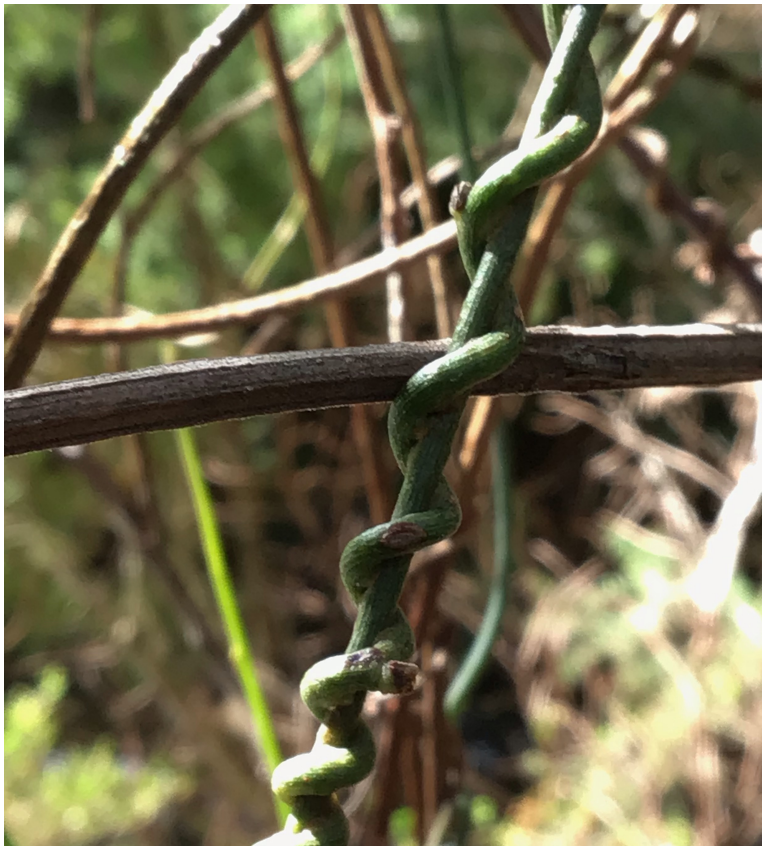
40 Weeks of Math Challenges

Week 13



These visual math challenges have been created to intrigue and inspire your children. They are designed to be hands on, open-ended inquiries, to challenge them to think deeply about the world around them.

Each week a new set will be released with four levels.

- Preschool
- Years 1/2 (approx. age 6-8)
- Year 3/4 (approx ages 8-10)
- Year 5/6 (approx. ages 10-12)

I hope you enjoy exploring the ideas with your children! The challenges don't require any special resources, however your children will need a 'Math Journal' to record their discoveries. Any notebook will work, but if you can, try to encourage them to use a Grid book.

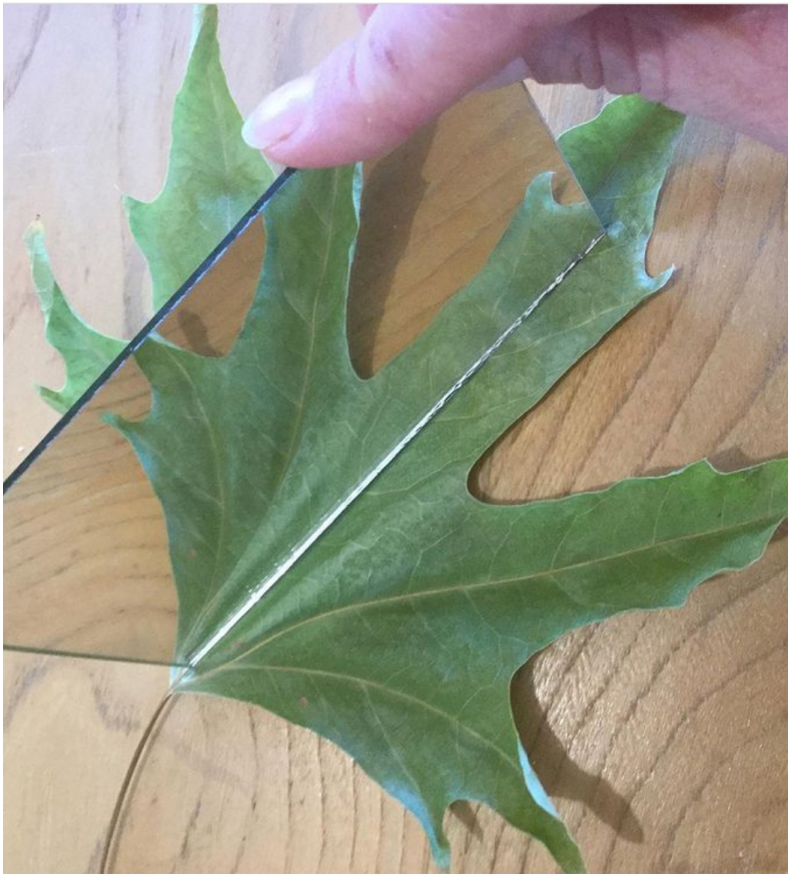
Find me on Instagram @jo_mathinnature and Nature Study Australia

Symmetry-Reflected

Definition:

One half is the reflection of the other half.

1. Look at the picture, what do you notice?
2. Collect some leaves. Cut them down the centre.
3. Match the leaves you cut. Can you find which half belongs to the other?

