1919 John Alcock and Arthur Whitten Brown made the first nonstop transatlantic flight, which is a flight across the Atlantic Ocean.

It was not until 1939 that the first jet-engine aeroplane, similar to the ones we fly in today, made its first successful flight. Today, it is not uncommon to see and hear planes in the sky at all different times of the day. Just under 50,000 flights take off daily and carry passengers all over the world. The largest passenger plane in the skies is the Airbus A-380. It can carry up to 840 people on each flight. What would Leonardo da Vinci or the Wright Brothers think if they could see air travel today?



Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Flying high

Questions – Answer using full sentences.

1. What is an ornithopter?

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2. Which country was Leonardo da Vinci from?

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3. What is it that makes a hot-air balloon rise?

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4. What is a flight across the Atlantic Ocean called?

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5. What do you think 'aviation advancements' in the third paragraph means?

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6. At the beginning of aviation, what types of designs were people focusing on?

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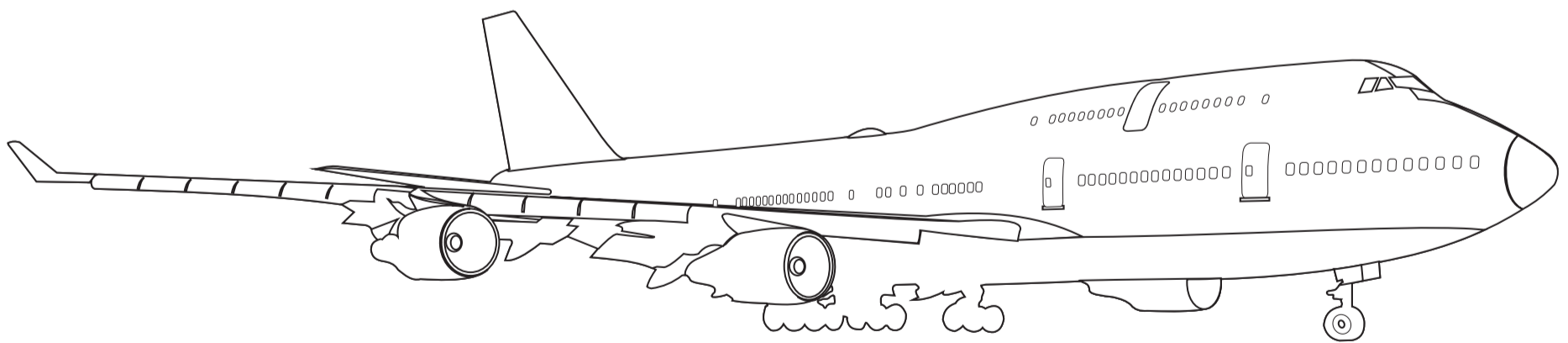
# Flying high

7. Make a timeline of the important dates and events provided in aviation history.

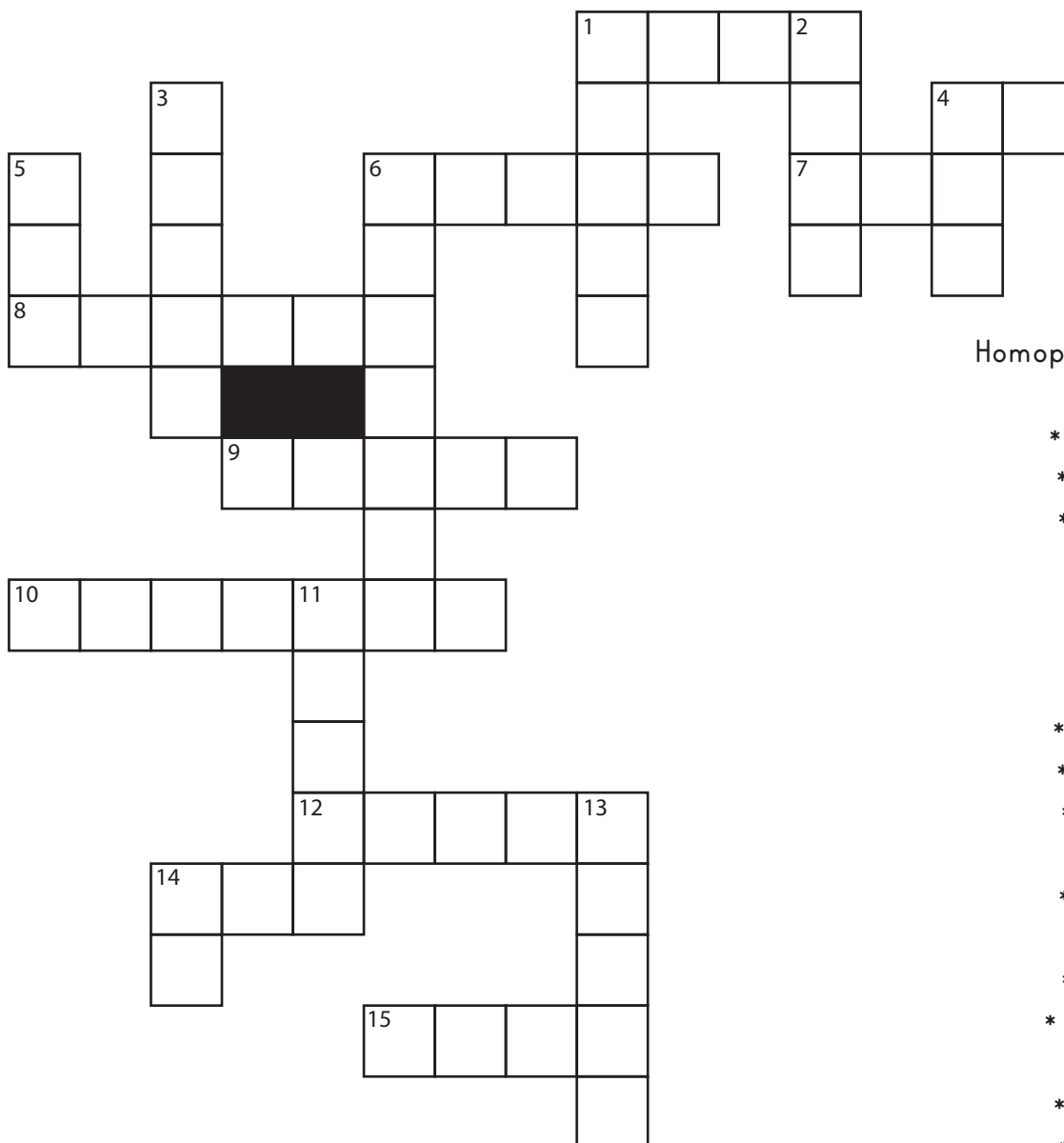
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Today = \_\_\_\_\_

