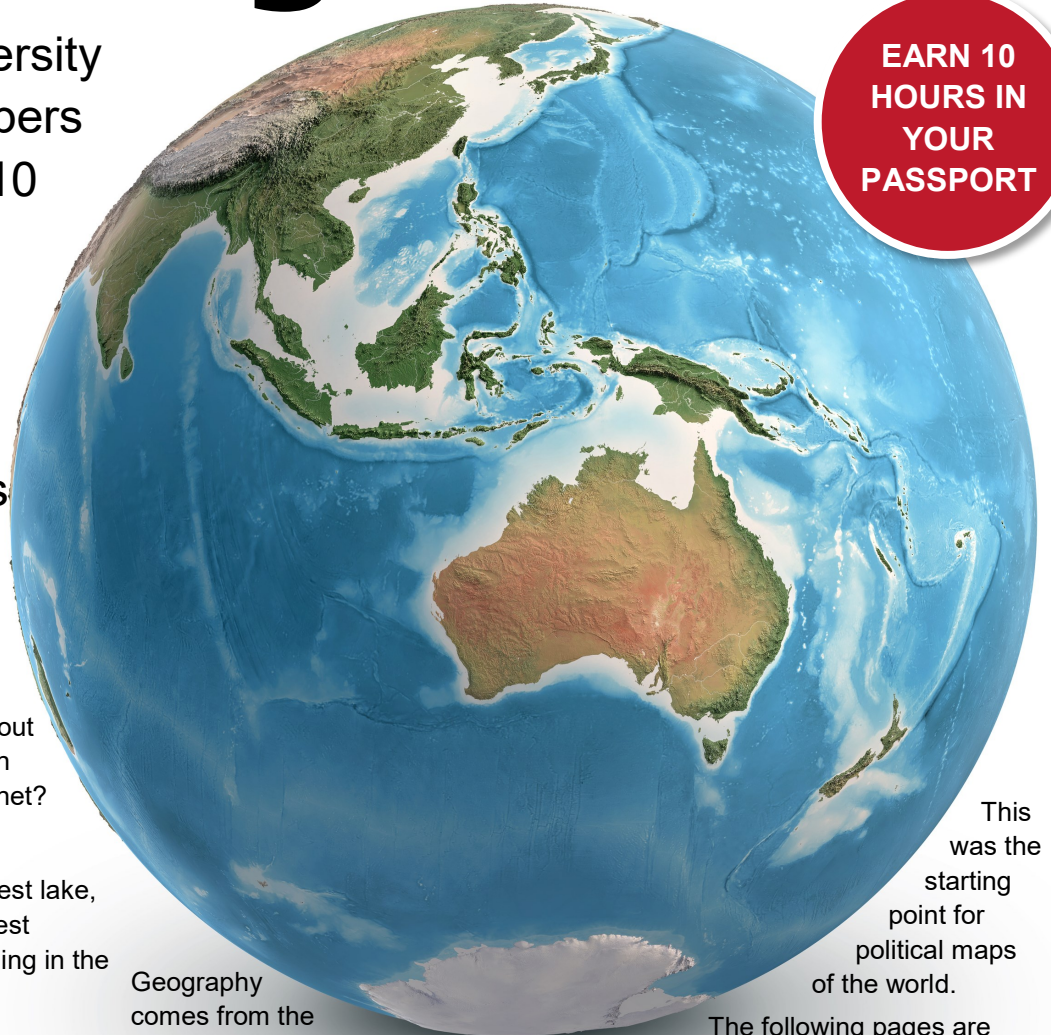


# Geography challenge

Children's University Tasmania members can earn up to 10 hours in their *Passports to Learning* for the engaging with the fun activities in this challenge.

Do you like geography?  
Before you answer, think about whether you are interested in knowing more about our planet?  
Things like:

- Where to find the largest lake, highest mountain, tiniest country or tallest building in the world?
- What happens when a volcano erupts?
- How people live in different parts of the world (what they eat, the language they speak, the sports they play etc)?
- What makes our planet liveable?
- How land changes through human activities?
- Where native animals live and how to keep them safe?



Geography comes from the Greek word *geographia* - *ge* means earth, and *graphia* means writing.

A person who studies geography is called a geographer.

A Greek scientist called Eratosthenes was the first person to use the term geography, and is believed to be the first person to draw a world map.

He also calculated the circumference of the Earth, and even the tilt of the Earth's axis quite accurately.

Eratosthenes also drew lines on maps to separate kingdoms.

