


06.01.21

L.O. Recognise and use square numbers

Remind me!      What does this mean?


$2^2$

1	2
3	4

$2 \times 2 =$  


$3^2$

1	2	3
4	5	6
7	8	9

$3 \times 3 =$  

$4^2$

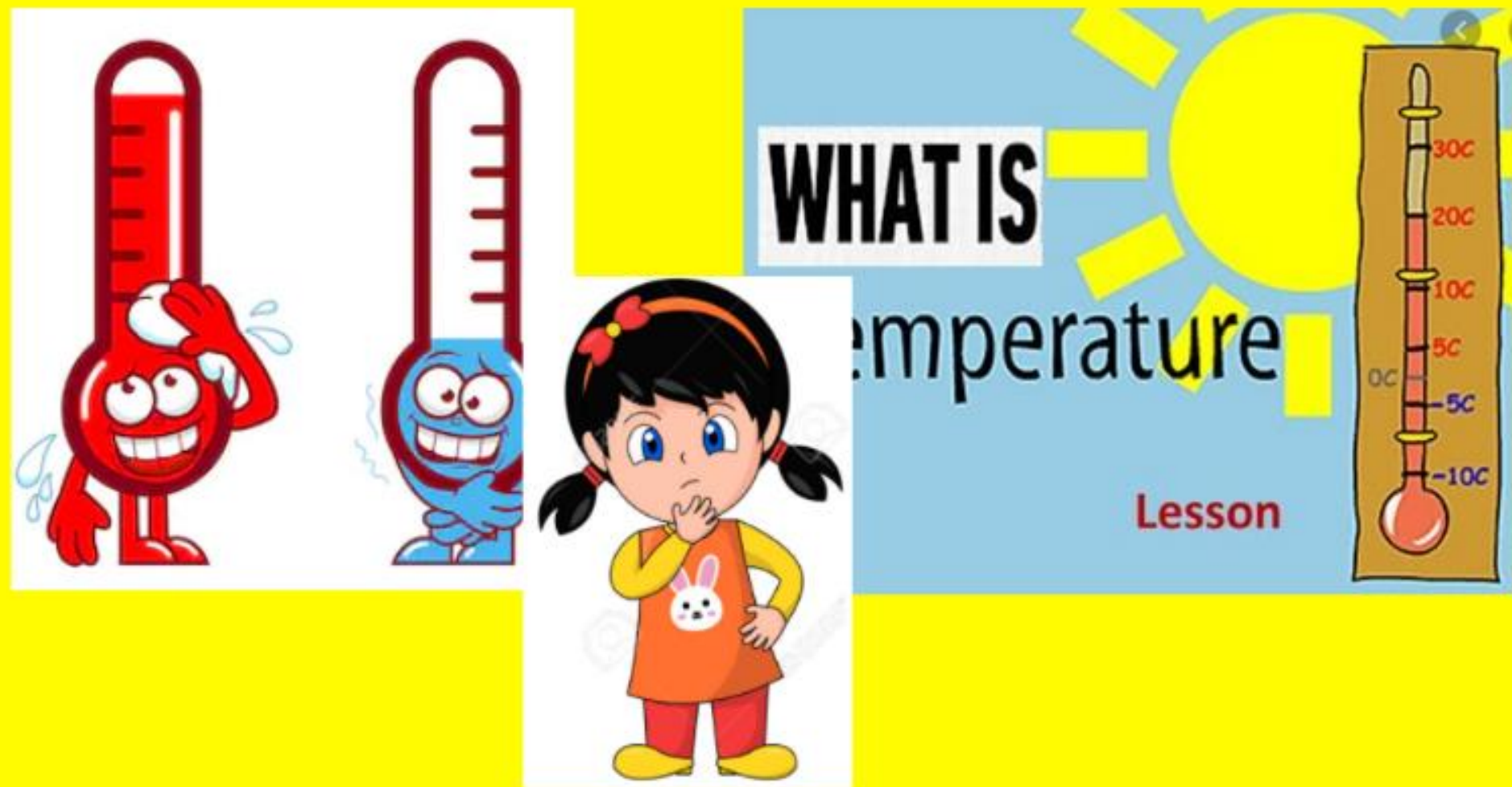
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

