

Children's Activity Guide

Aim: To illustrate aspects of stress using the symbolism of a popsicle stick bridge



Suggested resources for this week's activities:

Popsicle Sticks

About 30-36 of any one size, and up to 20 smaller (or half-size sticks)



A Hot-glue Gun

and glue sticks



CAUTION

Hot-glue guns may cause serious burns and should not be used by young children.

Or, where a glue gun is dangerous or impractical, any carpenter's glue or wood glue may be used. This would require additional drying time.

Optional:

Wood Glue

(Any brand)



Butterfly Clips

or other means of holding sticks together while glue sets.



For simplicity, the plans for the rest of the week will use sticks purchased at the local two-dollar shop, in the following sizes. The sizes below are suggestions only, and other sizes may be used to demonstrate the principles we talk about in each session

114mm x 10mm

65mm x 10mm

If Popsicle sticks and glue are not available, do substitute whatever sticks and binding material are available in your area - raffia, palm fronds or flax might be used to bind sticks of similar size and thickness.

Day-by-day Activity Guide

to be used alongside the Daily Readings for Health Week.

Attached is a full-size plan of the construction of the bridge (print on A3 paper).

The activities below are designed to guide the activity for each day but also to integrate it into the scripted presentation, so that the craft aspect is being used to fully illustrate the two types of stress (compression and tension) but also to stimulate discussion about how the triangular shape can be used to cope with psychological stress. So, for example, I am stronger together with my family and God, or to show how strategies such as deep-breathing, relaxing and pursuing new hobbies form another kind of triad.

This can be accomplished by actually labelling the sticks as the bridge is constructed, Because the coping strategies should be drawn from the children themselves, I have not set out to prescribe what those labels should be.

Day 1: Giants and Grasshoppers

This is the day to introduce the following concepts and vocabulary: (Simplify according to children's level)

- **Pressure;** The external force which is the source of stress in an object or person
- **Compression:** The internal compression (squashing) reaction to the force which has been applied. Any pressure which makes person feel smaller, or diminishes them in any way.
- **Tension:** The internal reaction to opposing pressures - the feeling of stretching or being torn between two opposite views.

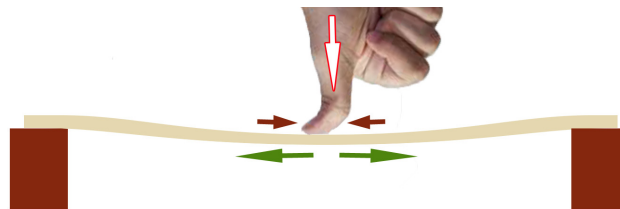


Illustration: Demonstrating Pressure (thumb), compression (top layer of wood), Tension (bottom layer of wood)

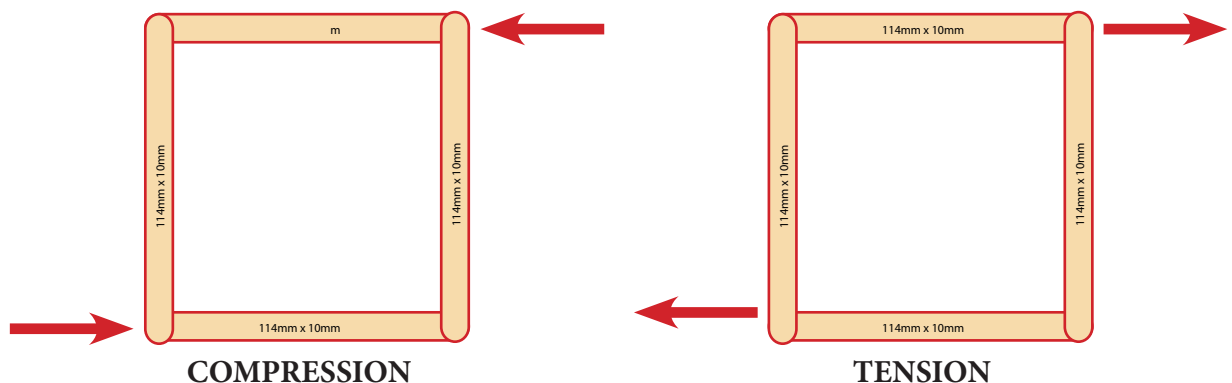


Illustration: Showing the Compression/tension forces acting on a square.