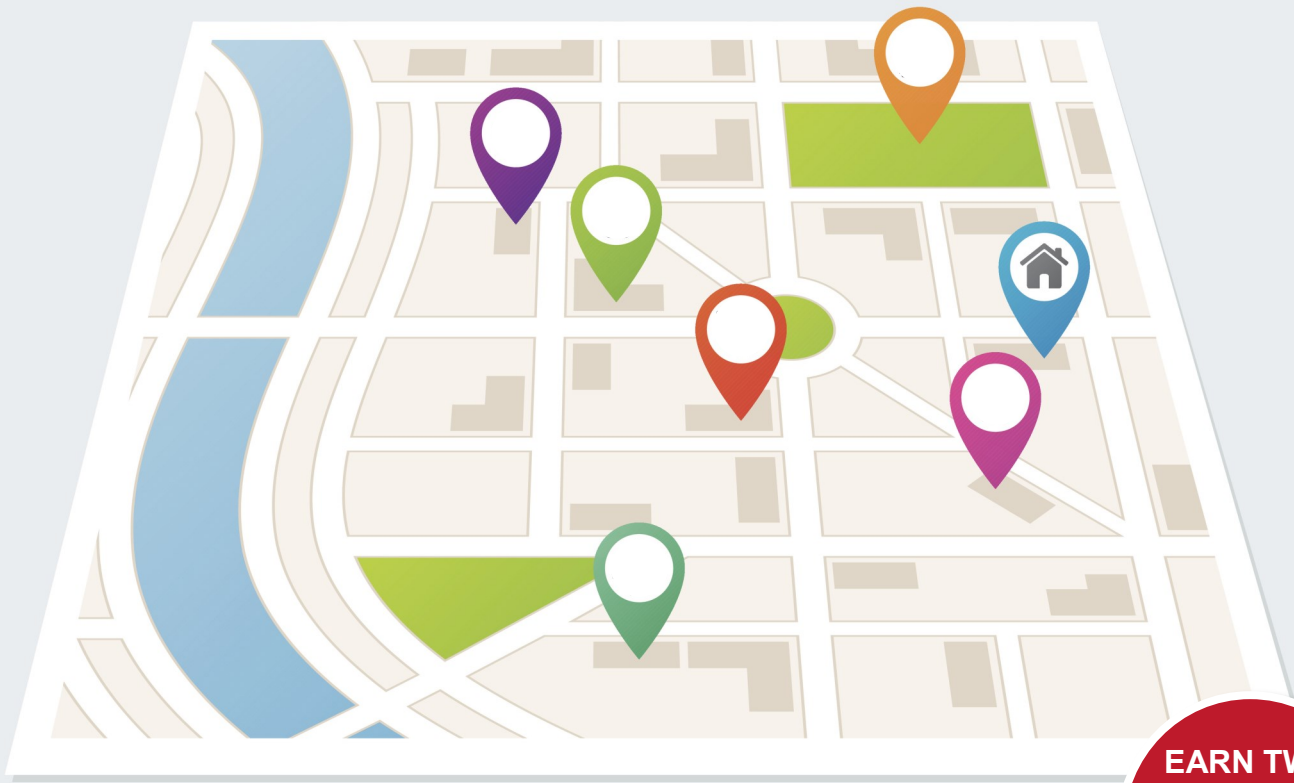
This was the starting point for political maps of the world.

The following pages are packed with activities you can earn hours in your passports for attempting, along with lots of puzzles, games and other fun things to do.

You can turn your hand to drawing maps, broaden your knowledge of the countries and capital cities all around the world, learn to make a compass out of a sewing needle, design your own flag, and much more.

One day you might be interested in studying geography at the University of Tasmania.

**FUN FACT:** Political maps show state, national and country boundaries.



# Cartography fun

EARN TWO HOURS IN YOUR PASSPORT

THERE are many types of maps. But generally when you think about maps, you probably think of geographic maps. These are drawings of the Earth, or areas of the Earth on a flat surface. The people who produce maps are called cartographers. Famous astronomer, mathematician and cartographer Claudius Ptolemaeus (better known as Ptolemy), made a large contribution to geographic knowledge. Way back in the 2nd Century, Ptolemy produced a series of guides to drawing the Earth, known as the *Geography*. He talked about the problems of representing a spherical earth on a flat sheet of paper, and is believed to have been the first to have placed a grid system on a map and

