

Visual science

Limbs and levers

Touch the pink buttons and see what happens.

◀ ▶ Use the arrows to move backwards and forwards.

✕ Touch the cross to close a window.

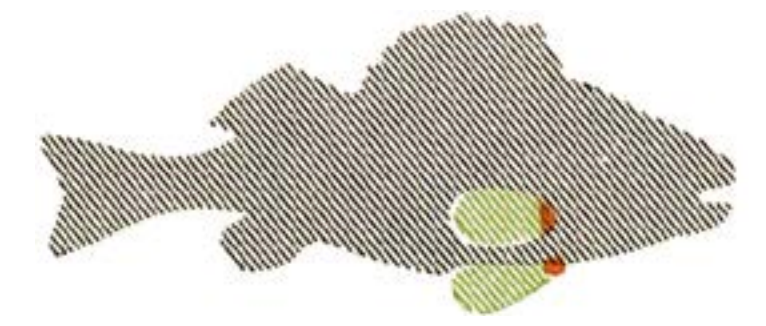
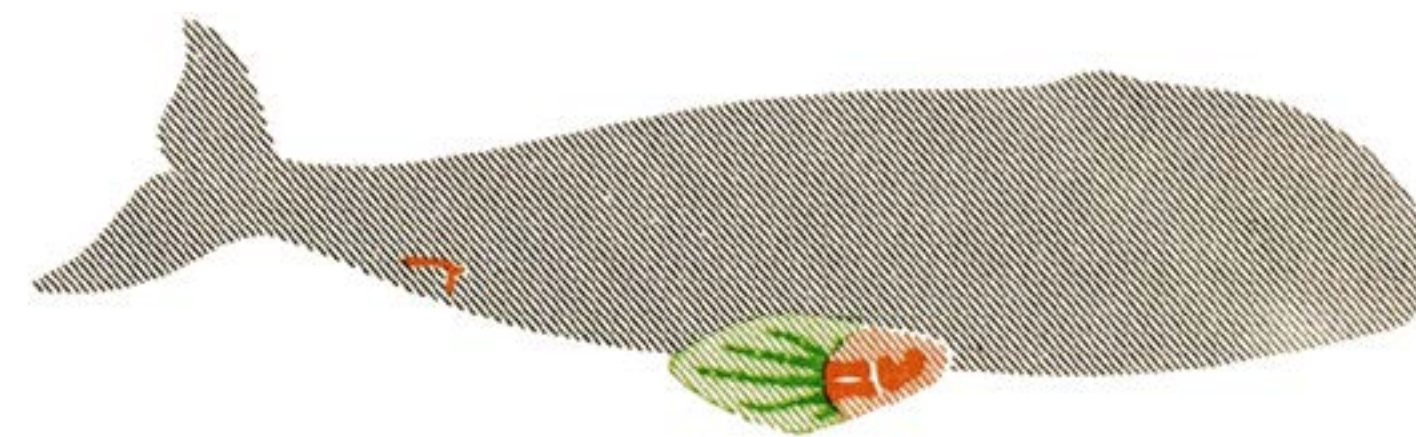
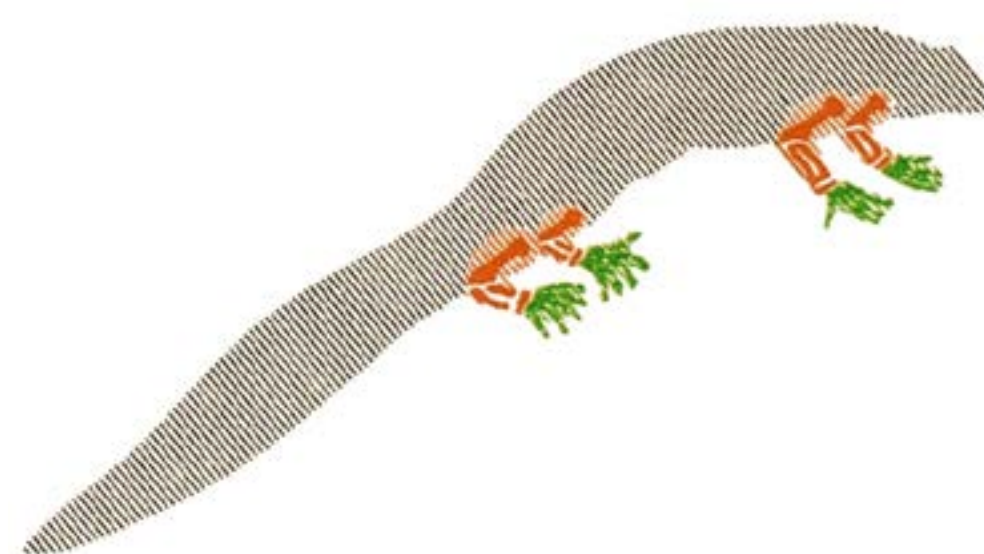
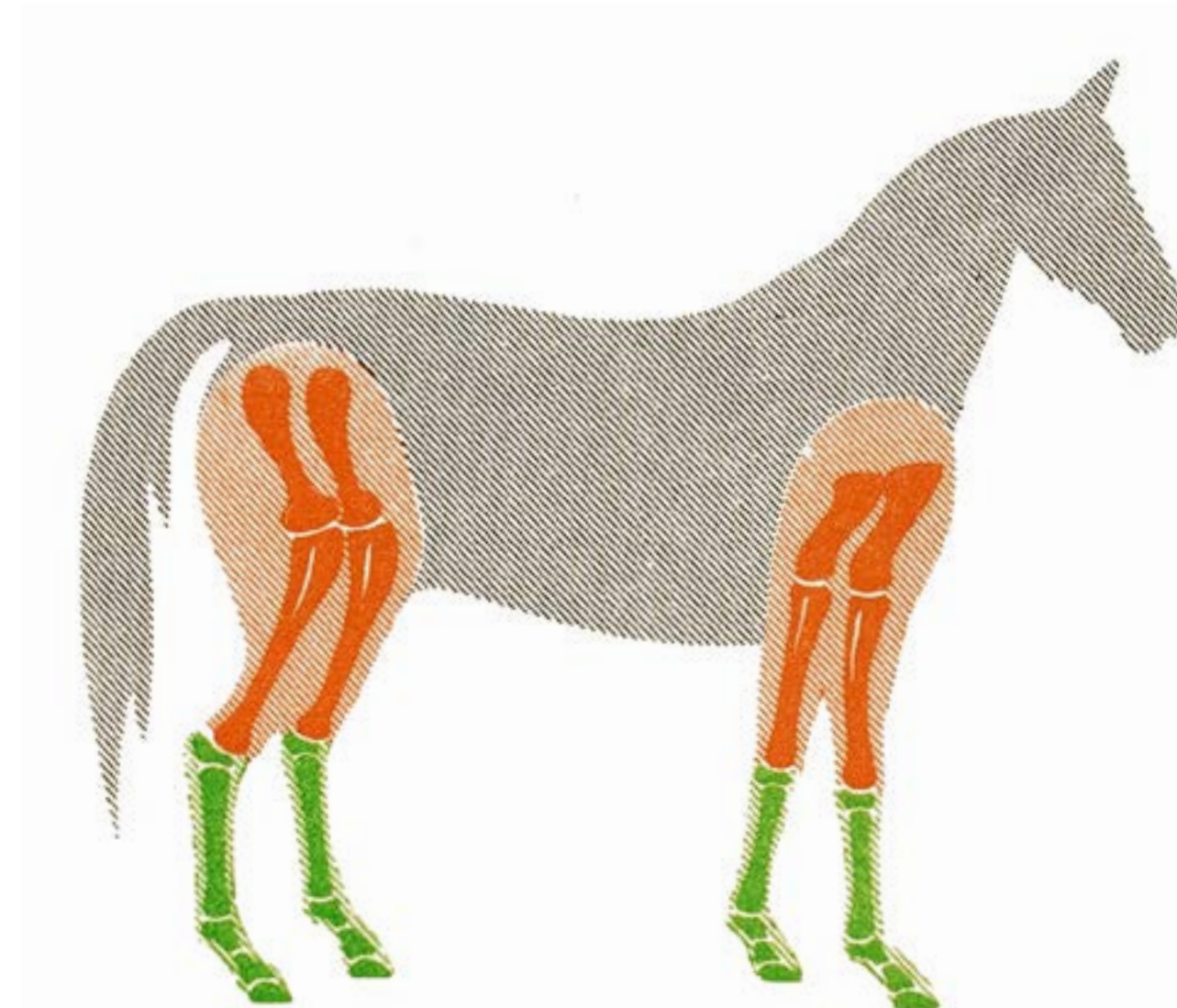
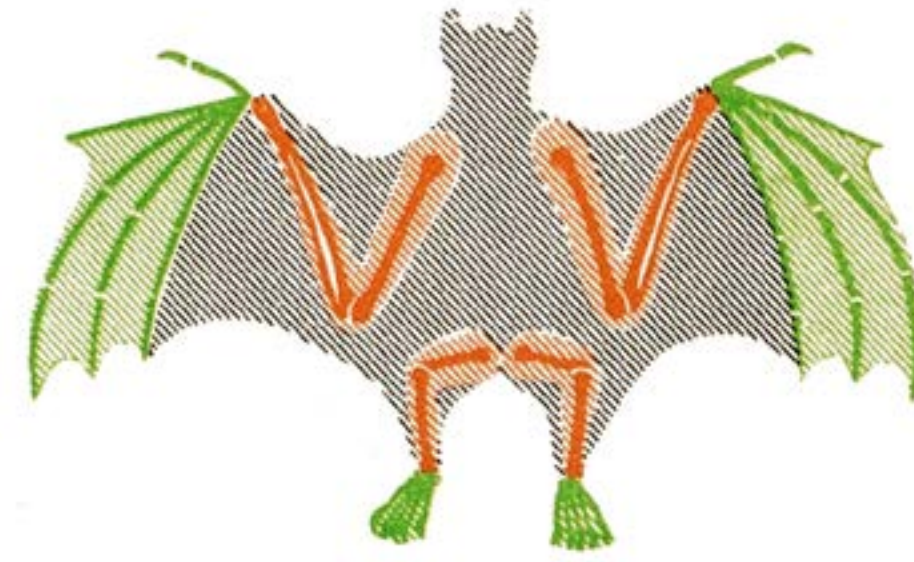
Limbs and levers

