

Maths Week Scotland

Community Based Learners

Maths Week Scotland is taking place 26 September – 2 October 2022 with events online plus activities and ideas for you to do.

This resource contains ways to celebrate and enjoy Maths Week Scotland with individuals and groups of all ages. Online versions are available at www.mathsweek.scot/activities. Activities can be adapted to the age and ability of the group and individuals. Activities suitable

specifically for ESOL or family groups are highlighted in the descriptions.

We would love to see what you get up to. Share your celebrations with us on Twitter @MathsWeekScot, #MathsWeekScot and @edscotld.

BEAUTY OF MATHS

Using Shapes for Art!

The artist Paul Klee created over 10,000 pieces of art. He loved to create city landscapes with buildings, bridges and other structures using 2D shapes, such as squares and rectangles.



Create a piece of art using coloured 2D shapes in the same style. Try your hometown or a favourite city.

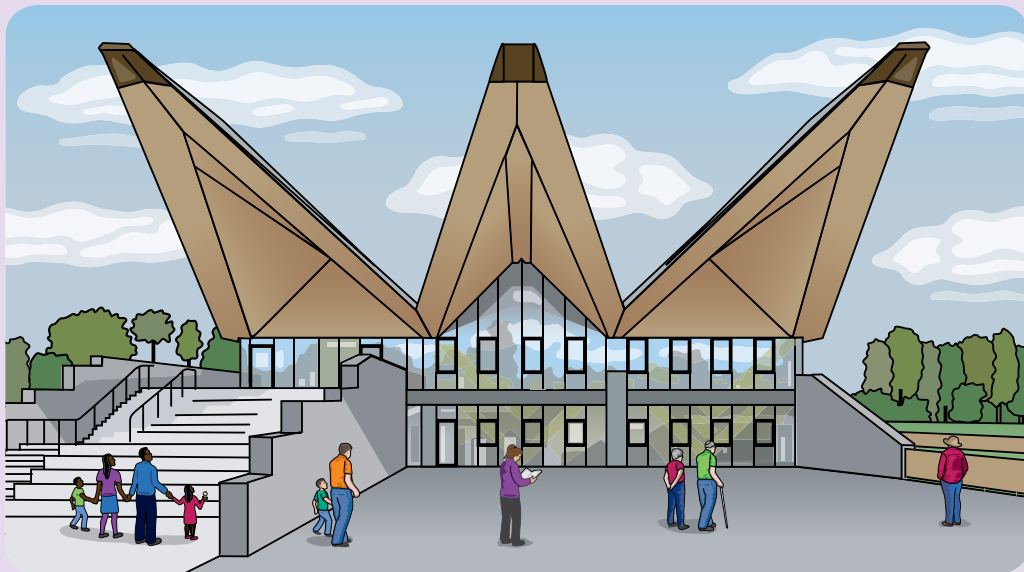
Mazes and Labyrinths

Mazes have many branching paths, with only one path leading to the centre or exit, whereas *labyrinths* are unicursal (or single-pathed).



Some of the earliest mazes and labyrinths we know of were found in Egypt and in Crete, dating back over 4000 years. Mazes are still very popular today, with many large ones found in the grounds of parks and stately homes. Find out if there are any near you with this [Labyrinth Locator](#).

Create your own maze or labyrinth. You might like to draw this out on squared paper, with chalk on the ground or create it using 3D objects. Once you have finished share this with others to see if they can navigate their way around correctly.



Architecture Observation

Take a walk around your local area and photograph different buildings.

Discuss what makes a design more appealing. What do they have in common in terms of symmetry, proportion, shapes, angles or other properties?

Put them in different categories according to criteria of your choice. Do any of your buildings belong to more than one category?

Search buildings from around the world such as:

- Beijing Daxing International Airport, China
- Heydar Aliyev Center in Baku, Azerbaijan
- Cube House in Rotterdam, Netherlands
- Milwaukee Art Museum in Wisconsin, USA
- Broomlands Primary School, Kelso, Scotland.