8. If you could ask the Wright Brothers one question, what would it be?

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# HOMOPHONES CROSSWORD



## Homophones Used

- \* two
- \* they're
- \* aloud
- \* there
- \* too
- \* to
- \* your
- \* bye
- \* where
- \* we're
- \* right
- \* buy
- \* write
- \* by
- \* their
- \* allowed
- \* rite
- \* you're
- \* wear

## ACROSS CLUES

1. You need to \_\_\_\_\_ a hat when you are out in the sun. (4)
4. I'm coming \_\_\_ your party on the weekend. (2)
6. The parents were very proud of \_\_\_\_\_ daughter on her graduation. (5)
7. The \_\_\_\_ boys made a great duo. (3)
8. \_\_\_\_\_ going to be very happy with your science mark. (6)
9. "\_\_\_\_\_ going out to lunch,' said the girl excitedly. (5)
10. We weren't \_\_\_\_\_ to go out and play until we had cleaned our rooms. (7)
12. You go to the end of the street and then turn \_\_\_\_\_. (5)
14. It was hard to say \_\_\_\_\_ to such a good friend for so long. (3)
15. Let's have a sleepover at \_\_\_\_\_ house. (4)

## DOWN CLUES

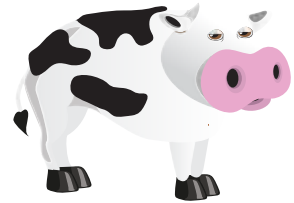
1. I'm going to \_\_\_\_\_ a novel when I finish school. (5)
2. Starting school is a \_\_\_\_\_ of passage. (4)
3. I was surprised when the teacher asked me to read my work \_\_\_\_\_ to the class. (5)
4. The weatherman said it would be \_\_\_\_\_ dangerous to go out in the storm. (3)
5. I still need to \_\_\_\_\_ you a birthday present. (3)
6. \_\_\_\_\_ going to dinner at their grandparents' house. (7)
11. I don't know \_\_\_\_\_ I'm going. (5)
13. \_\_\_\_\_ are so many places to go shopping in my suburb. (5)
14. My favourite book is written \_\_\_\_\_ an American author. (2)

## Adding Fractions with Common Denominators

Answer each question and cross out the box that has the correct answer in it. Write the answer to the joke on the lines provided using the remaining letters.

$S = \frac{3}{20}$	$D = \frac{8}{8}$	$H = \frac{5}{8}$	$C = \frac{7}{9}$	$P = \frac{3}{10}$	$W = \frac{3}{5}$	$K = \frac{4}{5}$	$O = \frac{5}{7}$	$I = \frac{8}{11}$	$O = \frac{8}{9}$	$M = \frac{6}{7}$
$I = \frac{9}{11}$	$L = \frac{2}{7}$	$A = \frac{2}{3}$	$U = \frac{5}{6}$	$L = \frac{6}{10}$	$E = \frac{7}{11}$	$E = \frac{1}{4}$	$Y = \frac{9}{10}$	$Q = \frac{4}{9}$	$J = \frac{5}{6}$	$D = \frac{1}{3}$
$Z = \frac{17}{20}$	$M = \frac{2}{9}$	$P = \frac{7}{12}$	$T = \frac{8}{12}$	$G = \frac{2}{3}$	$I = \frac{3}{8}$	$B = \frac{4}{4}$	$F = \frac{4}{5}$	$L = \frac{2}{5}$	$K = \frac{1}{2}$	$X = \frac{12}{12}$

What do you get from a pampered cow?



\_\_\_\_\_

\_\_\_\_\_

(a)  $\frac{1}{4} + \frac{3}{4} =$  \_\_\_\_\_

(l)  $\frac{4}{9} + \frac{3}{9} =$  \_\_\_\_\_

(b)  $\frac{1}{3} + \frac{1}{3} =$  \_\_\_\_\_

(m)  $\frac{1}{5} + \frac{3}{5} =$  \_\_\_\_\_

(c)  $\frac{2}{12} + \frac{5}{12} =$  \_\_\_\_\_

(n)  $\frac{1}{3} + \frac{1}{3} =$  \_\_\_\_\_

(d)  $\frac{2}{9} + \frac{2}{9} =$  \_\_\_\_\_

(o)  $\frac{2}{5} + \frac{2}{5} =$  \_\_\_\_\_

(e)  $\frac{1}{11} + \frac{8}{11} =$  \_\_\_\_\_

(p)  $\frac{3}{7} + \frac{3}{7} =$  \_\_\_\_\_

(f)  $\frac{2}{5} + \frac{1}{5} =$  \_\_\_\_\_

(q)  $\frac{4}{8} + \frac{4}{8} =$  \_\_\_\_\_

(g)  $\frac{1}{6} + \frac{4}{6} =$  \_\_\_\_\_

(r)  $\frac{2}{6} + \frac{3}{6} =$  \_\_\_\_\_

(h)  $\frac{3}{8} + \frac{2}{8} =$  \_\_\_\_\_

(s)  $\frac{8}{12} + \frac{4}{12} =$  \_\_\_\_\_

(i)  $\frac{3}{10} + \frac{3}{10} =$  \_\_\_\_\_

(t)  $\frac{2}{10} + \frac{7}{10} =$  \_\_\_\_\_

(j)  $\frac{14}{20} + \frac{3}{20} =$  \_\_\_\_\_

(u)  $\frac{3}{12} + \frac{5}{12} =$  \_\_\_\_\_

(k)  $\frac{3}{11} + \frac{4}{11} =$  \_\_\_\_\_

(v)  $\frac{5}{9} + \frac{3}{9} =$  \_\_\_\_\_



Name \_\_\_\_\_

Date \_\_\_\_\_

## Rounding Decimals - Tenths and Hundredths

① Round these decimals to the nearest tenth.

