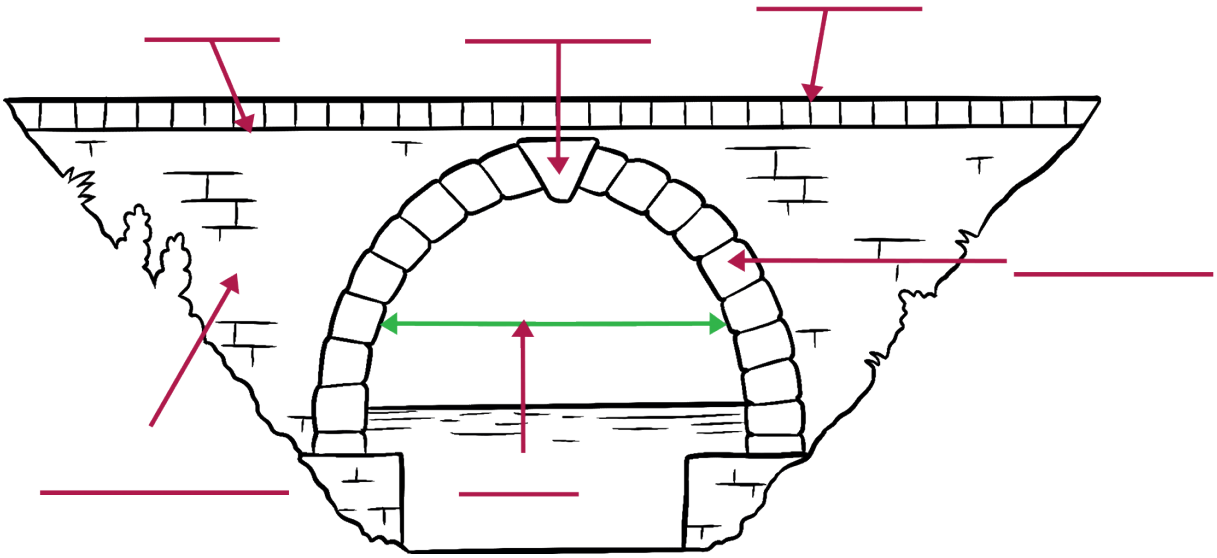
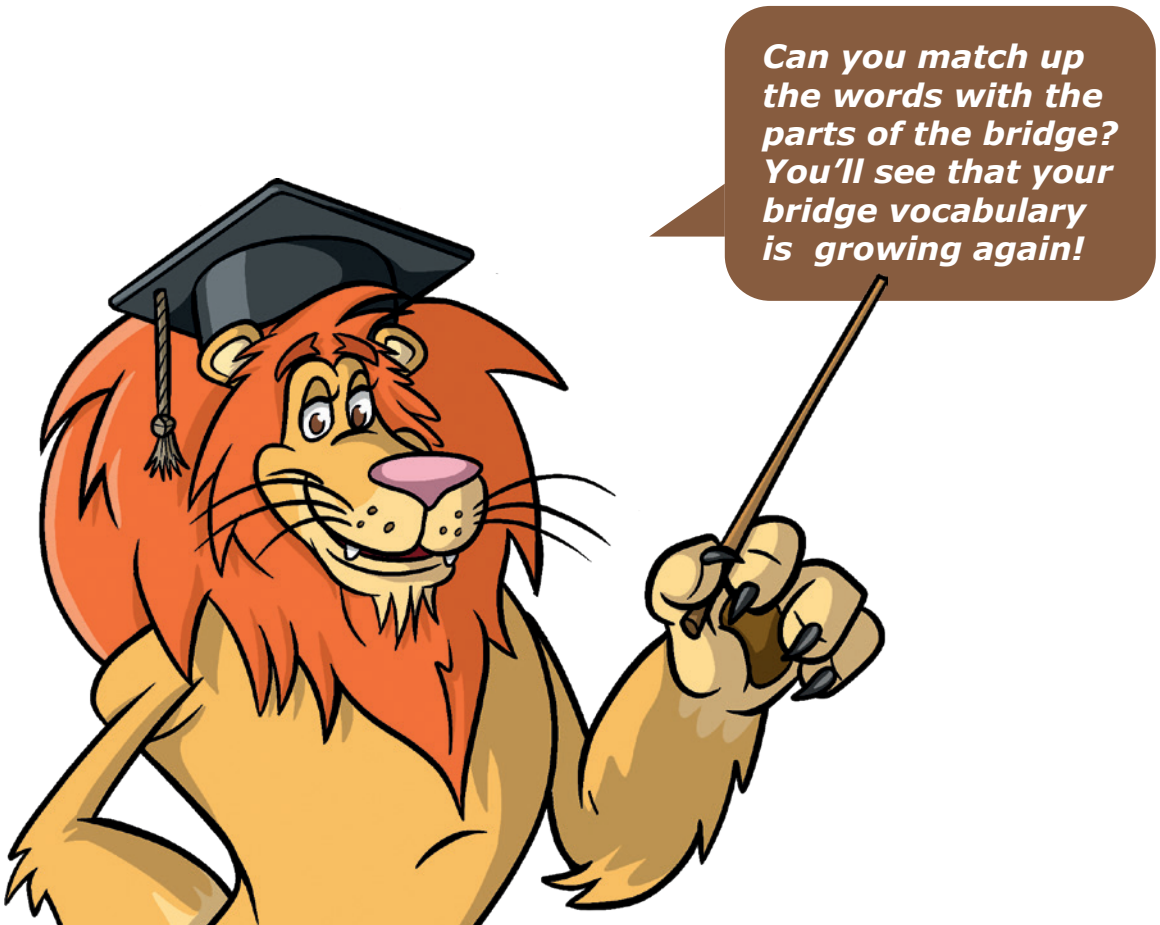
# Arch bridge terminology

