



Jumping Stick Stacks

For this activity, you will need some

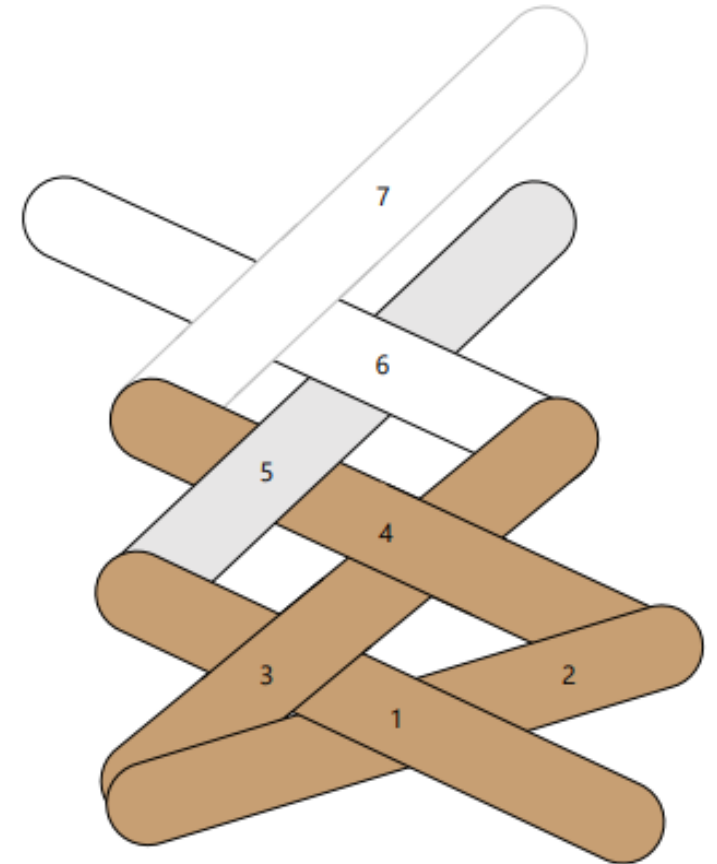
- wooden tongue depressors (found on eBay and Amazon) or lollipop sticks (found in craft stores)
- something heavy (like a paperweight).

Jumping Stick Stacks are a fun way of exploring tension (stretching force) and compression (pushing force).

The sticks want to stay flat, but as we weave them together we stretch and squash them into a bent position. As soon as you release the end of your stick stack, the sticks will spring back into their natural (flat form). Weave a long chain of sticks and you might see them release in the 'cobra wave'.

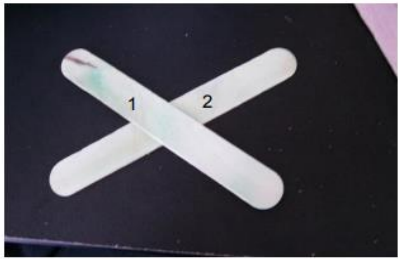
Starting a stick stack can be tricky: you might need an adult to help you - two pairs of hands will help. With a bit of practice, you will soon get the hang of it!

How to start your Stick Stack

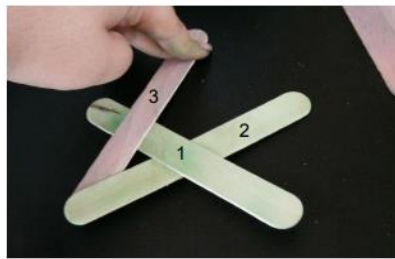




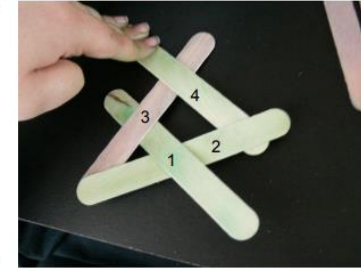
Jumping Stick Stacks



1. Cross two sticks into an "X" shape. Make sure there are two obtuse and two acute angles. The stick on top will be Stick 1 and the stick on bottom will be Stick 2.

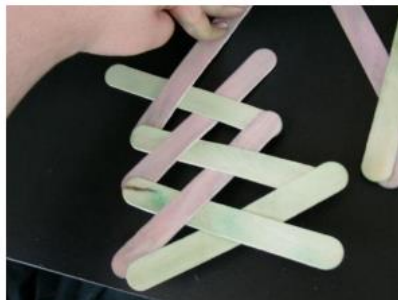
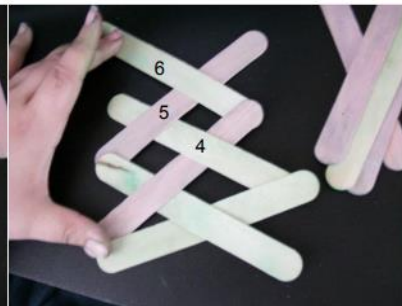
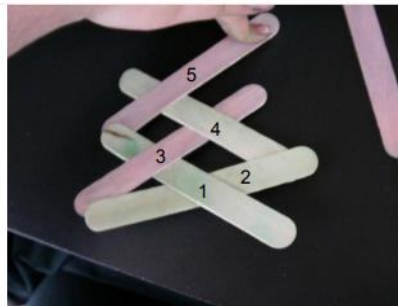


2. Add a Stick 3 by tucking one end under the end of Stick 2. The new stick should go over Stick 1.



3. Add another stick by tucking its end under Stick 2 and letting the rest lay over Stick 3.

This is tricky to do and you may need someone to help you!



4. Now you're ready to make a lattice! The next stick goes under the end of Stick 1 and over the top of Stick 4. Can you see a pattern emerging? It can still get quite confusing, so use our guide sheet to help you get it right!

TIPS

- You might find it easier to build your stick stack if you use a weight to hold down the first few sticks.
- The more sticks you add, the more impressive your stick stack 'explosion' will be. The sticks are under tension and compression and they would all prefer to be flat again – watch these forces in action!