(a)  $9.74 =$  \_\_\_\_\_

(k)  $9.17 =$  \_\_\_\_\_

(b)  $29.10 =$  \_\_\_\_\_

(l)  $67.670 =$  \_\_\_\_\_

(c)  $0.77 =$  \_\_\_\_\_

(m)  $0.592 =$  \_\_\_\_\_

(d)  $4.61 =$  \_\_\_\_\_

(n)  $8.97 =$  \_\_\_\_\_

(e)  $2.456 =$  \_\_\_\_\_

(o)  $0.08 =$  \_\_\_\_\_

(f)  $6.54 =$  \_\_\_\_\_

(p)  $32.87 =$  \_\_\_\_\_

(g)  $10.55 =$  \_\_\_\_\_

(q)  $24.24 =$  \_\_\_\_\_

(h)  $9.043 =$  \_\_\_\_\_

(r)  $5.432 =$  \_\_\_\_\_

(i)  $3.5 =$  \_\_\_\_\_

(s)  $82.098 =$  \_\_\_\_\_

(j)  $128.10 =$  \_\_\_\_\_

(t)  $3.333 =$  \_\_\_\_\_

② Round these decimals to the nearest hundredth.

(a)  $4.387 =$  \_\_\_\_\_

(k)  $7.444 =$  \_\_\_\_\_

(b)  $7.336 =$  \_\_\_\_\_

(l)  $82.876 =$  \_\_\_\_\_

(c)  $0.1731 =$  \_\_\_\_\_

(m)  $76.909 =$  \_\_\_\_\_

(d)  $1.88 =$  \_\_\_\_\_

(n)  $87.770 =$  \_\_\_\_\_

(e)  $5.7491 =$  \_\_\_\_\_

(o)  $4.4333 =$  \_\_\_\_\_

(f)  $0.3089 =$  \_\_\_\_\_

(p)  $3.321 =$  \_\_\_\_\_

(g)  $9.692 =$  \_\_\_\_\_

(q)  $2.2222 =$  \_\_\_\_\_

(h)  $6.4664 =$  \_\_\_\_\_

(r)  $4.3004 =$  \_\_\_\_\_

(i)  $1.8202 =$  \_\_\_\_\_

(s)  $1.0648 =$  \_\_\_\_\_

(j)  $1.868 =$  \_\_\_\_\_

(t)  $5.1445 =$  \_\_\_\_\_



Name \_\_\_\_\_

Date \_\_\_\_\_

## Rounding Decimals - Thousandths and Whole

① Round these decimals to the nearest thousandth.

(a)  $4.4787 =$  \_\_\_\_\_

(k)  $9.24786 =$  \_\_\_\_\_

(b)  $9.9986 =$  \_\_\_\_\_

(l)  $4.23548 =$  \_\_\_\_\_

(c)  $0.7633 =$  \_\_\_\_\_

(m)  $6.28831 =$  \_\_\_\_\_

(d)  $8.8881 =$  \_\_\_\_\_

(n)  $6.3455 =$  \_\_\_\_\_

(e)  $8.9887 =$  \_\_\_\_\_

(o)  $9.14717 =$  \_\_\_\_\_

(f)  $7.2769 =$  \_\_\_\_\_

(p)  $6.6644 =$  \_\_\_\_\_

(g)  $3.2497 =$  \_\_\_\_\_

(q)  $3.76855 =$  \_\_\_\_\_

(h)  $7.6138 =$  \_\_\_\_\_

(r)  $6.9296 =$  \_\_\_\_\_

(i)  $6.31828 =$  \_\_\_\_\_

(s)  $1.86119 =$  \_\_\_\_\_

(j)  $9.4981 =$  \_\_\_\_\_

(t)  $9.23265 =$  \_\_\_\_\_

② Round these decimals to the nearest whole.

(a)  $9.84 =$  \_\_\_\_\_

(k)  $919.6 =$  \_\_\_\_\_

(b)  $44.4 =$  \_\_\_\_\_

(l)  $0.872 =$  \_\_\_\_\_

(c)  $0.99 =$  \_\_\_\_\_

(m)  $1.11 =$  \_\_\_\_\_

(d)  $18.18 =$  \_\_\_\_\_

(n)  $11.11 =$  \_\_\_\_\_

(e)  $100.11 =$  \_\_\_\_\_

(o)  $7.501 =$  \_\_\_\_\_

(f)  $5.55 =$  \_\_\_\_\_

(p)  $42.009 =$  \_\_\_\_\_

(g)  $8.9 =$  \_\_\_\_\_

(q)  $10.10 =$  \_\_\_\_\_

(h)  $3.50 =$  \_\_\_\_\_

(r)  $6.909 =$  \_\_\_\_\_

(i)  $8.099 =$  \_\_\_\_\_

(s)  $7.773 =$  \_\_\_\_\_

(j)  $1.134 =$  \_\_\_\_\_

(t)  $1.101 =$  \_\_\_\_\_



# Integers Polygon Puzzle

Cut out the polygons and match the number sentences and answers.

