




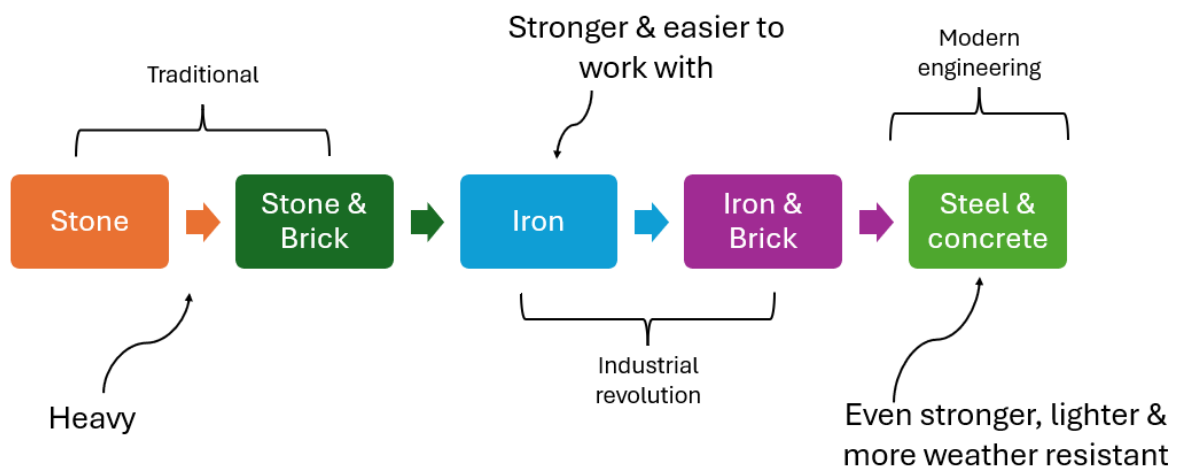


Bridging the gap – the evolution of materials used in bridge-making

Bridge name	Year built in	Location	Building materials
Perry Bridge 	1711	Perry Barr	Stone
Summit Bridge 	1789	Smethwick	Brick and Stone
Galton Bridge 	1829	Smethwick	Cast Iron
Holliday Street Aqueduct 	1881	Birmingham City Centre	Cast Iron, Wrought Iron and Brick
Bellingham Bridge 	In progress	Birmingham City Centre	Concrete and Steel



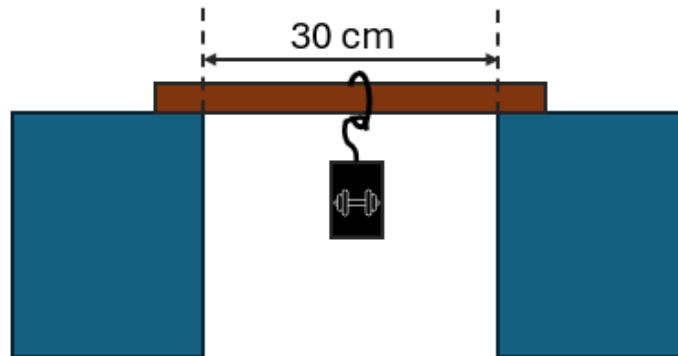
So... What changed?

Type of material	Combination of materials	Processing of materials	Composition/mixture of materials
Stone Brick Iron Steel Concrete	Stone and brick Iron and brick Steel and concrete	Cast iron Wrought iron	E.g. Steel = iron + carbon

Activity: Let's build a bridge!

Imagine you are a materials engineer, and you are tasked with materials selection for a new bridge:

- It must cross a distance of **30 cm**.
- Use the materials provided to construct your bridge.
- Considerations:
 1. What **materials** will you use, and why?
 2. Will you **combine** different materials to make a composite bridge?
 3. How will you **process and put together** these materials to build your bridge?



Bridge materials	Building materials	Testing materials
Paper Card Cardboard Paper straws Balsa wood Aluminium foil Wooden skewers	Masking tape Clear tape String Cable ties Measuring tape	Non-slip mats Hanging scale Hanging weights Measuring tape