Many animals have parts which correspond to their arms and hands, legs and feet.

They use them in different ways to move about.

Orange = parts which correspond to arms or legs

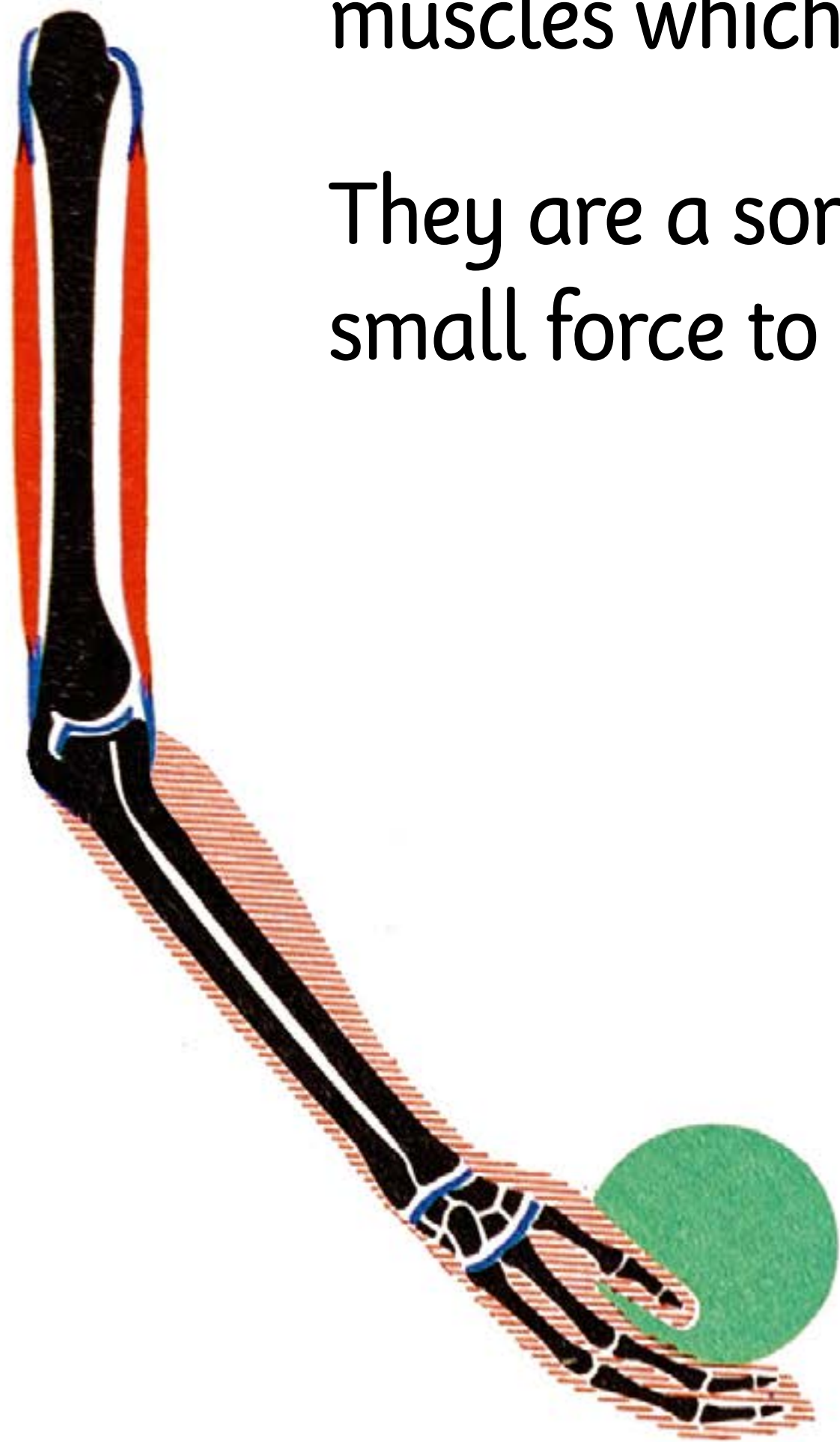
Green = parts which correspond to hands or feet