used the same grid system for the entire planet. In other words, Ptolemy invented the lines of longitude and latitude, along with a few other ideas about geography, that we still use today. He also showed north at the top of the map. Maps show areas of the Earth from the air, as if you were flying above in an aeroplane. Maps of the world show oceans and land, and sometimes use different colours to show countries. Maps of countries show information such as state borders, cities, rivers and lakes, and perhaps major highways. Street maps help people find their way from one destination to another by displaying all the roads of a particular area and other important information for people,

such as schools, parks, police stations or shops. Try drawing a map which shows your path from home to school. You will need to think about directions - north, south, east and west. You will also need to consider scale. You might also like to use map points, symbols and words to show important locations or landmarks (e.g. your school and your house). You could use colour pencils or textas to show geographic features - dark green for a park, or blue for waterways. Then draw a line to show the quickest safe route from your school to your house.

**FUN FACT:** Physical maps show mountains, rivers, lakes and other physical features.

UNIVERSITY of TASMANIA  
— Peter Underwood Centre



# Word puzzle

The word puzzle grid is a 13x13 grid of letters. The words hidden in the grid are: PIRATES, CAPTAIN, TREASURE, BOMB, SHIP, ANCHOR, PARROT, WHEEL, COMPASS, BARREL, and HAT.

Illustrations on the map include: an anchor, a parrot, a wooden barrel, a bomb, a three-masted sailing ship, a treasure chest, a ship's wheel, a compass, a map, and a hat.

**FUN FACT:** The Pacific Ocean covers more than 30 per cent of the Earth's surface.

## Pirate bounty

Create a Tassie treasure map

Pirate maps are very popular fictional stories, but there are no recorded cases in history of pirate's creating maps to remember the location of buried treasure. It is fun to think about though, and even more fun to create your own treasure maps.

Use the following page to do just that.

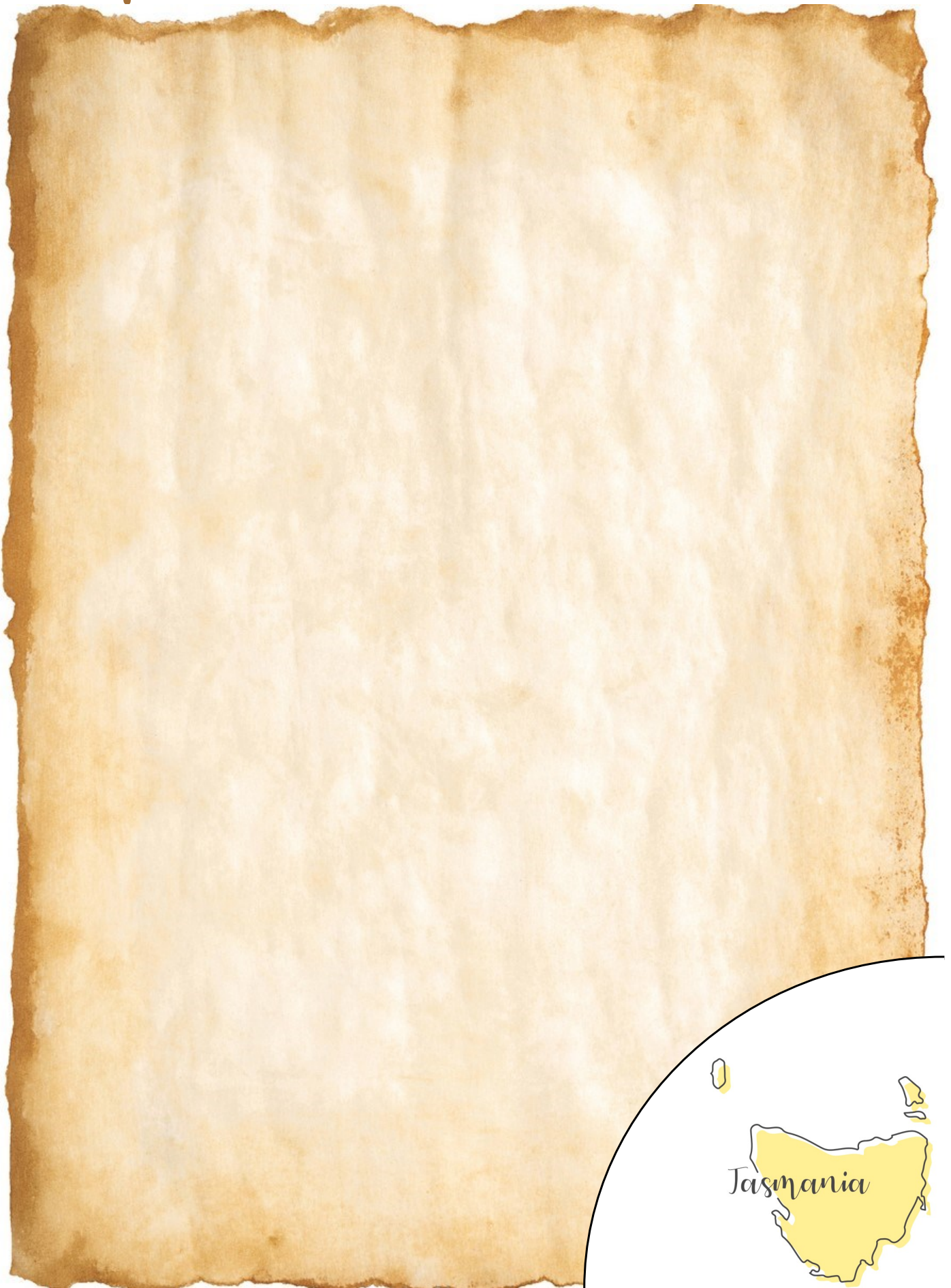
Perhaps you might like to use a location in Tasmania you know well, like one of our many islands.