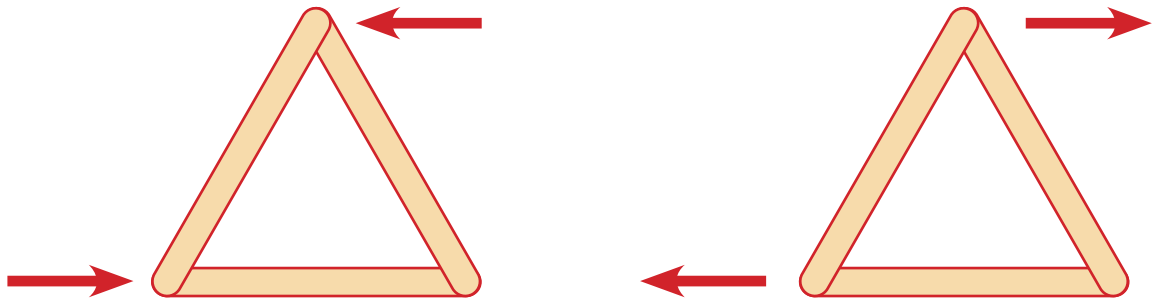


Illustration: The compressive and tensile forces acting on triangle.

Discussion: Have children talk about **hypothetical** situations in which they feel:

- Pressure
- Compression
- Tension:

CAUTION: TREAT LESSONS AS A SAFE PLACE: DO NOT ENCOURAGE OR ALLOW CHILDREN TO EXPOSE CONFIDENTIAL SITUATIONS OR SITUATIONS WHICH MIGHT BE POTENTIALLY EMBARRASSING OR COMPROMISE THEIR SAFETY.

Day 2: Pigs or Parties

The task for Day 2 is to build six equilateral triangles - these will form the vertical sides of the bridge. Each one is independent, but will be joined on Day 3. As in the illustration below, when gluing the sides, keep both the joins on the base (bottom side) on the inside (or outside) of the other two sides. This will make it easier to join the shapes together.

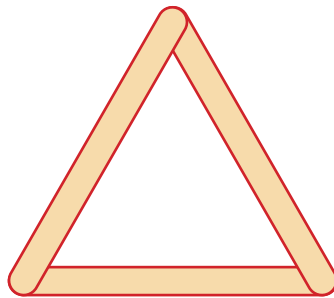
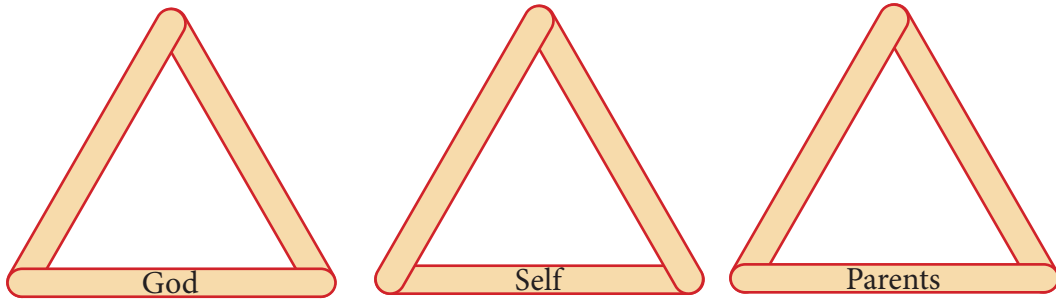


Illustration: Template for construction of 6 triangles showing the relationship between the base and the other two sides.

Discussion: Choose the names of (generic) important people who play a role in a child's life. Suggest names such as: **Parents (or Father/ Mother), Siblings, Friends, Teachers, God, Self.** (We need 6 names) See the plans for suggestions.

