

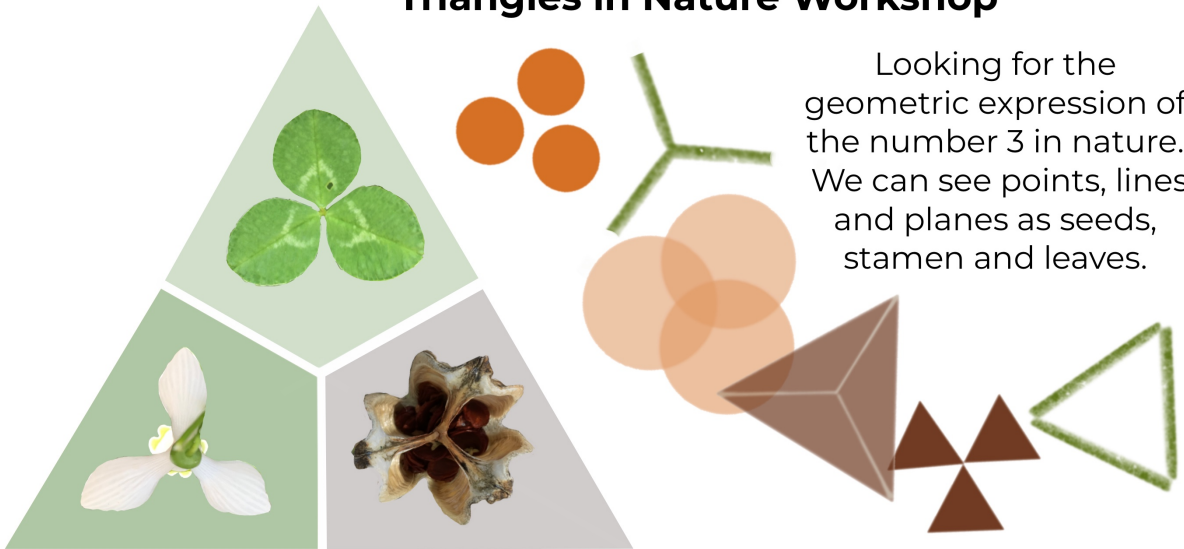


Triangles in Nature Workshop for Primary Level.

Using a selection of props, natural specimens and storytelling to explore the TRI-FORM shape within nature. For **Senior Infants, 1st or 2nd class**.

This workshop explores the **Shape and Space** and **Transformation** mathematical concepts within the 2024 NCCA Primary Maths Curriculum. Also the **Working Scientifically** and **Living Things** strands of the SESE curriculum.

Triangles in Nature Workshop



Looking for the geometric expression of the number 3 in nature. We can see points, lines and planes as seeds, stamen and leaves.

The **Triangles in Nature Workshop** is particularly suitable for Maths week 12-20 Oct or Science week 10- 17 Nov 2024, or any time during the academic year.

The workshop consists of three parts:

• Part One - Deconstructing the triangle

Maritime Pine needles group in clusters of 3's. What other patterns can be made using the 3 needles? Each child explores ways to arrange needles into different patterns.

What similarities are there between petals of the clover and pine needles clusters?

Exploration of the geometric expression of three and how the triangle transforms into other tri-form shapes.

• Part Two - Show and Tell

A discovery session of plants and natural specimens that have the tri-form structure as previously experienced. The hands-on friendly specimens and models distributed throughout the classroom for examination and discussion.

The selection of specimens includes:

- seed heads,
- flowers,
- buds,
- Fruits
- and photos

Use of visual props- acetate shape viewers- to aid in seeing connections to the tri-form structure.

Encouragement to see the groupings of three (corners, petals, stamens etc) and their multiples that are available for us to see in flowers.

• Part Three - Storytelling

'When Triangle jumped from the maths book'

Following the journey of a Triangle character as he jumps from the maths book to find his friends in nature. A game of hide and seek within the book. Looking for the tri-form shapes we have learnt about within the pages of the book .

Follow up by class teacher

Full teacher notes provided

Triangle scavenger hunt worksheets for follow up field work.

Shape viewers stay with the students to be used in own/class explorations.



Objectives and Targeted areas of understanding:

- Connect with the child's learned knowledge of the triangle and establish associations of this shape within a new environment.
- Engagement of playful creativity when looking at a triangle shape from a new environment.
- Explore the number 3 as an expression of various geometric properties.
- To be able to see this tri-form structure within natural specimens.
- Encourage curiosity in searching for this in natural forms.
- To see how the tri-form structure changes throughout the life cycle of a plant.

Curriculum areas.

The areas explored focus on the **Shape and Space** and **Transformation** mathematical concepts within the 2024 NCCA Primary Maths Curriculum. Also the **Working Scientifically** and **Living Things** strands of the SESE curriculum.

The particular areas include:

- Geometrical properties of the triangle - Part One as listed above
- Transformation of triangle - Part One
- Exploring triangle shape within a new environment - Part Three and field work
- Describing/communicating the geometrical properties of triangle and comparisons of natural specimens
- Observing, analysing and recognising patterns in specimens - Part Two
- Building a familiarity with the life cycle of plants - Part Two

Props used:

- acetate shape viewers to assist in recognising the triangle structure within the specimens.
- Plants and seed specimens.
- A model of the stages of the life cycle of a tulip showing its transformation of triangle forms from bud through to seed pod.
- Fruits - cucumber and melon sliced open to see the triangular seed formations

Delivery in pairs (or triples) with provision for 20(or 30) students
Seated at tables with capacity to move to front to see specimens.

Cost to school

€100 for 1-1.5 hours session approx.

If outside the P85 Eircode additional travel costs of €2 per km from Clonakilty will apply.

Overview

This workshop deals with the concepts of spatial patterning and growing patterns in nature. Particularly natural patterns that relate to the educational concept of 'subitising'.

Looking for shapes in nature shows us how numbers express social relationships through pattern and share their roles within a single natural specimen, fostering a gentle understanding of belonging and oneness.

To book

Email Lisa Lillywhite

Please indicate a few preferred dates, school location and student numbers.

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