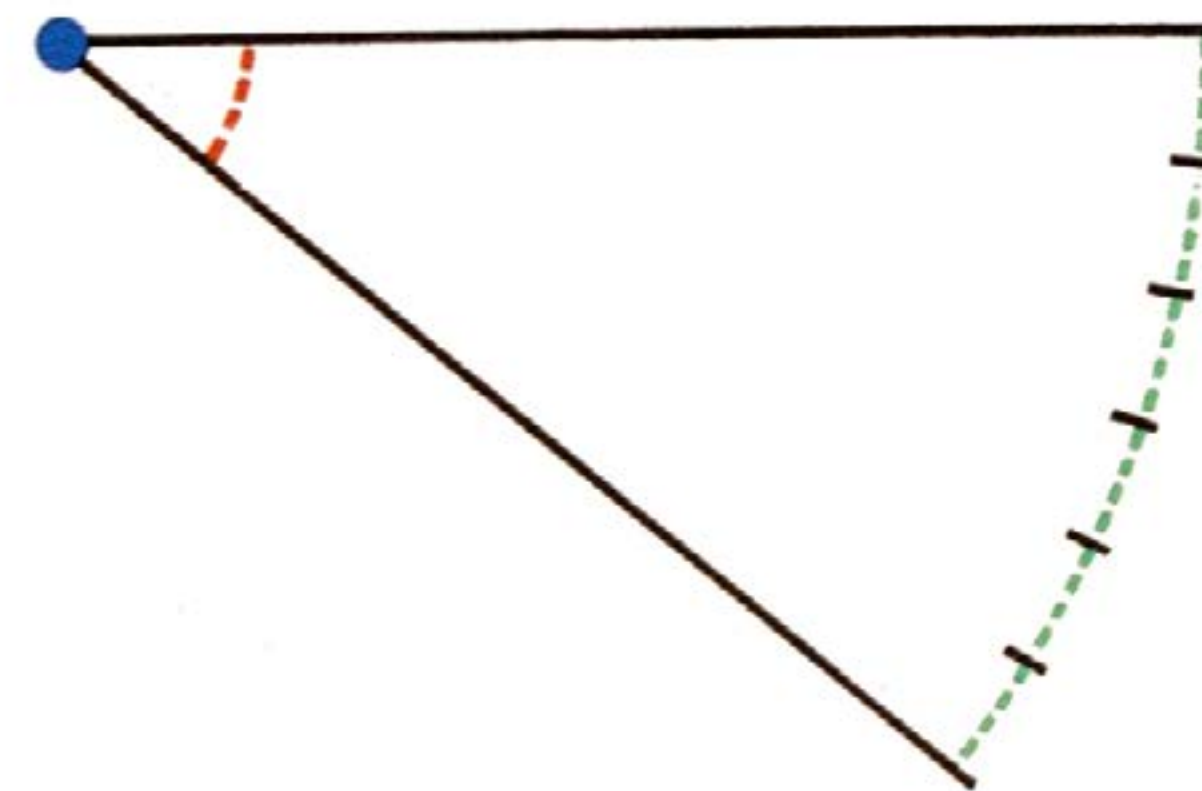
