PVA
Polyvinyl acetate

'White glue'. **The workhorse of the classroom** - but be warned, not all PVA is the same. Think of there being three types: basic PVA, washable PVA and PVA wood glue.

Basic PVA can be found in most classrooms. Most suppliers of school materials have PVA in their catalogues and in many cases it is their 'own-brand'. Perfectly adequate for general classroom activities, its performance falls short when technology activities call for an adhesive to fasten wood and heavy card. It is slow to 'grip', and so encourages impatient pupils to ladle on some more glue to speed things up!

PVA is a water-based emulsion - for it to set the water has to penetrate the material being joined and eventually evaporate into the air. The more glue applied the wetter the material becomes and the longer it takes to dry. Wet wood isn't much different from dry wood, but when card gets wet it loses a lot of its stiffness and strength, only regaining it once properly dried out. If children are encouraged to add more glue it makes matters worse.

The answer has to be to use a **PVA wood glue**. It has more 'stick'. Yes, it costs about twice as much as the ordinary PVA but it's worth it. You will use half the amount anyway, so the investment in a quality adhesive will pay off in the long run. *Wood glue from DIY stores is probably fine, but we always source from educational suppliers just in case there are undesirable additives we don't know about. You should be safe with school supplies.*

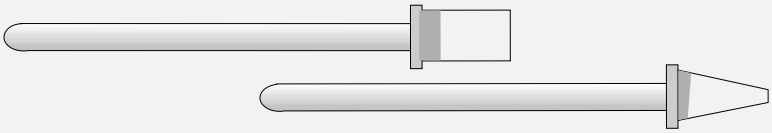
It is important to remember that PVA needs to lose water in order to set. This means that it will not work with impervious materials. The surfaces to be joined must be porous. It won't work on plastics for instance, so you won't be able to stick yoghurt pots together!

Cheaper PVA tends to be over-diluted. You can improve its performance somewhat by removing some of the water. Decant small quantities into old margarine containers and leave uncovered for a while to allow evaporation (but it's still not as good as a wood glue!)

The first paragraph refers to **Washable PVA** and it hasn't been mentioned again! - OK, so it comes out of hair and clothes etc., but unfortunately it doesn't stick anything other than paper. Don't try to use it for technology construction, even in the nursery department - it only leads to frustration.

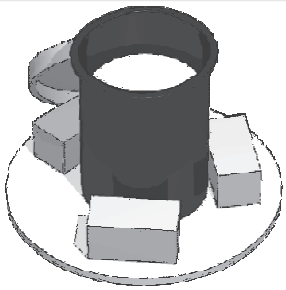
Ideally the classroom that uses both paper and wood as construction materials should use two kinds of PVA glue. A standard PVA for sticking papers, or for diluting as a 'varnish, or for mixing with water paint to give a degree of waterproofing, and a PVA wood glue for joining wood to wood or heavy card. Unfortunately both kinds look exactly the same, so some system needs to be devised to avoid confusion. The obvious thing is to use containers that look different, and never mix them.
Another idea is to add a few drops of food colouring to the wood glue. It doesn't take much to tint the adhesive sufficiently, and the colour is so thin that it doesn't show up on wood and card when dry.

GLUE SPREADERS
Plastic spreaders are a little too much like shovels! It would pay to cut some down to size!

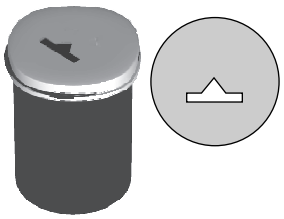


Better still, encourage the children to make their own spreaders to suit the job they are doing. Just think about it - First they have to identify a need. Then design and make, using available materials. Then arrive at a suitable solution to the problem. They then have to use the spreader to see how well it works.
Now where have we seen this sequence before?
Yes, they will have experienced the whole design process while cutting a scrap of material to make a glue spreader. It's easier and more practical than a suspension bridge across the playground!

You can buy large packs of wooden spills or splints which make excellent spreaders. They can be snipped with ordinary scissors and don't get soggy. (They also make good mini-planks).



Film canisters make excellent, airtight pots for PVA. The only problem is that they can be knocked over easily. Here's a little stand the children can make themselves from one 63mm card disc and three small blocks of wood. Glue two of the blocks and let the glue dry. Then, using the pot as a guide, glue and position the third piece. The pot is a little smooth. If necessary, put a band of masking tape round the bottom to increase the friction.



A HANDY GLUE DISPENSER
Cut a hole, as shown in diagram, in the lid of a 35mm film canister. Use a modelling knife or a Stanley knife. The slot should be such that a lolly stick just slides through. The amount of glue dispensed is proportional to the size of the V notch.
Push a lolly stick through the hole and into the PVA glue stored in the canister. When the stick is withdrawn the glue will be scraped off - except for that allowed through the notch.