The puzzle consists of 18 hexagonal pieces arranged in a honeycomb pattern. Each piece contains either a number sentence or a numerical answer. The pieces are as follows:

- Top row:  $12 - (-2) =$  (answer: 2),  $13 - (-3) =$  (answer: 16)
- Second row:  $14 - (-7) =$  (answer: -13),  $-13 - (-3)$  (answer: 10),  $4 + (-4) =$  (answer: 8),  $5$  (answer: 4)
- Third row:  $(-5) + (-5) =$  (answer: -10),  $(-12) + 8 =$  (answer: -4),  $2 + (-4) =$  (answer: -6),  $12 + (-8) =$  (answer: 4)
- Fourth row:  $10$  (answer: 0),  $7 + (-9) =$  (answer: -2),  $14$  (answer: -10),  $8 + (-3) =$  (answer: 5),  $(-2) + 4 =$  (answer: 2)
- Fifth row:  $21$  (answer: -10),  $5 - (-5) =$  (answer: 10),  $(-12) + 6 =$  (answer: -6),  $(-4) + (-4) =$  (answer: -8),  $(-2) + 4 =$  (answer: 2)
- Bottom row:  $(-7) + 51$  (answer: 44),  $(-17) - 6 =$  (answer: -23),  $(-12) + 6 =$  (answer: -6),  $(-2) + 4 =$  (answer: 2)

# 2D and 3D Shape Crossword

## Across Clues

3. I am 3D, I have 5 faces and vertices, 8 edges and I'm found in Egypt. (18)
4. I am 2D, I have 1 curved side and the same diameter across. (6)
8. I am 3D, I have 6 faces, 8 vertices & 12 edges. New shoes come in me (16)
11. I am 2D, I have 8 sides and you would find me as a stop sign. (7)
12. I am 2D, I have 1 curved side with different diameters across. (4)
13. I am 2D, I have 5 sides and the sum of my internal angles is  $540^\circ$ . (8)
14. I am 2D, my opposite sides are equal length & corners are right angles. (9)
15. I am 2D, all my sides are equal length and my 4 corners are right angles. (6)
16. I am 3D and I have no vertices, edges or boundaries (6)
17. I am 2D, I have 2 pairs of parallel sides and I can be called another name starting with 'D'. (7)
18. I am 2D and I have no parallel sides but I do have 2 pairs of adjacent equal length sides. You might like to fly me at the beach or in the park. (4)
19. I am 3D, I have 6 faces, 8 vertices and 12 edges. I'm like a dice. (4)

## Down Clues

1. I am 2D, I have 4 sides and 2 of them are parallel. The sum of my internal angles is  $360^\circ$  (9)
2. I am 3D, I have 2 flat and one curved surface, 2 boundaries but no vertices. (8)
5. I am 3D and I have no vertices. I have 1 curved surface, 1 flat surface and 1 boundary. (4)
6. I am 2D and I have 3 sides of equal length and 3 equal angles. (19)
7. I am 2D, I have 6 sides and the sum of my internal angles is  $720^\circ$ . (7)
9. I am 3D and I have 5 faces and 9 edges. I look like a tent. (15)
10. I am 2D, I have 3 sides and 2 of my sides are equal length. I also have 2 equal angles. (17)

**Shapes Used**

- \* Rectangle
- \* Circle
- \* Cone
- \* Hexagon
- \* Square
- \* Equilateral Triangle
- \* Triangular Prism
- \* Sphere
- \* Rhombus
- \* Cube
- \* Square Based Pyramid
- \* Cylinder
- \* Trapezium
- \* Oval
- \* Rectangular Prism
- \* Pentagon
- \* Octagon
- \* Isosceles Triangle
- \* Kite

# Troll Toll

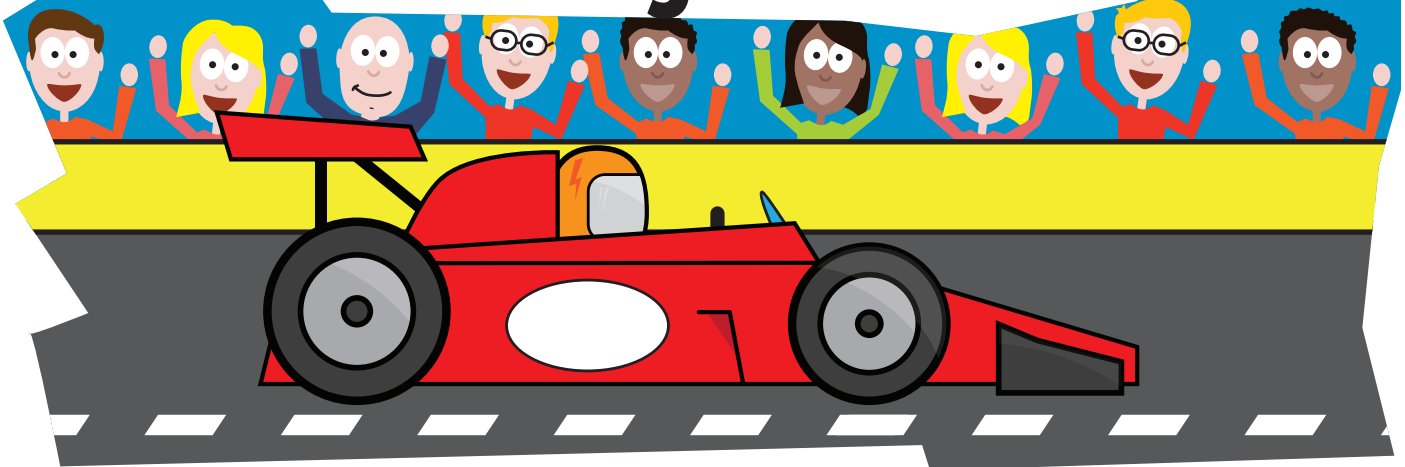


Help the brave prince feed his dragon some apples!

The prince has to cross 5 bridges. It sounds easy, but under each bridge lurks a troll! Each troll insists that the prince pay a troll toll. Before he can cross their bridge, the prince has to give them half of the apples he is carrying, but as they are kind trolls, they each give the prince back a single apple.

How many apples does the prince have to leave home with to make sure that he can feed his dragon three apples?

# Racing Record



Michael was the best driver the world had ever seen. His speedy racing car averaged 160 km/h. In the Big Race, his racing car came first in a record time of 1 hour and 10 minutes.

During the Big Race, Michael's racing car had one pit stop which took 10 minutes. During the pit stop, his racing car fueled up with an extra 25 litres of petrol. His racing car finished the race with only 2 litres of petrol left.

If Michael's racing car used half a litre of petrol per kilometre, how much petrol was in the fuel tank when the race started?

