

# Marvellous Materials and Brilliant Building Trail

TRAIL SHEET 1

**Find something on the Pier made from .....**

(Write or draw in the boxes below)

Wood

Metal

.....

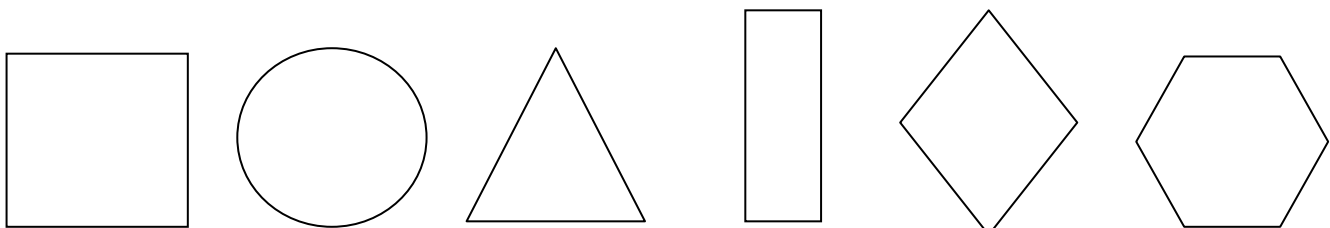
Plastic

Glass

.....

Q. What other materials can you think of?

**How many different things can you find on the Pier which have the following shapes?** (Write the number inside the shape)



Different shapes are good for building different parts of the Pier structure

**FACT:**

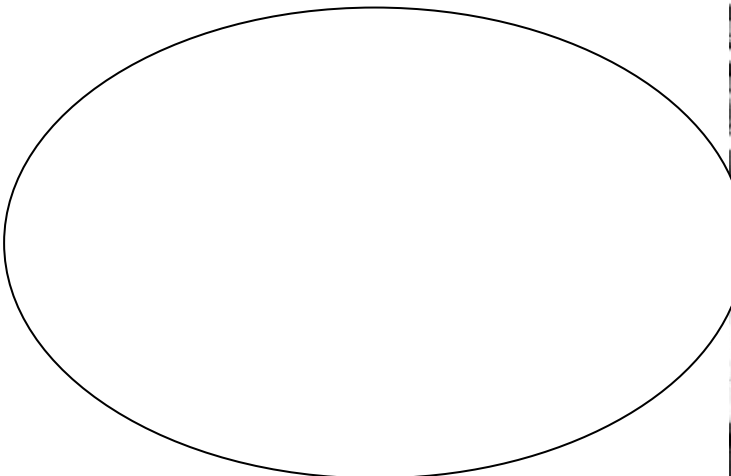
There are over 72,000 Triangles in the metal work under the Pier!

Draw arrows to the following parts of the Pier structure

Column

Truss

Deck beam

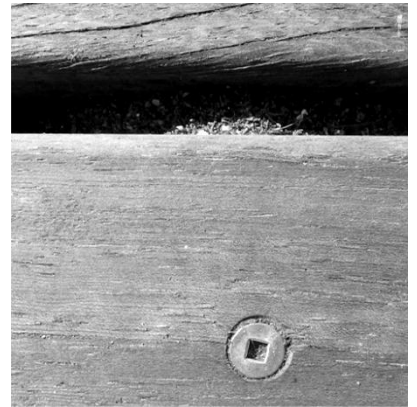
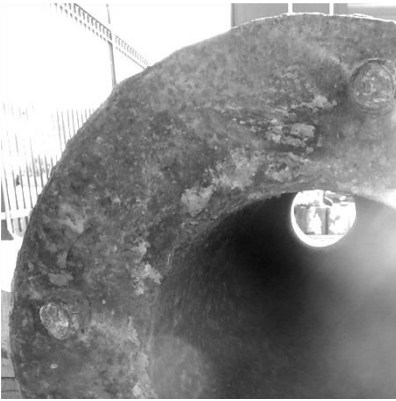


Describe how you think it felt to be a construction worker restoring the Pier.



# I Spy ..... Marvellous Materials and Brilliant Building

TRAIL SHEET 3



Q. What are materials are they made from?  
Where on the Pier did you find them?

## How many? How long? How much?

(Draw a line to the number you think is correct. Answers on Trail sheet 4)

1. Length of the Pier (metres). It is the same today as the Original Victorian Pier designed by Eugenius Birch)
2. Number of columns supporting the original Victorian Pier
3. Total number of columns today
4. Double Decker buses which the new steel used to Reconstruct the Pier could have made.
5. Elephants which the deck could support
6. Screws holding the deck planks in place
7. Construction workers who rebuilt the Pier
8. Planks of new wooden decking

200  
1300  
277  
440  
510,000  
72,000  
530  
316

## Wordsearch

|   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|
| e | u | g | e | n | i | u | s | n | a |
| s | c | r | e | w | p | i | l | e | p |
| i | t | r | u | s | s | m | b | d | p |
| n | l | e | e | t | s | p | i | e | r |
| a | i | k | k | e | n | a | r | c | e |
| v | s | w | t | m | n | e | c | k | n |
| l | t | e | u | l | t | i | h | a | t |
| a | i | l | n | e | l | h | g | s | i |
| g | o | d | n | h | o | a | u | n | c |
| c | r | o | s | s | b | r | a | c | e |

### Find the following words

|           |          |             |      |
|-----------|----------|-------------|------|
| pier      | column   | screw pile  | bolt |
| deck      | truss    | cross brace | nut  |
| ekki      | steel    | apprentice  | rust |
| engineer  | crane    | helmet      | weld |
| galvanise | eugenius | birch       |      |

Ans: 1.= 277m, 2 = 200, 3 = 316, 4 = 440  
5 = 1300, 6 = 510,000, 7 = 530, 8 = 72,000