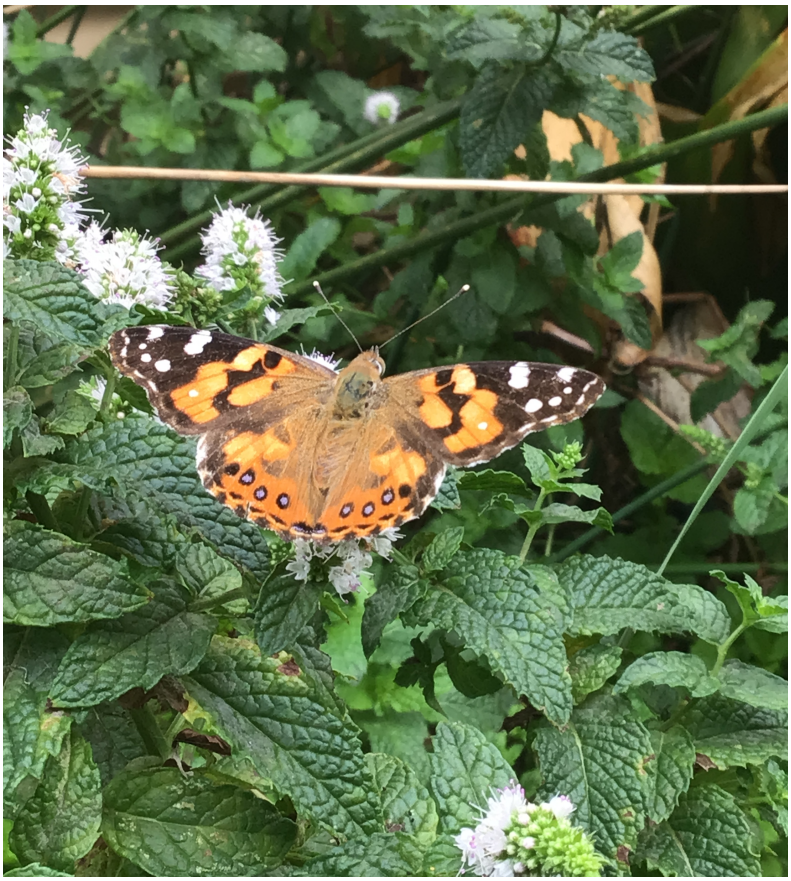


Symmetry-Reflected

Definition:

One half is the reflection of the other half.

1. Look at the picture, what do you notice?
2. The patterns on a butterfly's wing are amazing examples of reflect symmetry.
3. Draw a line down the centre of a page in your math journal. Draw half a butterfly and a pattern on it's wing, then repeat on the other side so that the butterfly shows reflected symmetry.
4. Can you find something else that has reflected symmetry?

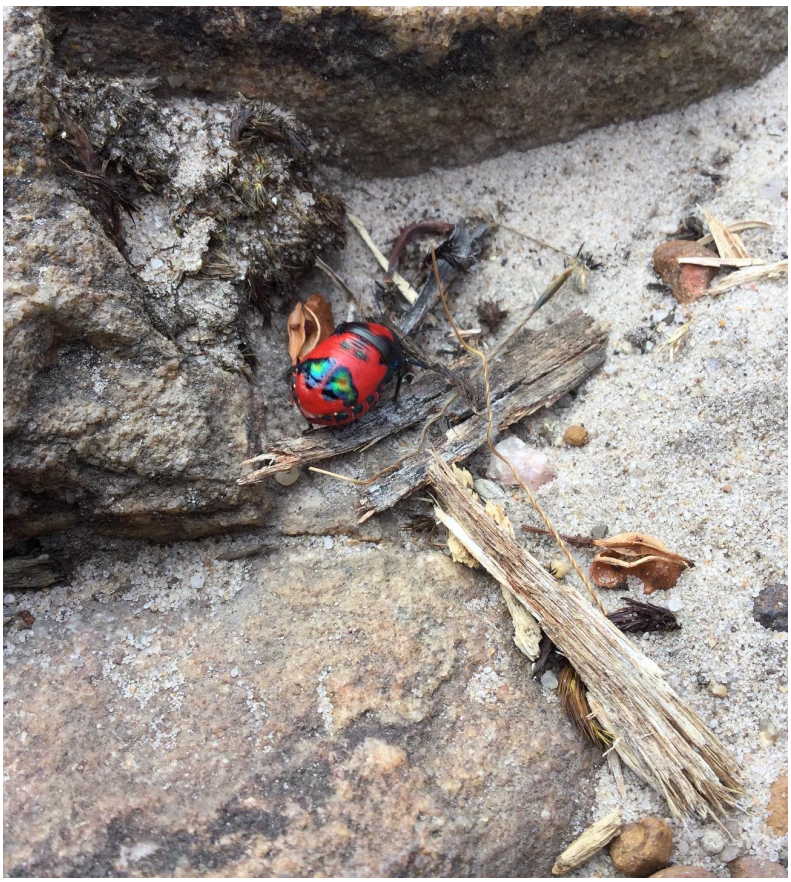


Symmetry-Reflected

Definition:

One half is the reflection of the other half.

1. Look at the picture, what do you notice?
2. Have a look at a bug and beetle book. Notice the reflected symmetry in the pattern and colours.
3. Draw some examples in your math journal.
4. In geometry we examine lines of symmetry. Cut out some polygons. Fold them down the middle and decide if the line you folded is a line of symmetry... are both halves the same?



Symmetry-Reflected

Definition:

One half is the reflection of the other half.

1. Look at the picture, what do you notice?
2. How could you decide if a shape has reflected symmetry? Explain to someone where the line of symmetry is on this beetle and how you know.
3. Draw three examples of reflected symmetry and one Non-example. (A non-example - this is NOT reflected symmetry) Explain why your non-example does not have reflected symmetry.