# Football Frenzy

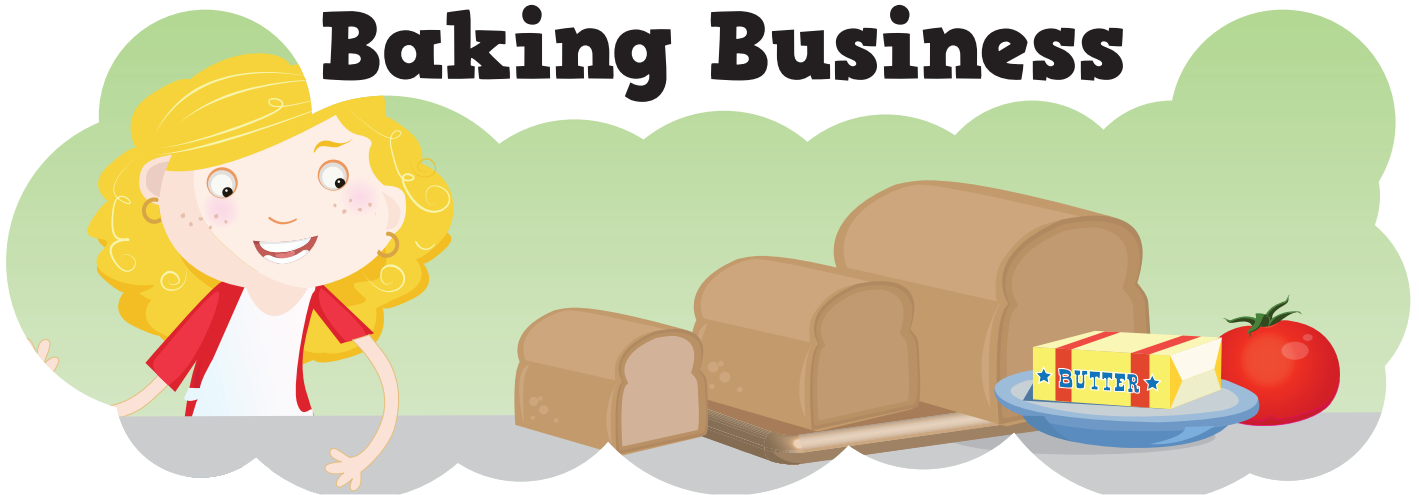
It was the final game of the season and, with a little bit of luck, Peter's football team could win the championship.

His team needed to beat John's team by three goals, but they also needed to score at least 4 more goals than David's team, who was playing Ben's team. David's team beat Ben's team by 1 goal.

**If Ben's team scored 1 goal in each half, what is the closest score Peter's team could beat John's team by to win the championship?**



# Baking Business



Jill woke up bright and early to start baking bread for her customers. She knew she needed to bake 68 loaves of bread, based on the orders she had received. When she had finished baking, she read the order list out of curiosity. The orders were as follows:

1. Every customer gets 2 white bread loaves.
2. Every customer gets half of a multi-grain bread loaf.
3. Every customer gets  $\frac{1}{3}$  of a wholemeal bread loaf.
4. All customers will have each type of bread.

**Can you help Jill work out how many customers she is serving?**

# Code Cracker



A secret agent found five clues to unlock a safe. She needs your help to crack the code and save the world!

- The first number is two less than twice the second number.
- The fifth number plus the third number equals the fourth number.
- The fourth number is five more than the second number.
- The second number plus the third number equals 11.
- The sum of all five numbers is 28.

What were the five numbers and in what order?

# Cash Crisis

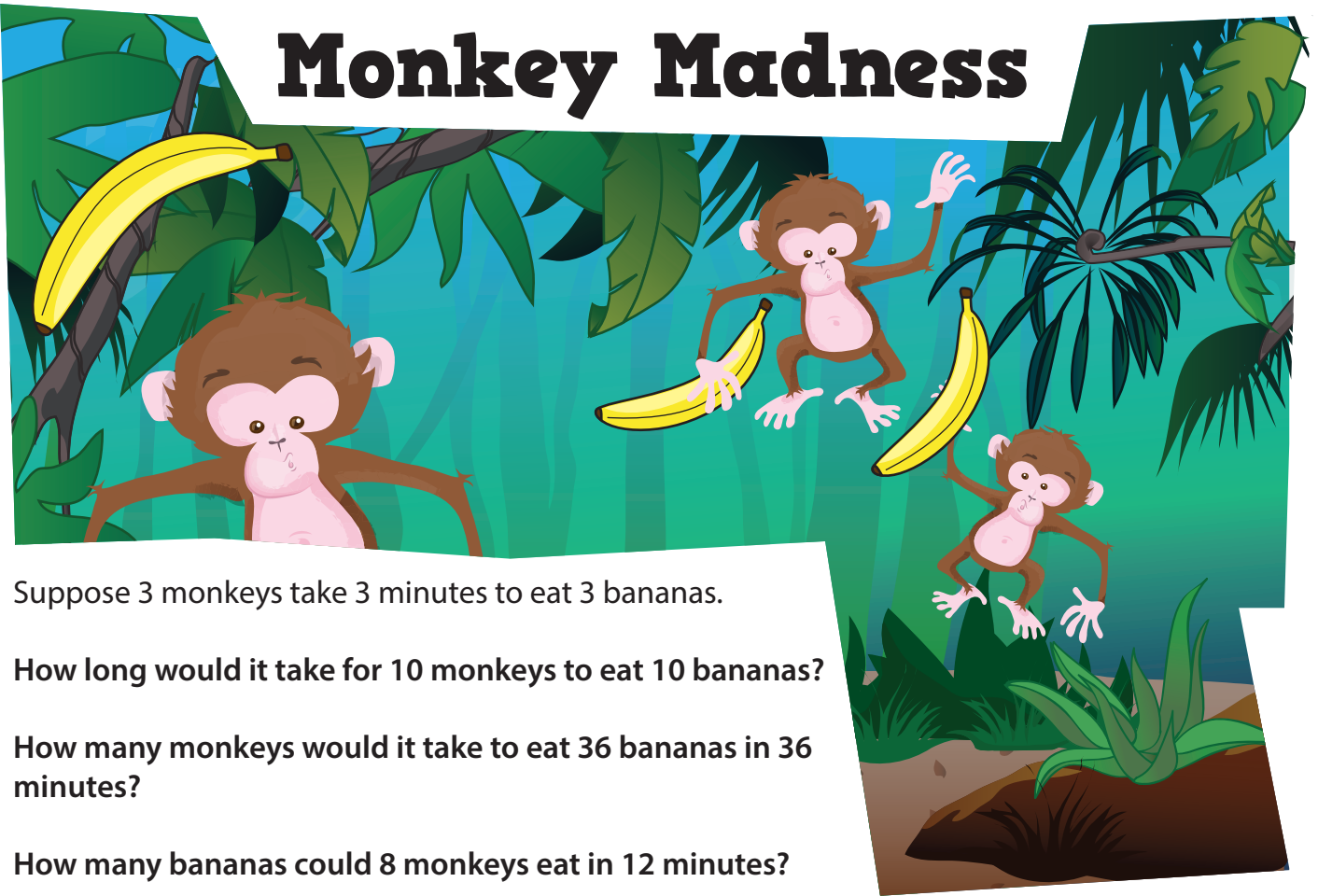
Scott dreamt of buying an iPad.