But if you just want to create a location from your imagination, go for it.



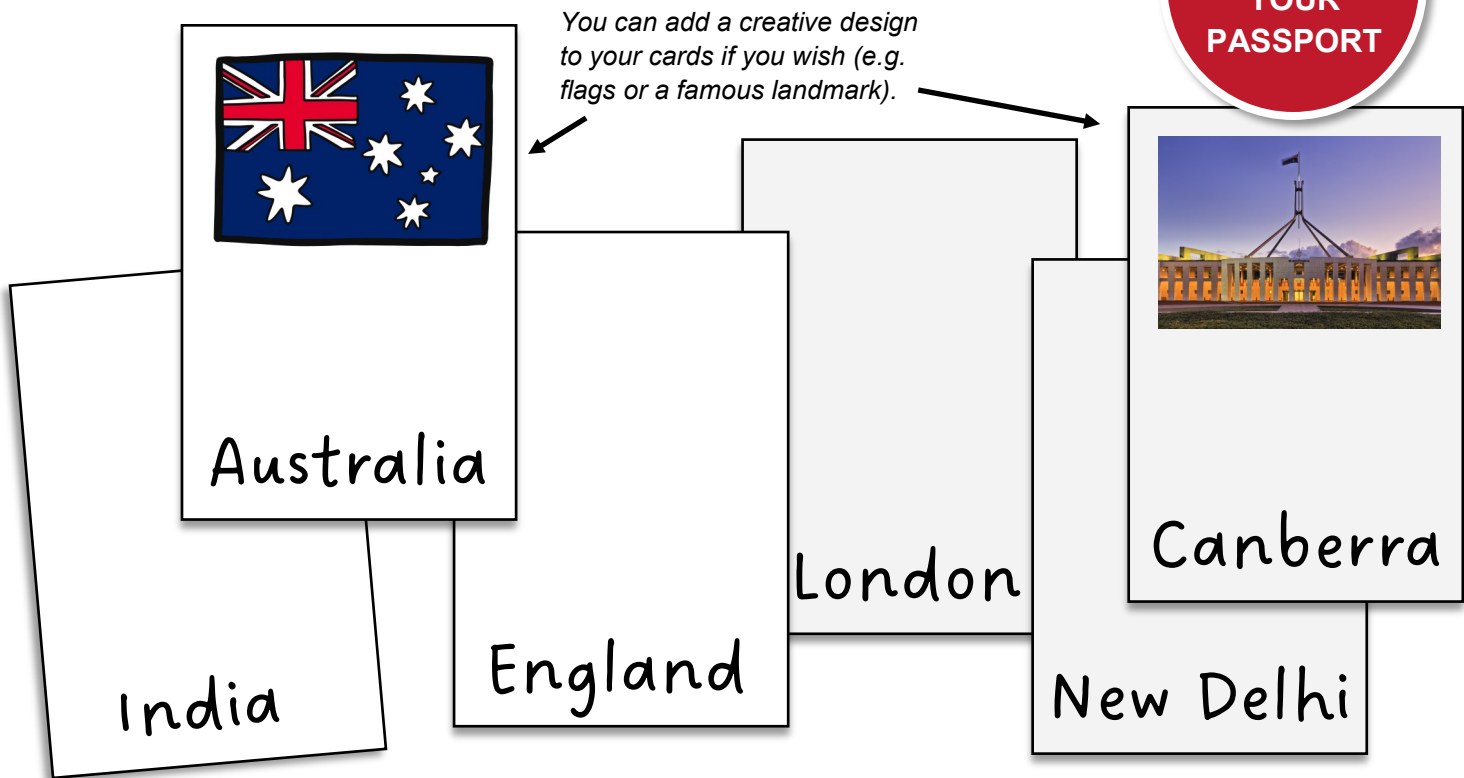
**FUN FACT:** Deserts are found on all seven continents.

