

Testing a property fairly: which is the most absorbent?

materials

What you need: paper towel pieces (same size, about 10 cm square) · cotton fabric samples (same size as paper pieces) · felt fabric samples (same size as paper pieces) · nylon fabric samples (same size as paper pieces) · jug of water · plastic syringe or dropper marked in ml · shallow tray or dish · kitchen or balance scales (optional — only if the whole class has agreed the mass-gain method; omit for the preferred syringe leftover method) · stopwatch or timer · cloths for wiping spills · paper towel and tea towel for the hook demo

Words to use

Fair test · Absorbency · Average · ml held

Our question

Which material soaks up the most water?

I predict...because...

Sort these into Change, Measure and Keep the same

the material · how much water it holds · amount of water offered · size of each piece · time it sits

Change – the ONE thing we change

Measure – the ONE thing we measure

Keep the same – to make it fair

Water held in 30 seconds (ml held = 10 – ml free)

Material	Trial 1 (ml held)	Trial 2 (ml held)	Average (ml)
Paper towel			
Cotton			
Felt			
Nylon			

Most absorbent to least absorbent, from your averages

Was your prediction supported by the evidence? What would have made this test unfair?