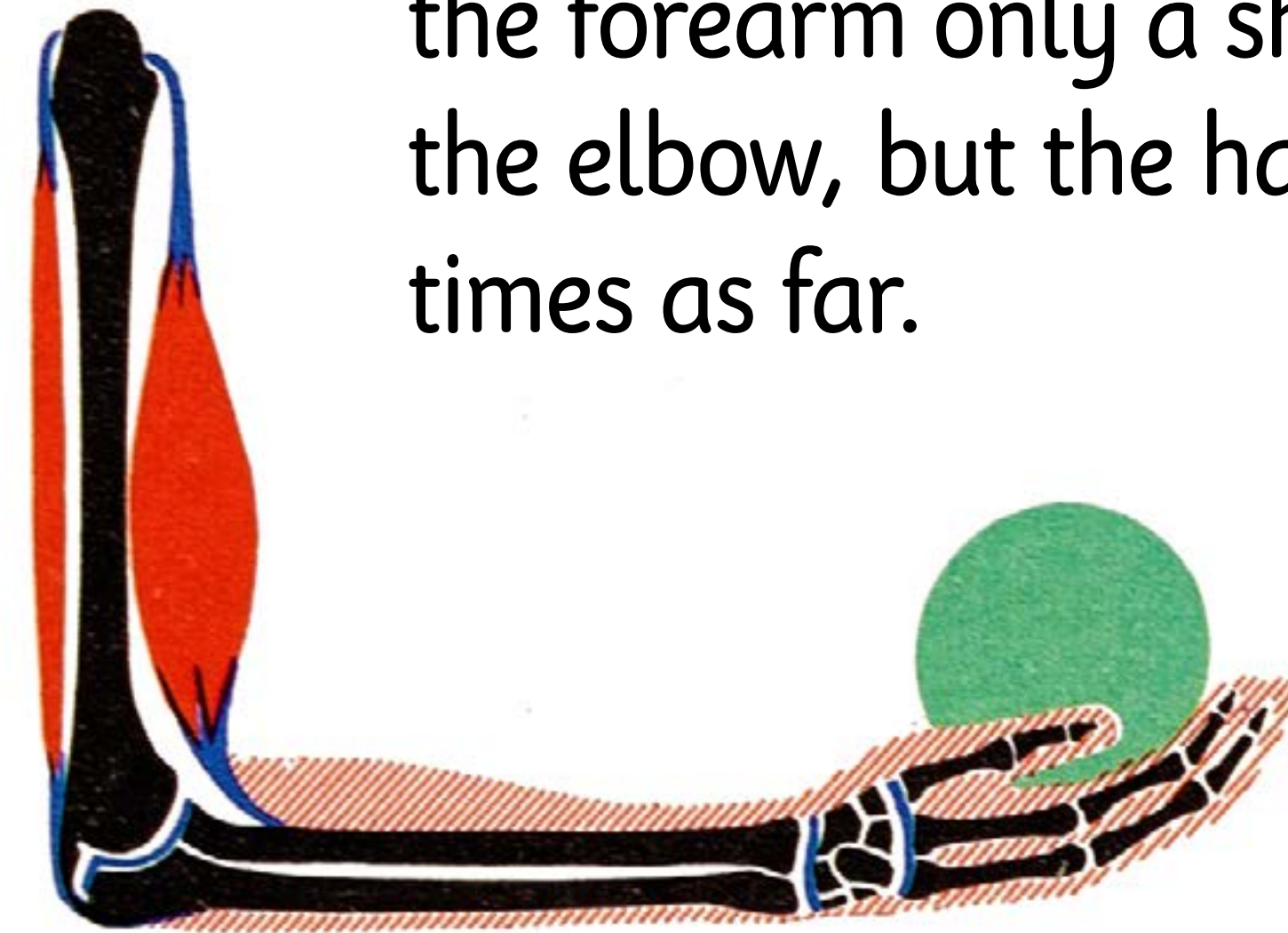
Limbs and levers

