



# Rio de Janeiro in 2016

# A Mathematical Project for Students

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Designed by Bill Healy

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### **INSTRUCTIONS TO STUDENTS**

- The purpose of this unit of work, based on the theme "In the Running for the Olympics", is to help you to revise your mathematics in the context of a problem solving activity.
- Diagrams in this book are not drawn to scale. Use the measurements on each of the diagrams in your calculations.
- Use the answers to the clues to complete the crossword on the last page of this book.

### A NOTE TO TEACHERS AND PARENTS

#### Five good reasons to use this project with your students.

- Bring mathematics to life with this project
- Introduce new topics and revise work
- Provide extra work for mathematically gifted students
- Give a sense of achievement to students who find mathematics difficult
- Classroom trials show that students love doing this project

#### Mathematics topics covered in the project "In the Running for the Olympics"

- digital time
- movement on a grid
- addition, subtraction, multiplication, division
- prime numbers
- Roman Numerals
- number sequences
- number and money word problems
- time (days, weeks, months, years, decades)
- puzzles using a grid
- triangular numbers
- square numbers
- decimals (addition, subtraction, multiplication)
- millilitres, litres
- probability and statistics

- grams, kilograms, tonnes
- perimeter
- nets of solids
- cylinder
- triangular prism
- cube
- square pyramid
- cone
- triangular pyramid
- logic puzzles
- cryptograms
- magic squares
- angles

	Let the Games begin!							
My name is								
• I set out to discover some Olympic facts								
at (time)								
on (day)								
date								

• I found the names of the cities that have hosted the Olympic Games

at (ti	ime)	
--------	------	--

on (	(day)	
------	-------	--

date \_\_\_\_\_

• The time taken to solve the problems and to complete the crossword was

#### In the Running for the Olympics

Solve the clues 1 - 6 and find the name of a city that has hosted the Olympic Games.

#### CLUE 1.

Write half past six in digital time.

Write the answer you have found in the box below.

#### CLUE 2.

Which one of the following is the latest time in the day?

6:15 6:30 6:03 6:51

Write the answer you have found in the box below.

#### CLUE 3.

**DID YOU KNOW** 

**THAT** ...

What is 6:05 + 20 minutes in digital time?

Write the answer you have found in the box below.



Ray Ewry of the USA won three successive gold medals in the standing long jump at the 1900, 1904 and 1908 Olympic Games?

 CLUE 1	



CLUE 2



Page 1

## In the Running for the Olympics

# **Olympic Crossword**

						1.		2.						21.	
	3.				4.					5.					
				 6.											
	7.		8.												
								9.							
												10.			
							11.								
				12.							13.				
										14.					
20.								15.	16.					17.	
			18.												
		19.													

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Rio de Janeiro in 2016



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### • Olympic Cities

No.	City	Year	No.	City	Year
1	Athens	1896	16	Mexico City	1968
2	Paris	1900	17	Munich	1972
3	St Louis	1904	18	Montreal	1976
4	London	1908	19	Moscow	1980
5	Stockholm	1912	20	Los Angeles	1984
6	Antwerp	1920	21	Seoul	1988
7	Paris	1924	22	Barcelona	1992
8	Amsterdam	1928	23	Atlanta	1996
9	Los Angeles	1932	24	Sydney	2000
10	Berlin	1936	25	Athens	2004
11	London	1948	26	Beijing	2008
12	Helsinki	1952	27	London	2012
13	Melbourne	1956	28	Rio de Janeiro	2016
14	Rome	1960	29	Tokyo	2020
15	Tokyo	1964	30		2024

The cities which have hosted more than one Olympic Games are: Athens, London, Los Angeles, Paris and Tokyo.

Some Olympic Games were cancelled.

See: http://en.wikipedia.org/wiki/List\_of\_Olympic\_Games\_host\_cities

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