



Bridge the gap on a budget – Who can build the widest bridge?

Your budget is £30. What is the widest bridge you can build using your Lego? It should have a span of at least 30cm (try to make it wider than this) and a height at its centre of at least 6cm. As before make it as colourful as possible using a variety of different pieces.



Challenges

1. Use the table below to put a cost value on each Lego brick. This will help you decide which bricks to use to build your bridge.

Type	Cost	Type	Cost
1 single brick (1 dot) 	10p	1 single flat brick (1 dot) 	20p
Speciality bricks will cost 30p (doors, windows, roof tiles etc.)			

2. Now design and build your bridge. Your aim is to build the widest possible bridge using as much of your budget as you can.
3. Upload a photo of your finished model to padlet.
4. Take some measurements of your model in millimetres (mm) –
 - a. What is the span of your bridge?
 - b. What is the height of the bridge span above the desk (river!)?
 - c. How much of your budget have you spent?
 - d. Put the measurements and cost in the comments of your padlet post.
5. If your budget is increased to £50 can you increase the span of your bridge? You may trade some of your spare Lego at the trading box to assist you with this task if you wish. Take note - the bricks from the trading post may cost more.

6. What are the new measurements in millimetres (mm)?
 - a. How much wider?
 - b. How much higher?
 - c. What is the cost of the new bridge?
 - d. What is the difference in cost between the two bridges?

7. Finally take a photo of your bigger bridge and post it on padlet. Type something about the cost and span of your bridge in the comments.