Arms and legs are made to move by muscles which get shorter or longer.

They are a sort of lever that allow a small force to have a greater effect.

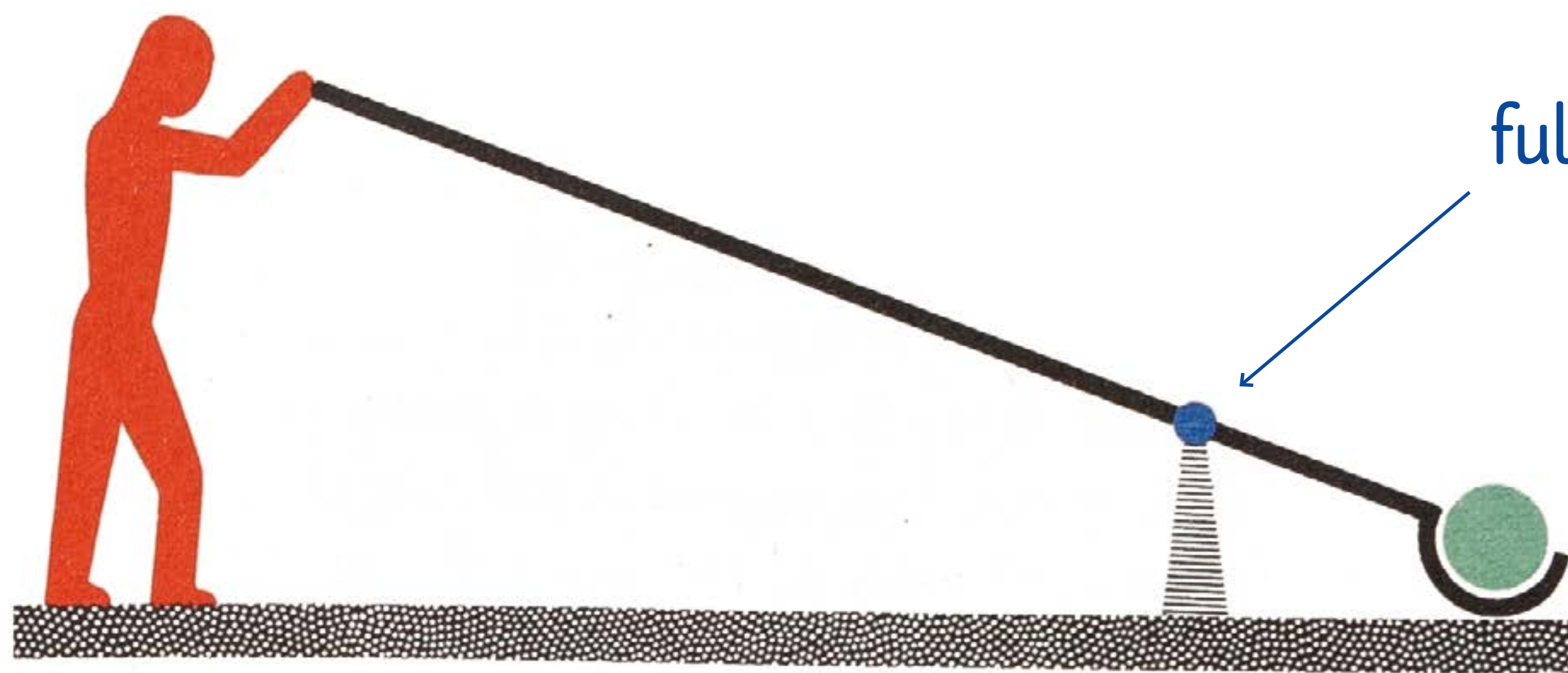


When the muscle shortens, it pulls up the forearm only a short distance near the elbow, but the hand is raised six times as far.

