

Warm Up: Times Tables

X		5	
10	100		
		25	
2			4

X	2			10
			9	
		25		
				100
	4			

X	1	2	3	
		10		
2		4		
				25
			30	

X				
6		36		
	49			
			64	
				81

Warm Up: Times Tables

Challenge

In the multiplication table on the right, the row and column headings are all missing, and only some of the products in the table are filled in.

All the numbers in the table are positive integers.

What is the value of $A + B + C + D + E$?

×					
	A	10		20	
	15	B	40		
	18		C	60	
		20		D	24
			56		E

Main Event: Activity 1

At the school sports day, some children took part in a long jump competition.

- Jo jumped 1.57m
- Ali jumped $\frac{1}{2}$ m further than Mark.
- Pippa jumped 12cm further than Jo.
- Mauro jumped 0.3m further than Evie.
- Timo jumped 27cm further than Pippa.
- Jack jumped $\frac{1}{4}$ m less than the 2nd place child.
- Timo jumped $\frac{3}{4}$ m less than Amelia.
- Shane jumped 0.6m further than Timo.
- Mark jumped 0.21m less than Mauro.
- Evie jumped 70mm less than Shane.

Who won the competition?



Main Event: Activity 2

Now and Then

Age 7 to 11 ★★

In 1908 the Olympic Games were held in London, that's just over 100 years ago. Then, just after World War 2 they were again in London in 1948.

Here are the results from some track events;

1908

100 metres 10.8 secs
200 metres 22.6 secs
400 metres 50.0 secs
800 metres 112 secs
1500 metres 240 secs

1948

100 metres 10.3 secs
200 metres 21.1 secs
400 metres 46.2 secs
800 metres 109 secs
1500 metres 229 secs

Questions

Try to answer these questions in full sentences and use examples to illustrate your point.

1. How did the results differ from 1908 to 1948? Do you notice any patterns?
2. The 2012 London Olympics were another 64 years later. How do you think the results differed from 1908 and 1948?
3. Do you think you could have predicted the results? How would you have done this?
4. What do you think the results would have been for the 2016 Olympics?

Main Event: Activity 3

This is the finish of the 200 metres in 1924. Jackson Scholz from USA won that race in just over 21 seconds.

I wonder if you could run the 100 metres in that time?

Or you could see how far you could run in 22 seconds.



This is the high jump in 1906. It shows Ray Ewry from the United States.

He jumped 1 metre 56 centimetres.

How high can you jump?

See how high 1 metre 56 centimetres is.

Can you find someone who can jump that high?



This is the start of the 100 metres in 1896. In that year Thomas Burke from the USA won the race in 12 seconds.

I wonder how far you could run in 12 seconds.

You and your friends could use a stop watch and then measure how far you ran.

This is the triple jump, which is a hop, step and jump. In 1906 it was Peter O'Connor from Ireland who won a silver medal. He jumped about 15 metres. What's your best hop, step and jump?



Main Event: Activity 4

Here are the top ten nations in the table of medal winners for the 2012 Olympic Games:

Position	Flag	Nation	Gold	Silver	Bronze	Total
1		United States	46	29	29	104
2		China	38	27	23	88
3		Great Britian	29	17	19	65
4		Russian Fed.	24	26	32	85
5		South Korea	13	8	7	28
6		Germany	11	19	14	44
7		France	11	11	12	34
8		Italy	8	9	11	28
9		Hungary	8	4	5	17
10		Australia	7	16	12	35

Is your own nation in the list?

If not find the data on the internet and compare it with the table.

How do you think the positions have been decided?

Could the results be presented differently to give another nation the top place?

How would this affect other results in the table?

<https://nrich.maths.org/7800>

Cool Down: Puzzle

Complete these magic squares.

Rules: Don't use the same number twice in a square and the numbers must add up to the same number in each row, column and diagonally as well.

a)

8		9
	6	
3		4

b)

13	9	8
12		

c)

3		
10	5	
2		

d)

6		11
7		12

e)

	2	
	7	
4		5

f)

6		11
7		12

g)

9		
8		6
		5

d) Now make your own:
