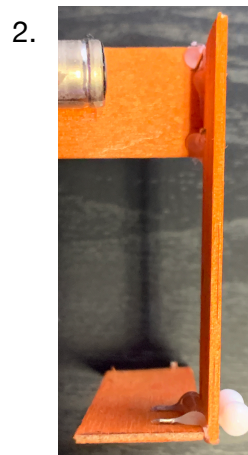
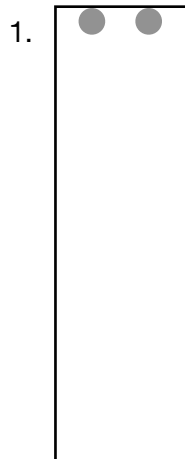


Penrose Triangle

The Penrose Triangle serves as a reminder that when we struggle to understand why some people do what they do, it helps to find out their story to see their perspective - everyone has a story.

You need:

- Cutting mat
- Pencil
- Ruler
- Scissors
- Double sided tape
- A battery (weight)
- Hot glue gun and sticks
- Map pins
- Popsicle sticks
- Pliers



Method:

1. We need to end up with 3 x 6cm popsicle stick rectangles. Using the ruler and pencil take the popsicle sticks, square the rounded ends and measure 6cm lengths. Use your scissors to cut the popsicle sticks.
2. Take two pins and at one end of a popsicle stick push them through. Make sure the pins are level with each other and as close to the end as possible (see image 1).
3. Repeat this for all three popsicle sticks.
4. Taking one of the popsicle sticks, take the pins out and use the pliers cut most of the pin off leaving enough pin for it to be put back without any pin sticking through.
5. Lay this stick on a flat surface with the pin heads underneath. Take one of the “long pin” sticks and apply hot glue to the steel part of the pins. Now looking back at the piece lying down, at the lower end on the right-side long edge lay the glued pins so the stick they are in ‘stands’ up at right angle to the stick lying down (see image 2).
6. Now flip the two sticks stuck together so the “long pin” stick is laying flat and glue the third stick (just as you did the second stick) to the second stick.
7. With the double sided tape, attach the battery weight to the end furthest from the pins on the last stick you attached to the Penrose Triangle.

What’s happening?

When you look at the Penrose Triangle from a certain angle or perspective, your brain is tricked into thinking the whole thing is connected when it’s not.

PERSPECTIVE - TAKING PERSPECTIVE

VALUE TOPIC: Perspective - Looking at something in a different way.

CATCH PHRASE: Everyone has a story -
Aroha ki te tāngata, Ahakoa ko wai te tāngata
(Love people, in spite of who they are)

TOPIC SUMMARY

Problem: I struggle to understand why some people do what they do. When we don't understand other people's behaviour, it helps to find out their story to see their perspective.

STEMHYPE Instructions - Penrose triangle

In STEMHYPE we combine Science, Technology, Engineering, and Mathematics with Hauora, You, Principles, and Ethics; to build cool things that remind us of valuable ways to solve problems and thrive in life.

When you look at the Penrose Triangle from a certain angle or perspective, the illusion tricks your brain into thinking the whole thing is connected when it's not.

By using relatively easy to find materials and tools each student could make their own 'Penrose Triangle', or you might select a group of students to make one and model to the rest of the class. However you decide to 'make it', the 'Penrose Triangle' is an item which helps to remind students of the value in Perspective and its part in helping us understand others.

SPECIFIC LEARNING OUTCOME	RESOURCE	LESSON SUGGESTION
7. We are learning to make a Penrose Triangle to remind us about perspective.	- 'STEMHYPE Instructions' - 'Penrose Triangle' activity	It will help if you have watched the 'STEMHYPE POP which shows how to make the 'Penrose Triangle'. Provide students with the materials needed, or have them collect them and bring them from home. Either follow the POP and pause whenever needed, allowing time for the students to get up to the same point in the process of making their 'Penrose Triangle'. Or follow the step by step instructions as outlined in the 'STEMHYPE Instructions' resource.