# Map the buried treasure



# Game of memory

EARN TWO HOURS IN YOUR PASSPORT



How well do you know the capital cities of countries around the world?

A great way to learn and remember them, and have fun with your family and friends, is to create a card memory game.

You can use cardboard flash cards, or just create your own by cutting out rectangular shapes from card paper.

Normal paper is fine as well.

It is important to cut the cards so they are the same size.

There are 197 countries in the world, so if you wanted to, you could make a lot of cards.

We would suggest 40 is a good number to start with - that's 20 countries and 20 matching cities.

You will need to do some research and find out the capital cities of 20 different countries.

Then write the names of 20 countries on different cards, and the 20 corresponding capital cities on the remaining cards.

If you like, you can make the country cards one colour and the cities a different colour.

You could also draw pictures or write facts on the cards (e.g. the population of the cities).

Keep a sheet of paper handy with the answers (i.e. which capital city matches which country).

## HOW TO PLAY

1. Shuffle the cards.
2. Place the cards face down on the table.
3. Each player takes a turn by turning over two cards.
4. If the cards are a match the player keeps those cards.
5. If the cards are not a match they are turned face down again. The challenge is remembering the location of those cards.
6. The next player then has their turn.
7. Once all the cards have been selected, the winner is the player with the most cards.

## What is your favourite meal of all?

If you could choose one meal for dinner tonight what would it be?

Once you have decided, research where in the world (country/region) that dish originated.

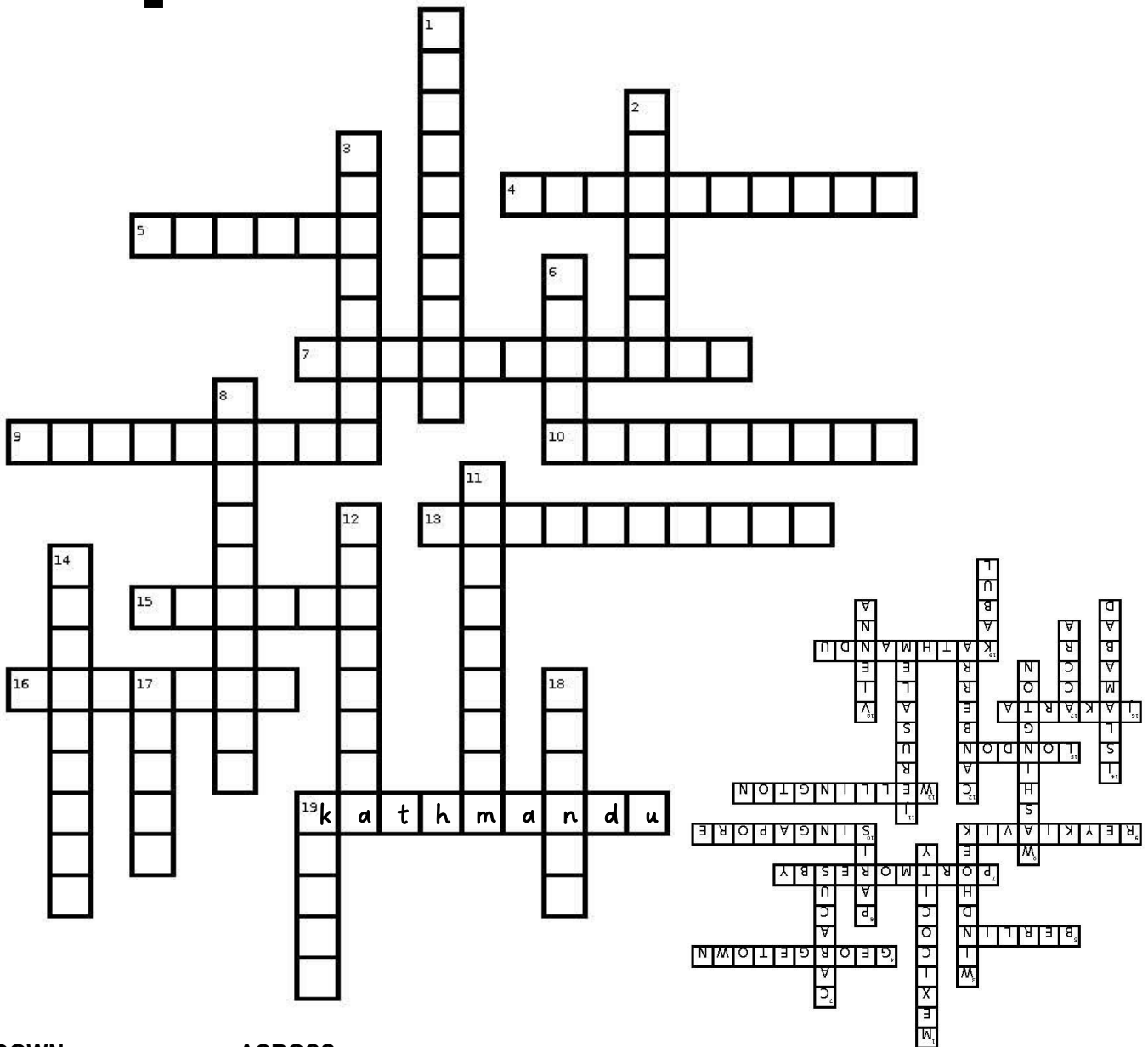
Discover as much about that dish and the location where it was invented as you can.