Label the parts of the bridge using the list of words below



Abutment | Deck | Parapet | Keystone | Span | Voussoirs



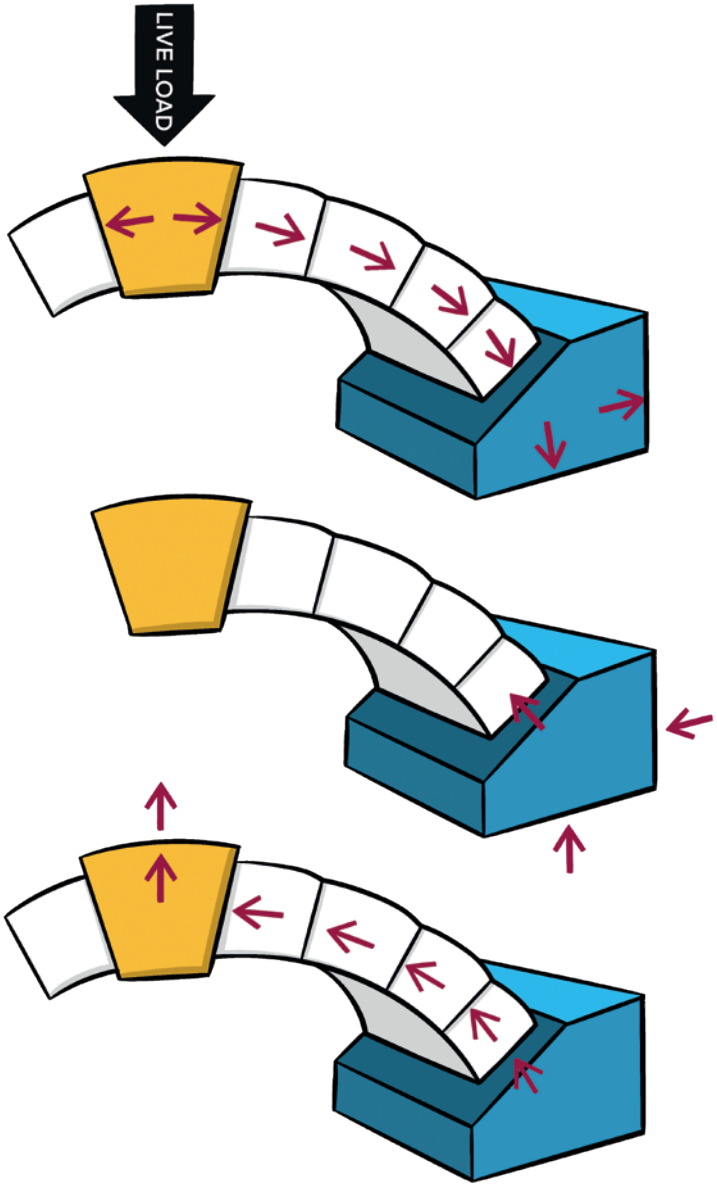
# Forces in an arch bridge

KEY: COMPRESSION KEYSTONE VOUSSOIR ABUTMENT

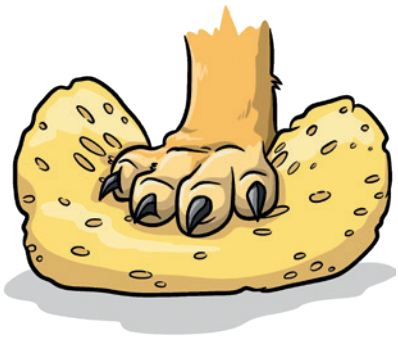
The load on the top of the **keystone** makes each **voussoir** on the **arch** of the bridge push on (**compress**) the **voussoir** next to it. This happens until the forces reaches the end **abutments** which are built into the ground.

The ground around the **abutments** is squeezed and pushes back (**compresses**) the **abutments**.

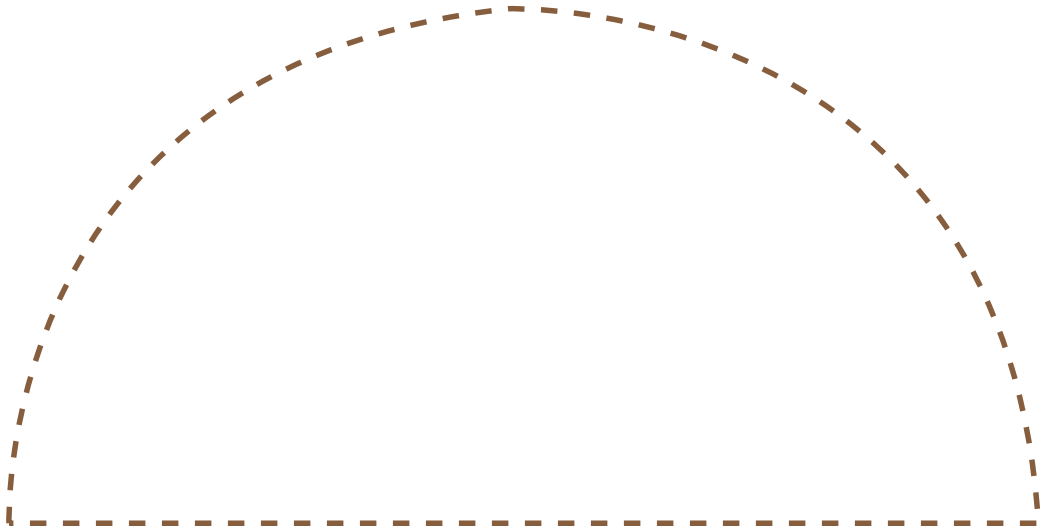
The **abutments** push back onto the **voussoirs** which pass the force back along the **arch** to the **keystone** which supports the load.




***There's no tension in an arch bridge! The only force is compression, which the arch dissipates into the abutment. That's why arch bridges are so strong.***



# Arch bridge shapes template



# Roman bridges


Pont Flavien, St Chamas, France – 1st Century BC


Alcantara Bridge, Spain – 1st Century AD


Pont du Gard, Remoulins, France – 1st Century AD

***We Romans figured out how to make a centring, which supported the Arch until we put the keystone in. You can still see Roman arches, viaducts and aquaducts across the world.***