Scott knew that he would have to work hard to save \$490 to buy an iPad. He worked 10 hours per week and spent \$50 per week on expenses.

If Scott earns \$12 per hour, how many weeks would it take him to save up enough money to buy an iPad?



# Monkey Madness



Suppose 3 monkeys take 3 minutes to eat 3 bananas.

How long would it take for 10 monkeys to eat 10 bananas?

How many monkeys would it take to eat 36 bananas in 36 minutes?

How many bananas could 8 monkeys eat in 12 minutes?

# Fit Firefighter

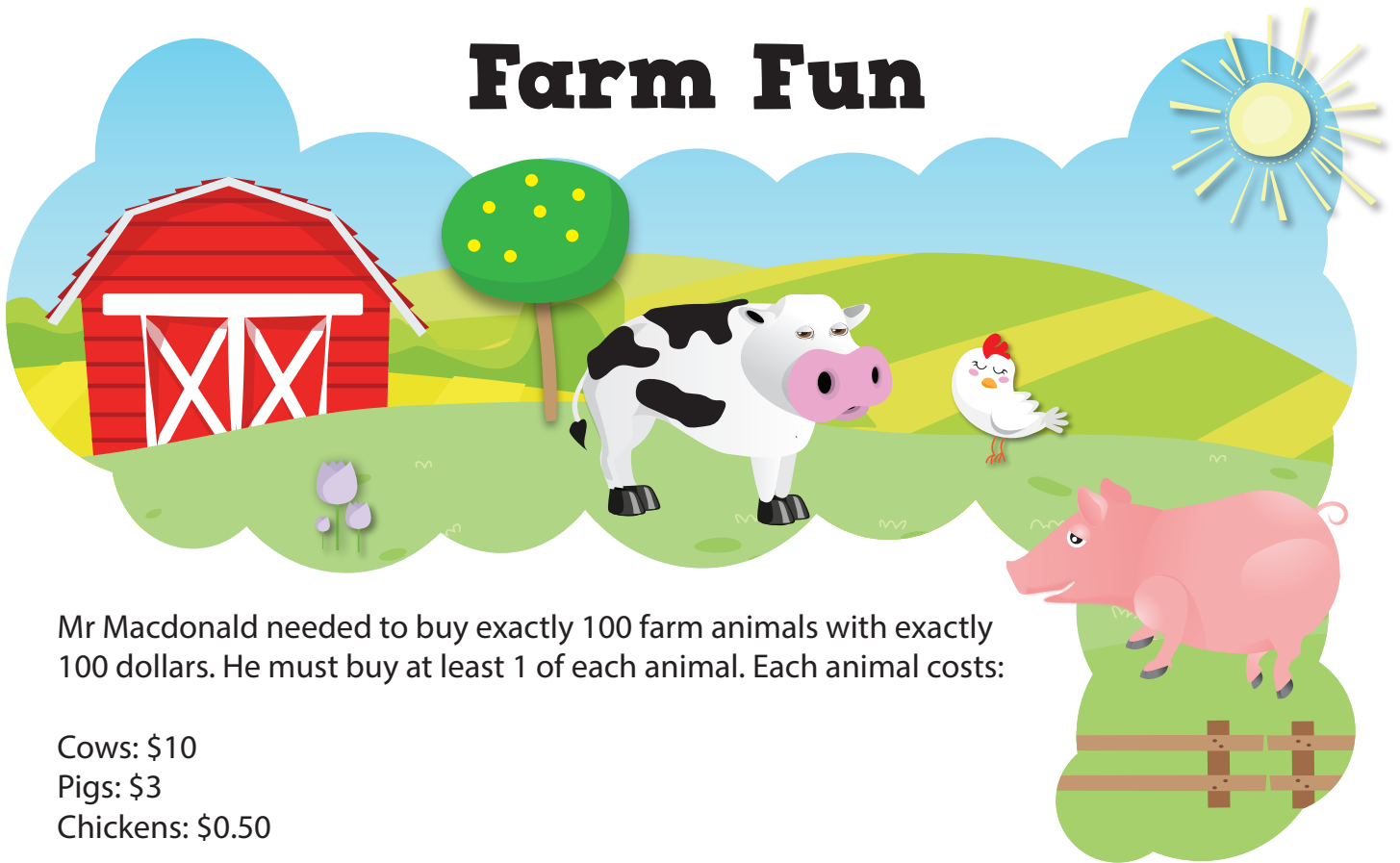


A firefighter stood on the middle rung of a tall ladder, spraying water on a burning house. He then climbed up 8 rungs before the heat of the flames caused him to come down 14 rungs. As the fire spread, he was able to climb 22 rungs to the very top of the ladder.

How many rungs did the ladder have?



# Farm Fun



Mr Macdonald needed to buy exactly 100 farm animals with exactly 100 dollars. He must buy at least 1 of each animal. Each animal costs:

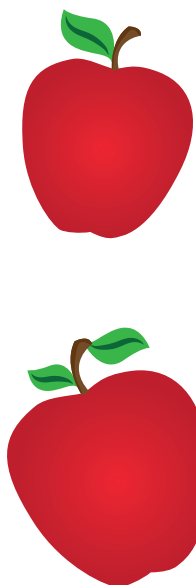
Cows: \$10

Pigs: \$3

Chickens: \$0.50

How many of each animal should he buy?