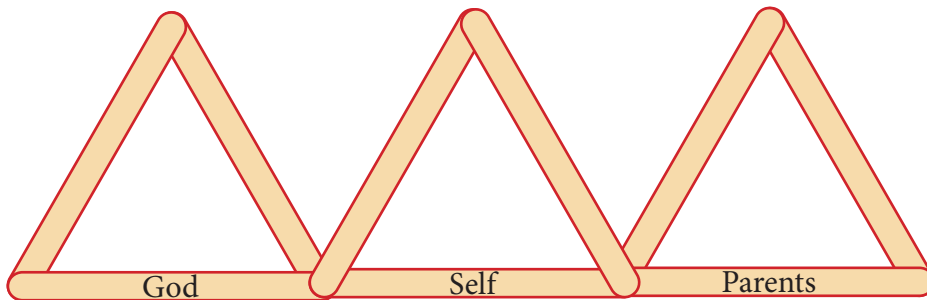
Write one of the names on the base of each triangle so that 4 of the names are on the base (facing out) and write "Self" and one other on the base with the base facing inwards. See example below, note the particular emphasis on direction of the base.



Do the same by matching the remaining names and triangles. Begin a discussion on why these individuals are important - hint that they can help us cope with stress

Day 3: Luxury or Lentils

Day 3 focuses on just how triangles support each other by transferring (absorbing) stress from the sides and to neighbouring triangles. The task today is to glue together the three triangles that form the trusses /girders/sides of the bridge and to begin to label some of the coping mechanisms that each offers.



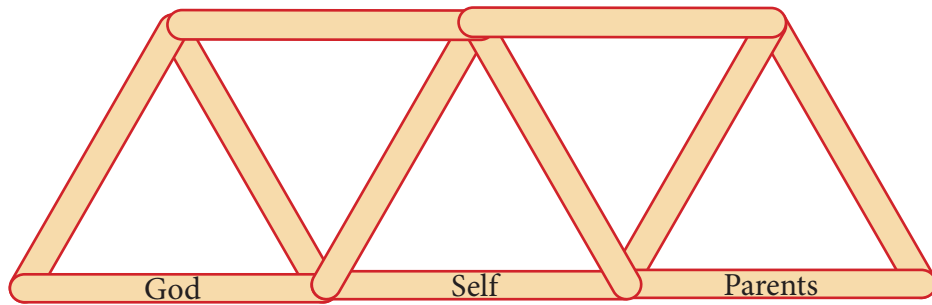
Discussion: *What causes those connections between important beings? - for example, God, Self, Parents. Follow up on earlier discussions with ideas on how various support people can help us cope with stress.*

Begin to identify some of the coping strategies that one can do alone - eg deep breathing, and some that need other people - eg. tell parents how you are feeling.

Label some or all of the blank sides.

Day 4: Down the Up Escalator

Day 4 script is looking at bullying and abusive behaviour from bigger or more powerful people. (Saul vs David). In this practical session we are going to add the tops to the trusses. This will help stabilise whole construction, as it adds another two triangles each side - each triangle using two existing sticks. (Economical use of materials)



Discussion: *Who are the people who might not be in your main group of support, (eg. God, Parents, etc) who can provide support during stressful times. (examples may be, pastor, doctor, sports coach etc.) These would be secondary (as opposed to primary) support people. (See the plans for some suggestions.)*

Do the same with the other truss (other side of the bridge)

Label the two new beams (popsicle sticks)

Day 5: A Lock-out Lock-down

Our bridge is beginning to take shape now. Without putting too much sideways pressure, carefully demonstrate how relatively strong the shape already is.

