Mathletics

Mathematics in the Real World Project Kit

Ages: 9 - 16

Introduction

One of the most challenging questions we get from students' around mathematics is 'when am I ever going to use this?'

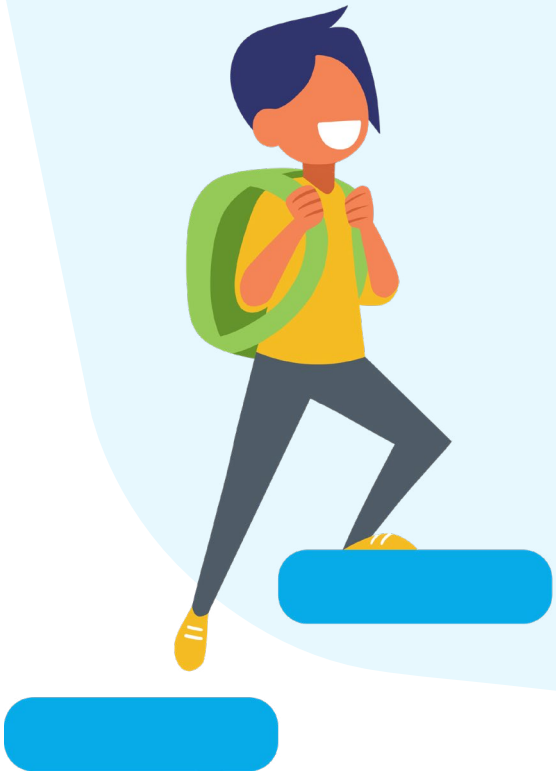
The Mathematics in the Real World Project aims to answer this question by challenging students to use their mathematics skills in a real-world context.

This kit provides a flexible structure for you to follow and adapt to any curricula or mathematics concept that you feel is most relevant. If you're stuck for ideas, we've included a list of fun projects at the end of the document.

Good luck!

The Mathletics Team at 3P Learning

How does the Mathematics in the Real World Project work?



Students work individually or in groups to:

- Identify a mathematics concept that can be applied to the outside world.

  Note: *Alternatively, you can assign a specific topic to a group or one topic to the whole class*.
- Research how their concept can be applied to a specific aspect of the real world.
- Prepare a presentation that explains how their concept occurs in the real world.
- Develop their soft mathematical skills.

How long will the project take to complete?

This project can take anywhere between 1 and 10 lessons to complete, depending on how much detail you specify.

Students are then given the freedom to choose which media they'd like to use to present their findings.

Ideas include:

- Poster
- Video
- PowerPoint Presentation
- Interpretive Dance
- Scale Model
- Blog

And so much more!

What's in the kit?

In this kit you will find:

- Teacher Project Planner
- Teacher Lesson Plan
- Student Planning Sheet
- Student Project Reflection Sheet
- Project Inspiration

Project Inspiration

If you or your students are stuck for project topics, here are some fun ideas that you could run with or use to inspire your thinking.

Town planning

Town planners use mathematics as they design the layout, appearance, and functionality of towns and cities. Whether it is figuring out how large a park can be, or how far apart two buildings should be, that's all maths.

Project idea:

Give your students the task of being a town planner for a new town or city. They'll need to use a lot of their measurement skills to get this job done.

Build a bridge (or a house!)

Just like town planners, architects use mathematics daily when creating designs for structurally sound architectural pieces.

Project idea:

Task students with the challenge of creating a new design for a building in your school. They'll have to draw on their knowledge of measurement, angles, ratios, etc. making it a great project for explaining these concepts.

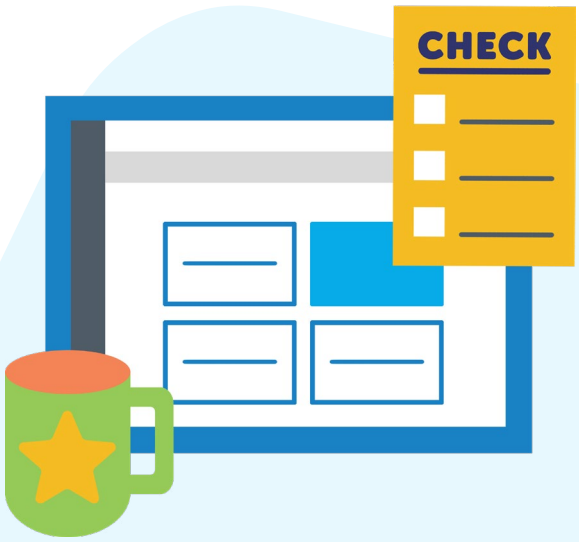
Smart Shopping List

One of the most obvious places you'll find people using mathematics in everyday life is at the grocery store. You need a broad range of knowledge to be able to calculate the price per unit, weigh items, figure out savings and estimate the final price.

Project idea:

Ask your students to visit the local grocery store with their family. They can estimate the total cost of the grocery bill, work out item discounts and use the experience to help them explain the topics of money, percentages, etc.

Tip: You could organise a field trip too!



Project Inspiration

Brainy Baking

The kitchen is the perfect place to get students thinking about mathematics in the real world. After all, a recipe is basically just mathematical algorithms. Being able to successfully cook or bake requires a wide range of mathematical knowledge (measuring ingredients, multiplying or dividing for more or less than a single batch, converting measurements, calculating cooking time... the list goes on!)

Project idea:

Get your class to pick a recipe for a yummy snack and use this to explain a mathematics concept of their choice (e.g. measurement).

Tip: For some added fun, ask your students to make and document their chosen snack at home!

Road Trip

Who doesn't like a little travelling?

A range of mathematics skills is a good thing to have in your back pocket when travelling. From estimating the amount of fuel you'll need to travel to budgeting for meals or even reading a map, you never know when they might come in handy.

Project idea:

Have students plan their own road trip with stops at various destinations. They'll need to think about things like how long it'll take to complete the trip, estimating how much money they'll need for accommodation and food, calculating possible time differences.

Students can use a project like this to explain so many different mathematics concepts!