# Adding Apples



A shop sells apples at \$4 each. Each of these apples have a special sticker on them. You can trade 3 of these stickers for 1 apple or five stickers for 2 apples. Once you've made 5 trades, you receive 2 additional apples.

If you have \$84, what is the most apples you can get altogether?

## Percentages, Fractions and Decimals Match-Up

Cut out the percentages, fractions and decimals and match them up in a table.

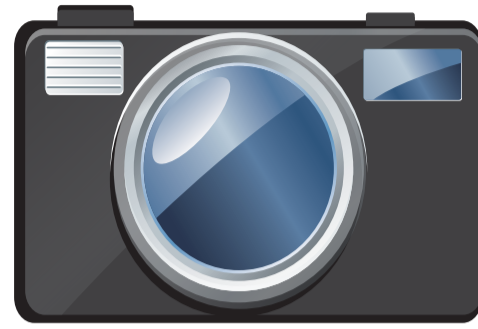
<b>0.25</b>	<b><math>\frac{1}{3}</math></b>	<b><math>\frac{1}{2}</math></b>
<b>75%</b>	<b>0.8</b>	<b>20%</b>
<b><math>\frac{100}{100}</math></b>	<b>33.33%</b>	<b><math>\frac{1}{4}</math></b>
<b>50%</b>	<b>0.2</b>	<b><math>\frac{4}{5}</math></b>
<b>0.1</b>	<b>25%</b>	<b>0.75</b>
<b>100%</b>	<b>0.333...</b>	<b><math>\frac{1}{10}</math></b>
<b><math>\frac{1}{5}</math></b>	<b>80%</b>	<b>0.5</b>
<b><math>\frac{3}{4}</math></b>	<b>1</b>	<b>10%</b>

# Dan's Digital WORLD



**\$623**

15" Notebook  
with HD Webcam



**\$389**

Compact  
Digital Camera



Memory Card **\$49**

60" Ultra HD TV – LED



**\$480 off**  
NOW **\$1865**

**Extra 3 Year  
Warranty**

15% of total  
price + \$50

**\$442** 8" Tablet  
HD Screen



## Game Bundle



- Game Console
- Wireless Controller x2
- Football Game
- Car Racing Game

**Valued at \$720**

NOW **\$632**



**\$1325**

Home Theatre System  
5 x 1000 Watt Speakers



Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Dan's Digital World

You are going shopping at Dan's Digital World. He is a generous man who is willing to make deal. Use a catalogue to help you calculate how much you will spend.

## 1. Spending spree

You are setting up your home entertainment system and you need to buy a TV, Speaker System and Game Console. Dan has decided to do you a special deal. He will give you 30% off the TV, 25% off the Speaker System and 15% off the Game Console Bundle. You decide to take the extra 3 year warranty on each of the products. Calculate the total cost to set up your home entertainment system.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## 2. Camera crazy

You are interested in taking a photography course, but will need to buy a new digital camera, a memory card and a laptop to upload your photos. Dan loves photography, so he has offered you a 5% discount on the camera and a 12% discount on the laptop. You decide to take the extra 3 year warranty just for the camera. How much will it cost you to get set up for your course?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### 3. Tricky tablets

Your office needs to buy tablets for each of its staff members. You have 15 staff. Dan likes the idea of selling so many tablets in one transaction, so he has offered you 10% off the first 5 tablets, 15% off the next 5 tablets and 20% off the last 5 tablets. What is the total cost for the tablets? Your boss has given you a budget of \$7000. How many tablets can you get the extra 3 year warranty for?

## 4. Screen saver

You are looking at buying the 15" Notebook with HD Webcam but you are afraid the screen will be too small. Dan has agreed to let you upgrade to the 18" screen for an extra 23%. Dan's major rival, Donny's Digital World has the 18" Notebook with HD Webcam on sale for \$749.00. What percentage off (whole number) the 18" Notebook would you need to negotiate with Dan to ensure you are getting a better deal with him than at Donny's?



## The Scenario

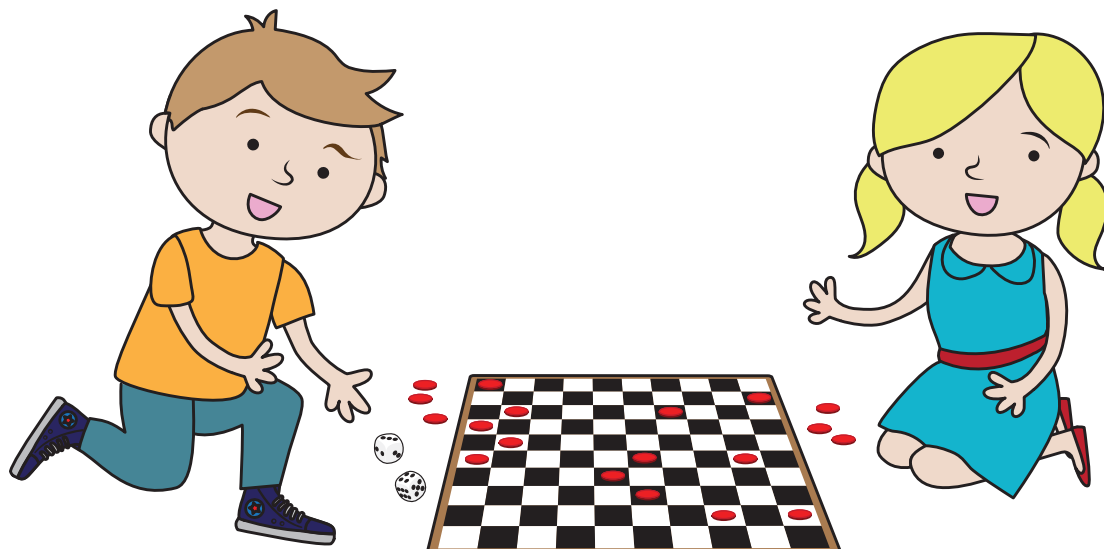
During a recent game of Snakes and Ladders, you noticed your friend whispering to the dice before each roll. You found this rather strange, so you asked your friend about it. Your friend replied, "If you whisper **Roll me a six!** to the dice before rolling it, you have a higher chance of getting a six. Everyone knows that!"