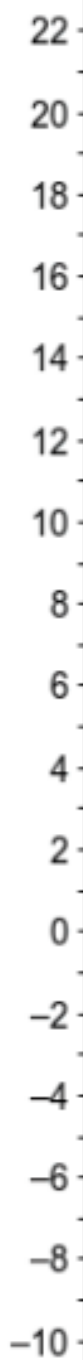
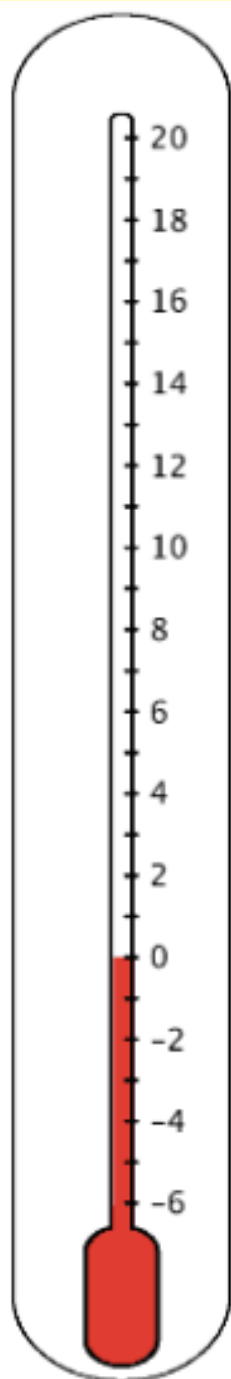
$4 \times 4 =$  

$1^2$	$1 \times 1$	1
$2^2$		4
$3^2$	$3 \times 3$	
	$4 \times 4$	16
$5^2$		
		36
	$7 \times 7$	
$8^2$		
$10^2$		100

06.01.21

L.O. Calculating differences in temperature.





What does the  
measure on this  
thermometer  
look like?



When we look at the increases and decreases in temperature, we use the same process as we have learnt for differences between positive and negative numbers.

Let's remind ourselves...

Calculate the difference between 9 and  $-6$ .



Answer:

**To calculate a difference: Largest number - Smallest number**

$9 - -6$  (When you have two negatives together - you add!)

So  $9 + 6 = 15$

Choose the section you feel most comfortable completing before completing the extension and the plenary.

Once completed send via SeeSaw.

**A**

Use the number line above.

- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| 1 Count on 3 from $-8$  | 5 Count on 4 from $-3$ | 9 Count on 5 from $-6$   |
| 2 Count on 6 from $-10$ | 6 Count on 3 from $-5$ | 10 Count on 10 from $-3$ |
| 3 Count on 4 from $-1$  | 7 Count on 7 from $-7$ | 11 Count on 6 from $-8$  |
| 4 Count on 6 from $-4$  | 8 Count on 8 from $-2$ | 12 Count on 9 from $-5$  |

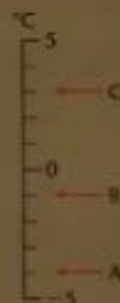
Copy and complete by filling in the boxes.

- |    |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|----|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 13 | $-5$                 | $-4$                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | $1$                  | <input type="text"/> | $3$                  | <input type="text"/> | $5$                  |
| 14 | <input type="text"/> | <input type="text"/> | $-6$                 | $-4$                 | <input type="text"/> | $0$                  | <input type="text"/> | <input type="text"/> | $6$                  | <input type="text"/> | $10$                 |
| 15 | <input type="text"/> | <input type="text"/> | $3$                  | $2$                  | <input type="text"/> | <input type="text"/> | $-1$                 | $-2$                 | <input type="text"/> | $-4$                 | <input type="text"/> |
| 16 | $10$                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | $2$                  | $0$                  | $-2$                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | $-10$                |



Look at the scale.

- 17 What temperatures are shown by the letters?
- 18 Which letter shows the coldest temperature?
- 19 Give the difference in temperature between:
- A and B
  - B and C
  - A and C
- 20 What would the temperature be if it was:
- at B and rose  $5^{\circ}$
  - at B and fell  $4^{\circ}$
  - at A and rose  $6^{\circ}$
  - at C and fell  $5^{\circ}$





**B**

Use the number line on page 8.