We are guessing spaghetti bolognese might be a popular choice.



**FUN FACT:** Mopane worms (caterpillars) are a popular dish in southern Africa.

# Capitals Crossword



**DOWN:**

1. Mexico
2. Venezuela
3. Namibia
6. France
8. USA
11. Israel
12. Australia
14. Pakistan
17. Ghana
18. Austria
19. Afghanistan

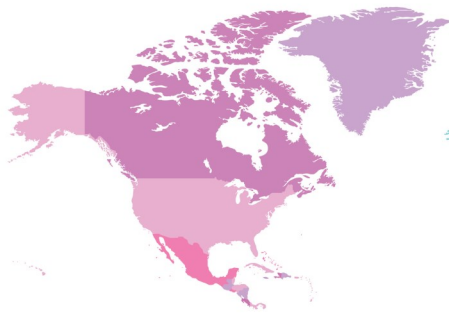
**ACROSS:**

4. Guyana
5. Germany
7. Papua New Guinea
9. Iceland
10. Singapore
13. New Zealand
15. England
16. Indonesia
19. Nepal

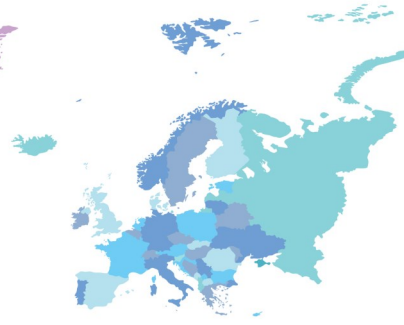


**FUN FACT:** Singapore is a city state linked by a bridge to mainland Malaysia.

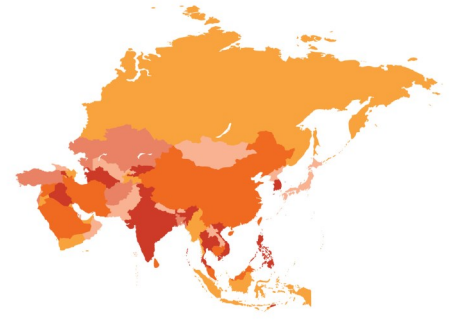
North America



Europe



Asia



South America



Africa



Australia



Antarctica



# Endemic species

Endemic species are those that can only be found in a single geographic location such as an island, state or country.

Match the species listed to their endemic region and continent.



Emu	Mainland Australia	Australia
Ring-tailed lemur		
Kiwi		
Golden jellyfish		
Galápagos giant tortoise	Galápagos Islands	South America
Pellucid hawk moth		
Tasmanian Devil	Tasmania	
Cotton-top tamarin		
Diademed sifaka		
Pellucid hawk moth		
Texas blind salamander		
Nosy hara leaf chameleon		
Matschie's tree kangaroo		
Philippine crocodile		
Forty-spotted pardalote		Australia

**FUN FACT:** Tasmania is home to 12 species of birds which are found nowhere else.

# Alphabetical order

EARN ONE HOUR IN YOUR PASSPORT

There are 197 countries in the world - 193 of which are recognised by the United Nations. The others which we have included are Vatican City, Palestine, Kosovo and Taiwan. You might like to find out what's different about those four. But for **one hour** in your passport, we have selected three letters - **B, C and M** - for you to research. How many do you know? How many can you find with your research skills.