You have been thinking about this statement and wondering whether your friend is right. You have decided to conduct a detailed chance experiment to see whether whispering to the dice before rolling it increases the chance of getting a six.

## The Task

Conduct a chance experiment to test the following statement:

If you whisper **Roll me a six!** to the dice before rolling it, you have a higher chance of getting a six.



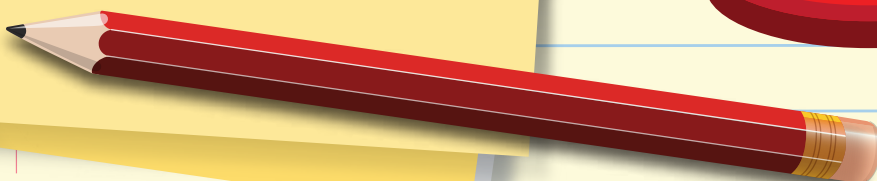


## The Procedure

1. Predict what you think will happen during the experiment. Record your ideas on the Making Predictions Worksheet.
2. Conduct the experiment. Roll a dice 20 times, whispering **Roll me a six!** before each roll. Record what happens each time in the table provided on the Conducting the Experiment Worksheet. Then roll the dice 20 more times, without whispering. Record what happens each time in the second table.
3. Use the Recording Results Worksheet to show the frequency that each number was rolled during each part of the experiment as a number, as a fraction, as a decimal and as a percentage.
4. Draw a side-by-side column graph on the Displaying Results Worksheet to display the results of each part of the experiment.
5. Answer the questions on the Discussion and Conclusion Worksheet to compare the results of the experiment with your prediction.

## The Materials

- Dice
- Worksheets



Name \_\_\_\_\_

Date \_\_\_\_\_

## Making Predictions

1. Do you think that the statement you are testing in this experiment is true or false? Give reasons for your answer.

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2. Out of 20 rolls, how many sixes do you think you might roll during the first part of the experiment (Whispering to the Dice)? Give reasons for your answer.

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3. Out of 20 rolls, how many sixes do you think you might roll during the second part of the experiment (Rolling the Dice Normally)? Give reasons for your answer.

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---

4. What will need to happen in this experiment to prove that the statement is true?

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Name \_\_\_\_\_

Date \_\_\_\_\_

## Conducting the Experiment

<b>Part 1: Whispering to the Dice</b>	
<b>Roll</b>	<b>Outcome</b>
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

<b>Part 2: Rolling the Dice Normally</b>	
<b>Roll</b>	<b>Outcome</b>
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Name \_\_\_\_\_

Date \_\_\_\_\_

## Recording Results

1. In the table below, record the frequency that each number was rolled for each part of the experiment.

	1	2	3	4	5	6
<b>Part 1 (Whispering to the Dice)</b>						
<b>Part 2 (Rolling the Dice Normally)</b>						

2. In the table below, record the frequency that each number was rolled as a fraction, as a decimal and as a percentage.

### Part 1 (Whispering to the Dice)

	1	2	3	4	5	6
<b>Fraction</b>						
<b>Decimal</b>						
<b>Percentage</b>						

### Part 2 (Rolling the Dice Normally)

	1	2	3	4	5	6
<b>Fraction</b>						
<b>Decimal</b>						
<b>Percentage</b>						



Name \_\_\_\_\_

Date \_\_\_\_\_

## Displaying Results

In the box below, draw a side-by side column graph to show the frequency that each number was rolled during each part of the experiment. Don't forget to include:

- an appropriate title
- labels for the x and y axis
- a key.



Name \_\_\_\_\_

Date \_\_\_\_\_

## Discussion and Conclusion

1. How did the results of Part 1 (Whispering to the Dice) compare with your prediction?

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2. How did the results of Part 2 (Rolling the Dice Normally) compare with your prediction?

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3. List any similarities you notice in the results of the two parts of the experiment.

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4. List any differences you notice in the results of the two parts of the experiment.

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5. If you whisper *Roll me a six!* to the dice before rolling it, you have a higher chance of getting a six.

Based on your results, is this a true statement? Why or why not?

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Name \_\_\_\_\_

Date \_\_\_\_\_

## Reflection

1. Did you enjoy working on this investigation? Give reasons to explain your answer.

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2. Were the results of the experiment what you expected? Give reasons to explain your answer.

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3. What would you say to your friend about whispering to the dice before each roll, now that you have conducted this investigation?

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4. What new knowledge and skills did you learn by completing this investigation?

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5. Circle the statement that best suits how you feel about conducting chance experiments.

- a) I feel very confident conducting chance experiments.
- b) My understanding of chance experiments is improving.
- c) I still need some help when conducting chance experiments.



# Bobby's Board Games - Math Design Pitch

My name is Bobby Board, and I am the Managing Director of board game manufacturer, Bobby's Board Games. I am hiring you to design and make a maths board game. In my time as a board game manufacturer I have noticed that, at times, children can find certain maths concepts difficult. Sometimes they need some extra help through the use of a board game. Your job is to identify a maths concept for students your own age or younger, and make a board game to help them understand this concept.

Your game may include:

- a game board
- rules or information on how to play your game
- any questions or game pieces that are necessary to play your game
- answer sheets for any questions in your game.

I don't like when my designers submit board games that are really similar to games that are already on the market, so use your imagination and try to think of something original. Remember board games should be fun... I only make and sell games that I think children will not only learn from, but also have lots of fun playing!!

I am looking forward to seeing your board game and using it to help children with their maths skills.

## Bobby Board

Bobby Board  
Managing Director, Bobby's Board Games

**percentages**

**decimals**

**place  
value**

**operations**

(addition, subtraction,  
multiplication and division)

**fractions**

**large  
numbers**





