

Year 6- DT Knowledge Organiser.

Structures: Playgrounds



Structure

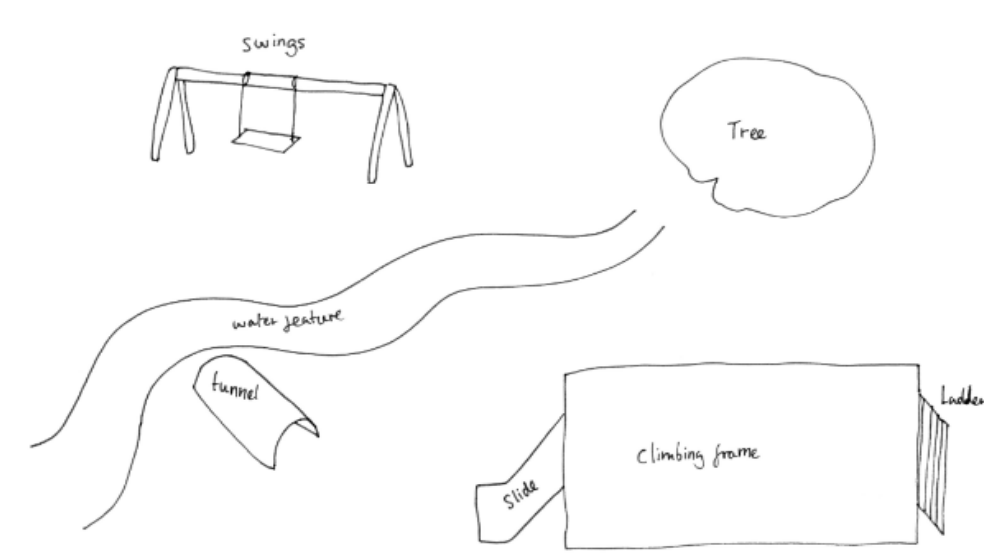
A structure is a building or object constructed from several parts.

Designing a Playground



There are many types of apparatus in a playground, such as slides, swings, monkey bars, tunnels, see-saws and treehouses. Which do you like?

Footprint



Design Criteria- Are things that your structure 'must have' to be successful.

Building Structures

Think about how you will make the different structures on their playground and discuss the techniques used as a class.

It is important to measure accurately before cutting. Then, demonstrate how to glue the different pieces of the structure together either using PVA glue or a glue gun.

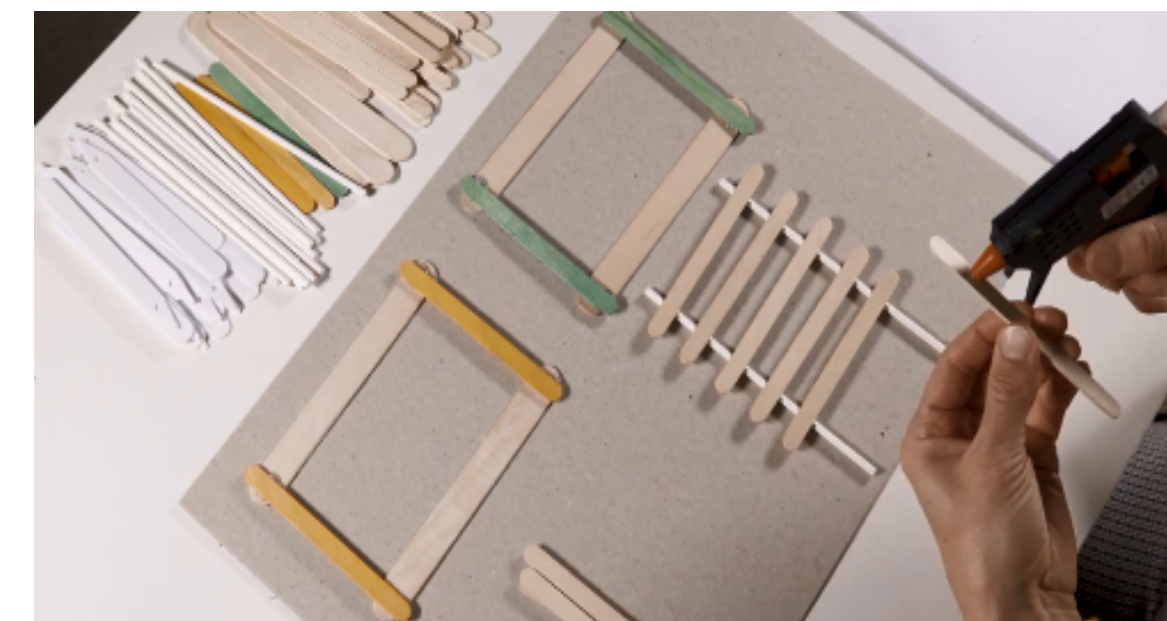


Coping saw

Hands away from the blade

Vice holding work secure

Remember to fix or hold your wood securely on the bench hook or vice when sawing, and keep your fingers out of the way of the blade.