<b>B</b> countries (17)	<b>C</b> countries (18)	<b>M</b> countries (18)
Bahamas	Cabo Verde	Madagascar
	Congo, Democratic Republic of	
	Congo, Republic of the	

**FUN FACT:** The Bahamas are a chain of more than 700 islands.



# Your place on Earth



Do you ever think about the fact that where you live is a small part of a much bigger world and universe?

A fun craft activity can help.

All you need is some polystyrene cups and marker pens or textas.

Start by writing the number of your house on a cup.

On the next cup write the name of the street you live in.

The suburb or town you live in would come next, followed by your region and so on, until you get to our universe.

Stack the cups in order, and then you can remove them one-by-one until you get to your street number.

To add some meaning to the activity, add an artistic design to each cup.

The design is completely up to you, but you might like to draw what springs to mind when you think about that location.

For example, when think about the country you live in, Australia, there might be a particular place, animal, plant, or even food that enters your mind.

When you think about your suburb or town, it might be a place you like to visit or a famous landmark.

For example, when I think about Stanley on the North-West Coast of Tasmania, I think about the Nut.

When I think about Queenstown on the West Coast, I think about the awesome trains of the West Coast Wilderness Railway.



**FUN FACT:** Most people on Earth live in the continent of Asia.

# Compass directions

The main tool geographers use is a map.

Of course a map can be of little use without a compass.

Direction is the course in which an object is moving.

When someone asks how to get from one location to another, the answer can be 'relative' directions (i.e. left, right, back, forward, up, down) or cardinal directions (the directions you find on a compass).

Cardinal directions, or cardinal points, are the four main points of a compass: north, south, east and west.

Usually only the first letter is used - N, S, E and W.

This symbol in the compass is known as the cardinal rose.

Ordinal directions are found at equal points between each cardinal direction.

Ordinal directions are northeast (NE), southeast (SE), southwest (SW) and northwest (NW).

