This resource is part of a suite of materials and activities created to inspire entrants, and support teachers, and parents to enter *maths inside*: a photo competition open to everyone in Scotland. *maths inside*: see different, make connections, celebrate!

Discovering and documenting the *maths inside* measuring trees

What is this?

This is an example to inspire and support Early Years practitioners to design an interdisciplinary learning (IDL) activity based on the *maths inside* photo competition, and leads children towards the creation of an entry. This activity is based on Early Years experiences and outcomes (Es+Os) and complements the *Measuring Trees with Hugs* example journey, its displayed final submission, and Image Bank 1 for Early Years to Fourth Level (Pre-school–S3).

CfE experiences and outcomes: Early Years

- I am developing a sense of size and amount by observing, exploring, using, and communicating with others about things in the world around me MNU 0-01a
- I have experimented with everyday items as units of measure to investigate and compare sizes and amounts in my environment, sharing my findings with others MNU 0-11a
- I have spotted and explored patterns in my own and the wider environment and can copy and continue these and create my own patterns MTH 0-13a
- I enjoy investigating objects and shapes and can sort, describe and be creative with them [MTH 0-16a]
- I have helped to grow plants and can name their basic parts. I can talk about how they grow and what I need to do to look after them SCN 0-03a
- I have the freedom to discover and choose ways to create images and objects using a variety of materials EXA 0-02a
- I can create a range of visual information through observing and recording from my experiences across the curriculum EXA 0-04a
- As I play and learn, I enjoy exploring interesting materials for writing and different ways of recording my experiences and feelings, ideas and information LIT 0-21b

Purpose of the activity

Outdoor learning provides experiences in a real-world context, not in isolation. The activity contained in this resource can help to embed an understanding of mathematical concepts within the world outside the classroom. To embark on a creative journey to record the discoveries made in an engaging piece of writing and in a visually appealing photograph. To provide opportunity to apply digital literacy skills.

Learning activity

- Ask children to look out for repeating shapes and patterns (for example, ripples in water, rings in trees, waves on water, or on a sandy beach)
- Using the questions in Image Bank 1 or the Measuring Trees with Hugs example journey, invite children to find a repeating shapes or pattern
- Invite children to ask "why" the shapes repeat
- Ask children to write down their discoveries in a commentary, either individually or in groups
- Have each group or individual take a photograph of their matched objects and discuss what makes a visually appealing and engaging photograph
- Digitally add the *maths inside* sticker (how to guides available) and submit to the competition

Extension activity

As a group discuss the variation both within the same type objects and between different objects. Invite children to explore possible reasons for this variation.

National benchmarks

These activities provide learners opportunity to engage in further thinking and to integrate skills from across the curriculum in a context. Observation and feedback from these learning activities could contribute towards overall assessment of learners progress.

Open to all ages with prizes in each level. You only need a mobile, the internet & curiosity! Enter on your own or as a team, mind to add the maths inside sticker, and submit in one, or in as many categories as you like. The photo should be your own, without changes, and for a chance to win, cannot be shared anywhere else. View the T&C for more information, and please do get in touch if you have any questions.

credits

This suite of resources are the fruit of a collaborative project between undergraduate and postgraduate students from the University of Glasgow — School of Mathematics & Statistics, Education Scotland, and Dr Andrew Wilson (*maths inside* Founder and Director)

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