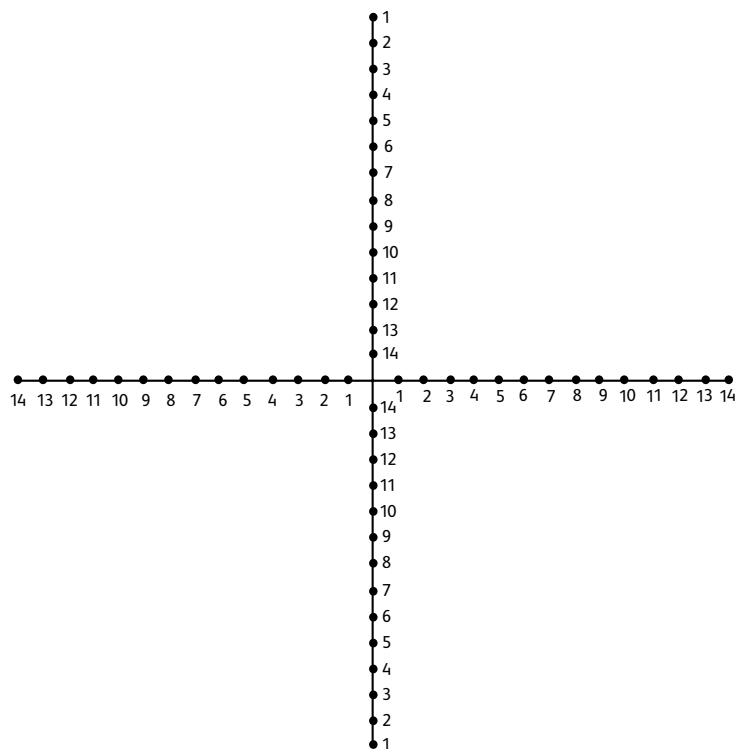
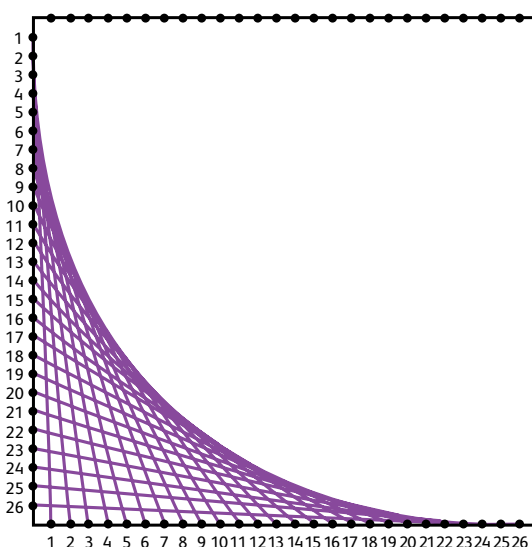
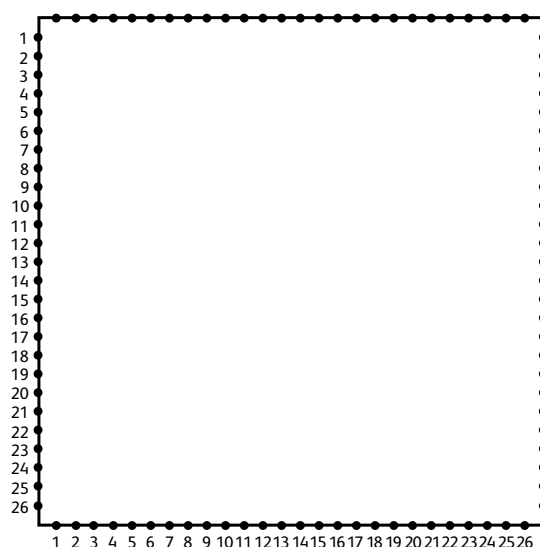
What is so special about these buildings?