- 1 Count on 7 from  $-9$
- 2 Count on 6 from  $-3$
- 3 Count on 10 from  $-6$
- 4 Count on 8 from  $-1$
- 5 Count back 5 from 2
- 6 Count back 12 from 8
- 7 Count back 7 from 0
- 8 Count back 6 from 5

Copy and complete the sequences.

- 9 4    3    2    1
- 10  $-5$     $-4$     $-3$     $-2$
- 11           $-2$     $-4$     $-6$     $-8$
- 12 6    4              $-4$     $-6$
- 13  $-10$     $-8$             0    2
- 14 9    7    5    3

- 15 What temperatures are shown by the letters?

- 16 Give the difference in temperature between:

- a) A and C
- b) B and D
- c) B and C
- d) A and D

- 17 What would the temperature be if it was:

- a) at A and rose  $10^{\circ}$
- b) at B and rose  $5^{\circ}$
- c) at C and fell  $10^{\circ}$ ?



Put  $>$  or  $<$  in each box.

- 18 0         $-2$
- 19  $-5$        5
- 20  $-4$        3
- 21  $-1$         $-2$
- 22 0        1
- 23  $-2$         $-8$
- 24  $-1$        0
- 25 7         $-9$



**C**

Find the difference between:

**1**  $-2$  and  $-5$

**5**  $-6$  and  $-1$

**2**  $-7$  and  $1$

**6**  $0$  and  $-3$

**3**  $4$  and  $-1$

**7**  $2$  and  $-4$

**4**  $-1$  and  $9$

**8**  $-5$  and  $4$

Put these numbers in order, smallest first.

**9**  $1$   $-3$   $2$   
 $0$   $-5$

**11**  $0$   $2$   $-4$   
 $-1$   $3$

**10**  $2$   $4$   $-1$   
 $-3$   $1$

**12**  $1$   $-5$   $0$   
 $-2$   $5$

Copy and complete these tables showing changes in temperature.

**13**

Sunday	Change	Monday
$-2^{\circ}\text{C}$	$+4^{\circ}\text{C}$	
$1^{\circ}\text{C}$	$-3^{\circ}\text{C}$	
$0^{\circ}\text{C}$	$-5^{\circ}\text{C}$	
$3^{\circ}\text{C}$	$-4^{\circ}\text{C}$	
$-5^{\circ}\text{C}$	$+3^{\circ}\text{C}$	
$-3^{\circ}\text{C}$	$+5^{\circ}\text{C}$	

**14**

Sunday	Change	Monday
$3^{\circ}\text{C}$		$-3^{\circ}\text{C}$
$-4^{\circ}\text{C}$		$-1^{\circ}\text{C}$
$-1^{\circ}\text{C}$		$5^{\circ}\text{C}$
$5^{\circ}\text{C}$		$-7^{\circ}\text{C}$
$0^{\circ}\text{C}$		$-4^{\circ}\text{C}$
$-6^{\circ}\text{C}$		$3^{\circ}\text{C}$

Edward went travelling around the world - can you follow his journey and figure out the changes in temperature that he experienced?



Edward started his journey in Preston where the weather was a cool 5 degrees. He hopped on a train to London. When he arrived there, the temperature had increased by 4 degrees. He took the ferry over to France and again, he saw a rise in temperature of 4 degrees.

After a night in Paris, he hitchhiked across to Spain and then to Italy where the temperature really rose! A whole 11 degrees warmer!

He hopped on a plane that took him to Sweden. He wished he had not worn his shorts as the temperature had dropped by 16 degrees! Brrrrr! His next stop, across land to Norway and then aboard a cruise liner through the Nordic Fjords, took him to Iceland. He had to pull out his wooly hat and gloves as the temperature had dropped by a chilly 7 degrees.

What was the temperature in Iceland?

# Plenary

Work to solve  
this problem!

## Flash Harry



In April Flash Harry bought a saddle for £100.  
In May he sold it for £200.

In June he was sorry he had sold it.  
So he bought it back for £300.

In July he got tired of it.  
So he sold it for £400.

Overall, did Flash Harry make or lose money?  
How much did he make or lose?