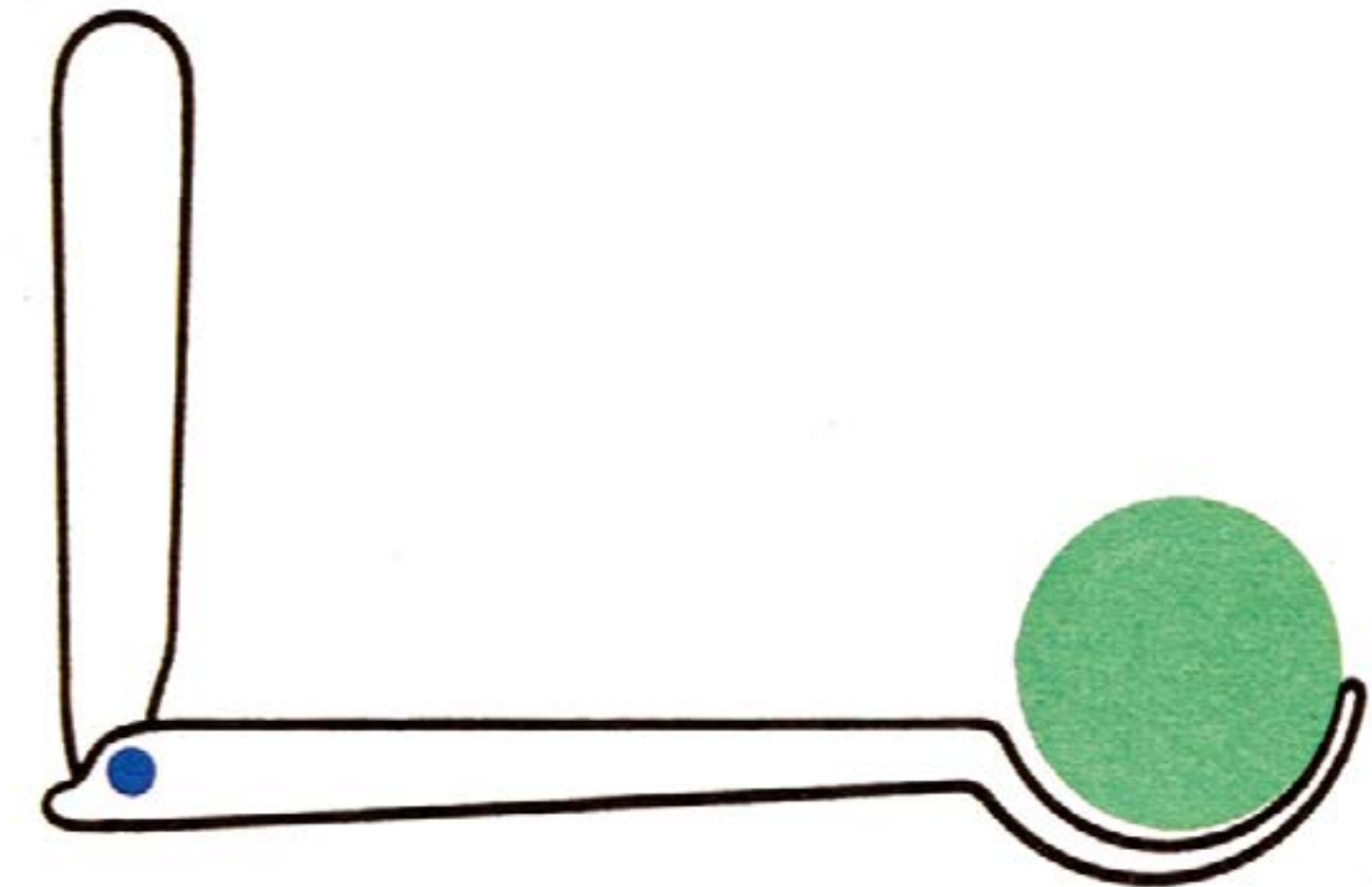


Limbs and levers

The forearm acts as a lever.