Parabolic Curve Art

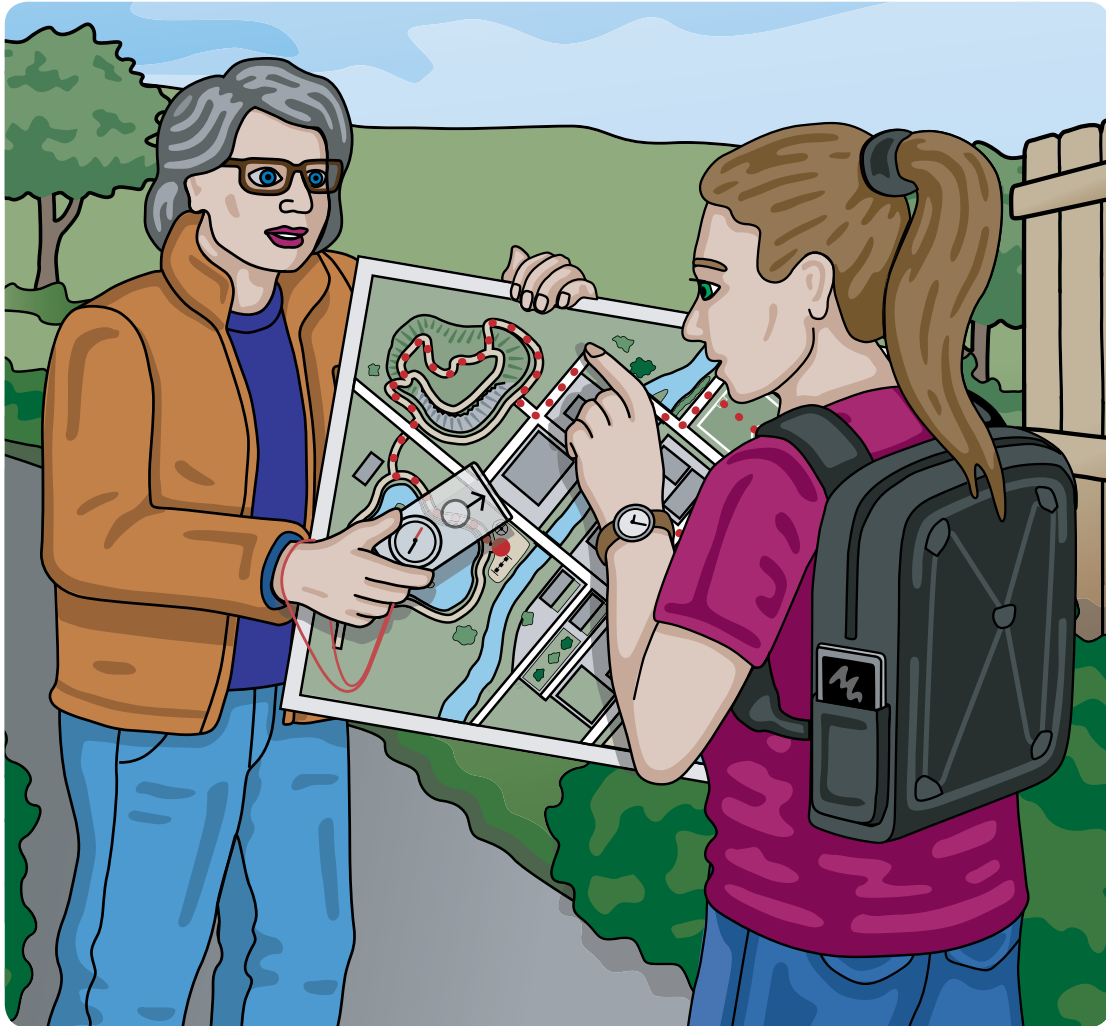
Create curves in art using straight lines. Start with a numbered grid like the one below then draw straight lines matching up the numerals.

Explore what happens when the numerals on the grid are spaced closer together or further apart. Try colouring in the pattern in different ways or using different coloured lines.

Extend the activity by starting with different grids like the one below or create a 3D one using cards and string.



MATHS IN YOUR ENVIRONMENT



Find Your Way

These activities are suitable for ESOL (English to Speaker of Other Language) groups or family groups.

- Carry out a role play exercise with someone asking how to get to a particular place in the local area for example a supermarket. This can be done with a map of the local area to support.
- Find a simple map of a local area. This can be from a surrounding area or a local attraction such as zoo or park. Pick a starting point on the map and ask one person to give directions. Other people in the group trace the route according to the directions and at the end say where they ended up on the map.
- Plan a local walk as a group. Plot the route in advance and estimate how long it will take. This can be combined with financial literacy at shops, navigating public transport or a trip to a local museum or science centre for Maths Week Scotland.
- Draw your own map of your local area highlighting important areas or landmarks to you. You can use legends, distance, scale and transport links.

Climate Change Action

Explore how your actions can impact climate change. Use these [Scotdec](#) resources to calculate the carbon choices in diet and travel choices and how to make an informed decision. Discuss the choices you have or could make as a group.

Systematic change is also needed as well as individual action. Discuss which large scale changes you think would make the biggest impact in our society.

Maths in the News

Find out how data is used by journalists.

Take a look at the [Our World in Data website](#) and the range of graphs which show CO₂ emissions of countries across the world. Looking at the position the UK ranks in comparison to the other countries.