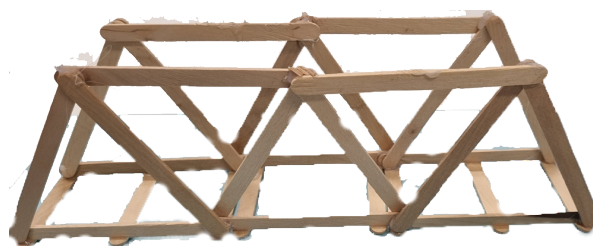
Today's task would be to put in a 'floor' for our bridge. by using some of the shorter popsicle sticks to join the two sides together. *(If you have only one size of stick, cut the longer sticks shorter or in half).*

Intentionally we are going to join the two halves by placing the floor beams (sticks) at 90 degrees to the sides. (We are not going to 'brace' the bridge quite yet - that is the task for Day 6)

To do this we need to have some way to keep the sides upright (maybe books or similar) and stand them upside down as in the illustration below.



When this is done the bridge will look like this:



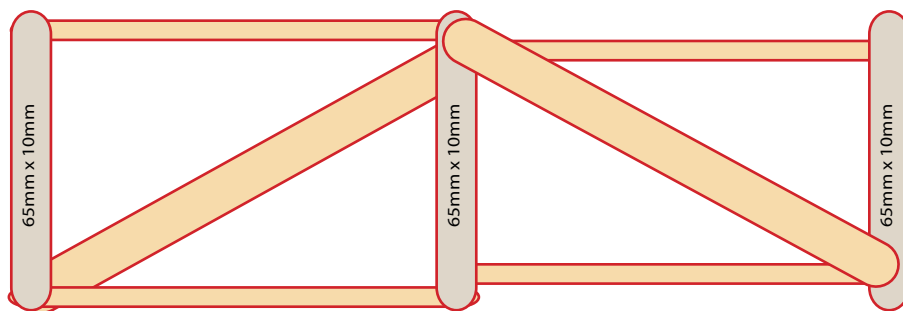
Test the bridge carefully, and note that it is still prone to twisting (torsion) to do that we will put braces on Day 6.

Discussion: *A bridge is no use if it only has one side - it needs to have a "floor" or base to be useful.*

Hint at how strong/resilient people can be 'useful' to others and lead discussion on how healthy people add to society by helping. Being grateful and saying 'thank you' is part of what makes us good citizens and able to help others.

Day 6: Courage and Conviction

On this final day, we will put cross-braces on both the roof and the base of the bridge. This will prevent twisting stress. (Torsion)



Discussion: *Pressure does not always come to us from one side, or even two. Sometimes we feel like we are being twisted - pressure is coming from all sides. This is often the time when people freeze and don't know what to do. The stress paralyzes them. This is one of the ways people react to too much stress.*

This is where the things we have been taught from early play a very big role. We call these things, values and morals and ethics. They come from learning about God, from stories in the Bible where we read about people who made mistakes, people who were weak, people who were strong, people who were bullies and people who were bullied.

For Esther, she had a clear sense of purpose (what she needed to do to save God's people) and this kept her from 'twisting' away from that goal.

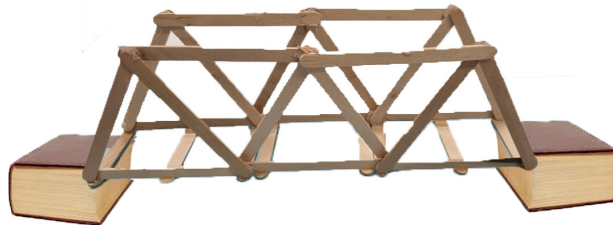
Forgetting what is behind, and straining toward what is ahead, I press on toward the goal to win the prize for which God has called me heavenward in Christ Jesus.

Phil 3:13-14

Finally we have the structure of a bridge;

A bridge is useful for crossing gullies, rivers or sea. You may wish to make the bridge more realistic by adding more short sticks to form a deck for a roadway.

If you wish to test the strength of your bridge, to demonstrate the principles we have learnt about this week, support the bridge on each end by placing the ends on a book or block of wood.



To test it's strength gradually place more books on the top of the bridge. This can be done to breaking point - because all of us can 'break' under too much stress. However, it can be shown to be strong without reaching the breaking point, as this may actually distract from the message that together with the key people in our lives and the habits we develop, we can resist or minimize stress.