Think about ways of reinforcing your structures to make them stronger, eg: extra pieces of wood to brace the structure, use of card triangles to strengthen corner etc

Evaluation

How well do your structures meet the design criteria?

Are the structures stable and secure?

Joining materials

PVA

PVA explain that this will take a while to dry, so they should make the sides of their structures and leave them to dry before assembling.



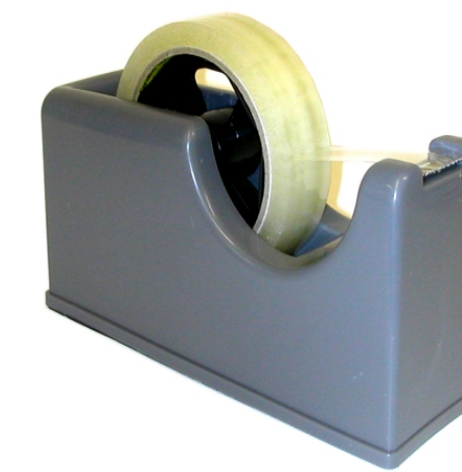
Hot glue

This method is a good way to join materials and is much longer lasting than PVA glue.



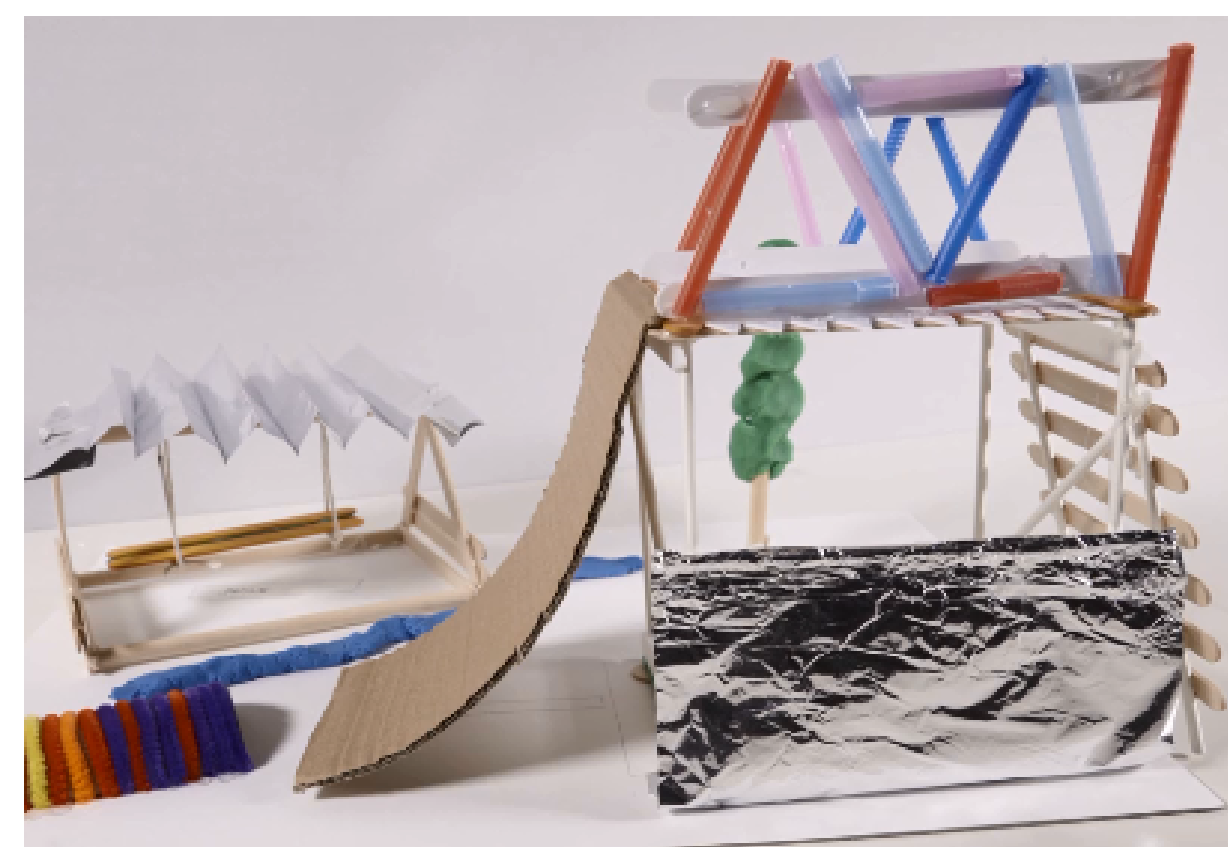
Card corners

These can be used to strengthen the structure. Triangles are often used in construction as they help with stability and strength.



Tape

If using tape, make sure you have wrapped it around enough times to be secure.



Safety

Before using sharp tools or equipment make sure that:
- Hair is tied back
- No jewellery is worn

Vocabulary

- Apparatus
- Structure
- Prototype
- Dowel
- Coping Saw
- Footprint
- Reinforce
- Modify
- Mark Out