Create a graph using 8 countries from this list, including the UK. If you were to choose a different 8 countries, would it change the ranking of the UK? Does their CO₂ emissions look better or worse in this graph?

Discuss why it is important for journalists to select the data that they include in their articles and news reports carefully.

Create your graph:

MATHS AT WORK

Maths is in a huge range of jobs and careers. Explore the maths in baking, sports, banking and statistics.

Ready, Steady, Bake

Create something delicious to celebrate Maths Week Scotland.

You use lots of different maths skills when you are baking and cooking. You might use fractions to adapt the portion size, estimation and measuring skills to weigh out the

ingredients and timing to judge when your recipe is ready.

Watch this National Numeracy [video](#) with Great British Bake Off 2020 Winner Peter Sawkins explaining how maths is his secret ingredient. Try out Peter's recipe or your own.



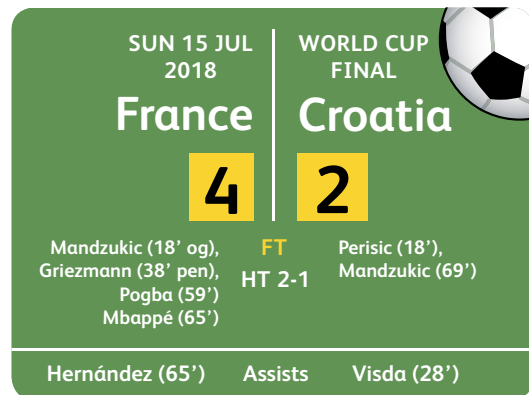
Be a ... Sports Reporter

The FIFA World Cup takes place in Qatar in 2022. In the last World Cup final, France beat Croatia to lift the trophy. Here are the statistics from the match:

If you were a sports reporter what statistics would you put in the final match report? For example:

There was 6 goals scored in the match. The first goal was scored in the 18th minutes.

Take a look at reports from other matches, league tables or other sports. Discuss the statistics used there.



I'm a Bank Manager

You are a bank manager and would like to develop a new bank account to attract young people.

- Research existing bank products for young people and the incentives which are available.
- Think of ways your bank could attract new customers such as discount incentives with local business, being able to use online banking or having a competitive interest rate.
- Design a bank card that includes:
 - Name of Bank
 - 16 Digit Reference Code
 - Sort Code
 - Start Date
 - Expiry Date
 - CVC Security for back of card
 - Eye catching colouring, logo or image.
- Explore some of the different designs and layouts that bank cards can have with [Visa Card Designer](#).
- Research why keeping your card safe is important. Find out more about some of the associate risks with using bank cards. Think about how to share the messages about the risks and benefits of using a bank card to your new customers. Try designing a poster, leaflet or advert.

STEM Ambassadors

STEM Ambassadors are people working in STEM industries or with an interest in STEM. They are available to meet with groups, run activities or help you plan sessions related to their work. Visit the [STEM Ambassador website](#) or request support to bring maths at work to life.

GET INVOLVED WITH MATHS WEEK SCOTLAND 2022

Maths Inside

Get your cameras ready to get out and about and find the Maths Inside your daily life. The Maths Inside photography competition has categories for early years up to adult anyone can enter! Enter at www.mathsinside.com.

Codebreak

Do you have what it takes to be a codebreaker? The Codebreak app from the Open University has three different levels increasing in difficulty. Work your way up the levels finding the codewords along the way. Play at <https://www.open.edu/openlearn/codebreak>

Local Events

Museums, science centres and galleries are taking part in Maths Week Scotland with events and resources. Take a look at the events and resources on offer at <https://www.mathsweek.scot/events>

Online Events

Keep an eye on online events for practitioners throughout Maths Week

Scotland. STEM Ambassadors have a series of talks highlighting a range of careers with maths at the core. Find events at <https://www.mathsweek.scot/events>.

Activity Packs

The full range of Activity Packs can be found on the [Maths Week Scotland website](#). Activities are targeted to early years and schools and can be adapted to a range of learners.

ADDITIONAL LINKS

- Climate change – OpenLearn – Open University
- The North Lanarkshire Youth Climate Ambassadors – YouTube
- Learning for Sustainability Awards 2021. Forget Me Not Intergenerational Gardening group – YouTube
- Ordnance Survey – Map Reading Made Easy
- Labyrinth Locator
- UN Footprint Calculator



Education
Scotland
Foghlam Alba