

Building Bridges

Learning Objective:

To analyse and evaluate products according to design criteria.





Last time, we looked at this brief for a new bridge:

This power station needs a new road bridge so that trucks and other vehicles can cross the river nearby. There is a lot of traffic travelling to and from the power station every day. Some of the vehicles are very heavy. Boats use the river.



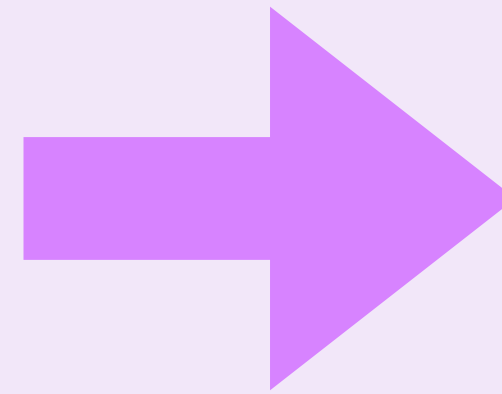
How can we test to see if a prototype model bridge is actually any good?

Discuss your ideas.



Prototypes can be analysed by answering questions that are based on some design criteria:

- The bridge must span a gap of 50m
- It must allow traffic to pass in both directions
- It must have a clearance of at least 20m
- It must be strong
- It must be attractive



- Does it span a gap of 50cm?
- Does it have a clearance of at least 20cm beneath it?
- Does it have a deck which allows two toy cars to pass each other?
- Is it strong and attractive?

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Now we can design tests which will help us answer these questions. I wonder what sort of tests we could do...

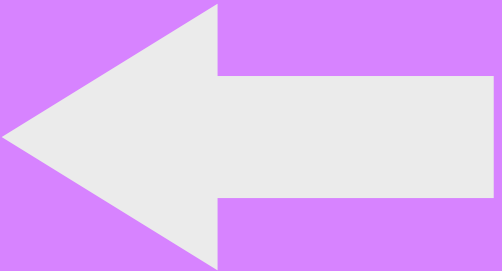
Discuss your ideas.



How will you test your model bridges?



A large, empty white rectangular area intended for writing or drawing answers to the question above.



Today we will be analysing and evaluating our prototype model bridges, taking account of the views of others.