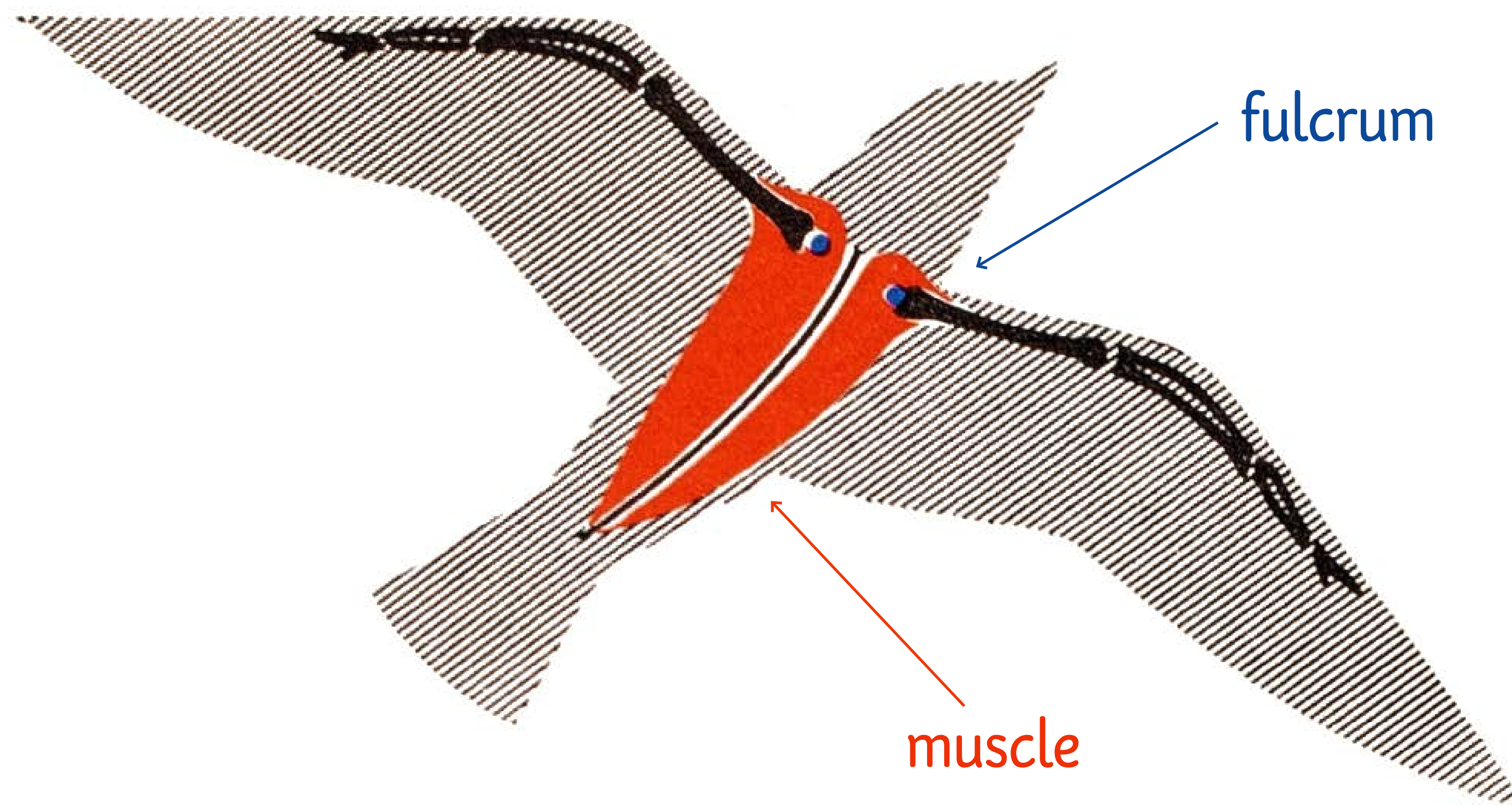
The point on which a lever is supported is called the fulcrum.



The fulcrum is at the elbow joint, the weight rests on the hand.

The lifting force is applied where the tendon joins the bone of the forearm.

Limbs and levers



Look at the picture of the bird.

The muscles move the bird's wings.
The force of the muscle acts near the fulcrum.

Can you think why the bird needs powerful muscles to move its wings?