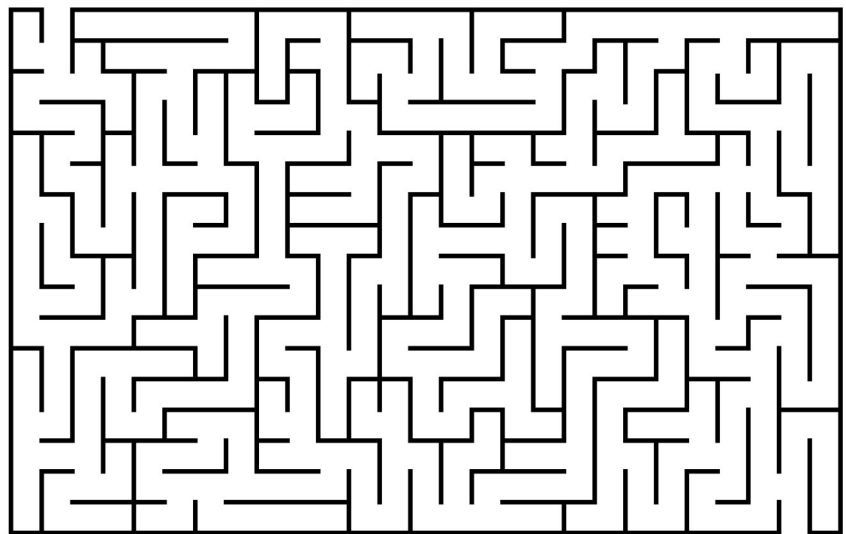
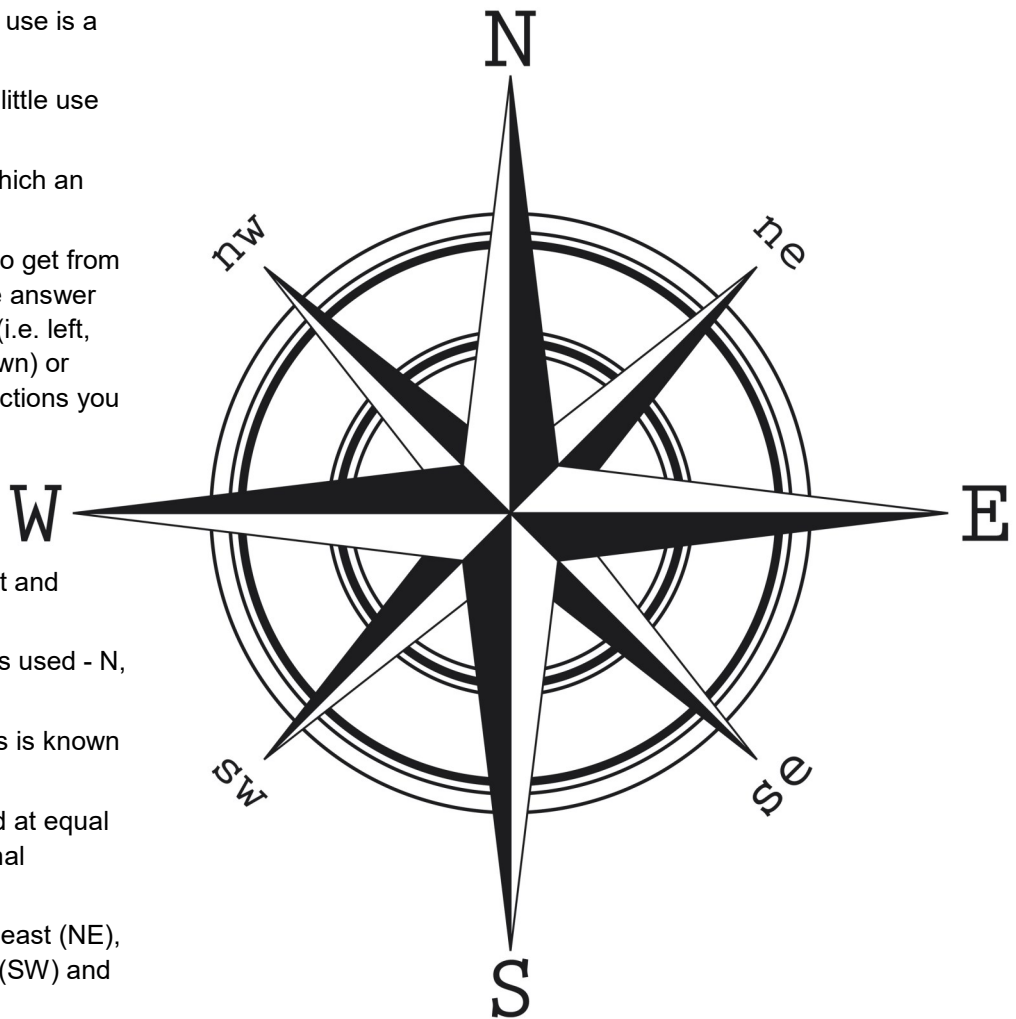
A compass rose with both ordinal and cardinal directions, such as the one pictured, has eight points.

Directions between each cardinal and ordinal direction are called intercardinal directions - NNE, ENE, ESE, SSE, SSW, WSW, WNW and NNW.

A compass rose with ordinal, cardinal and intercardinal directions has 16 points.

You might like to try drawing compass roses with four points, eight points and 16 points.

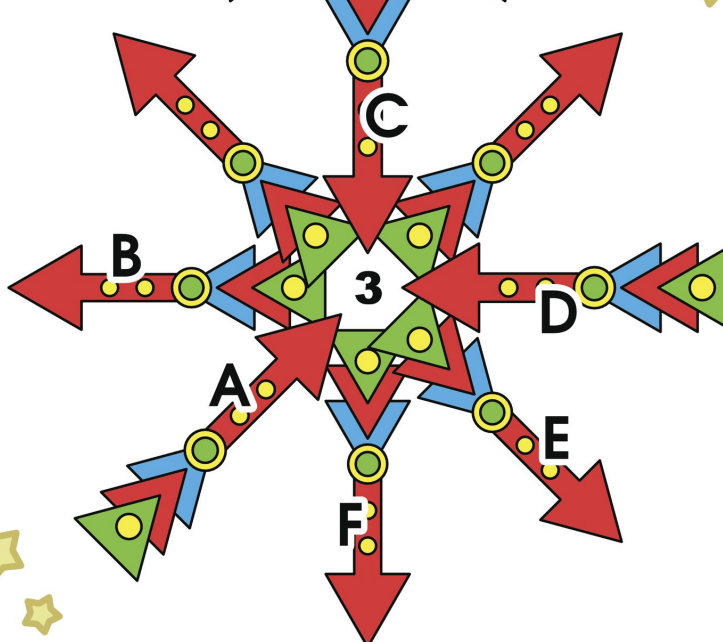
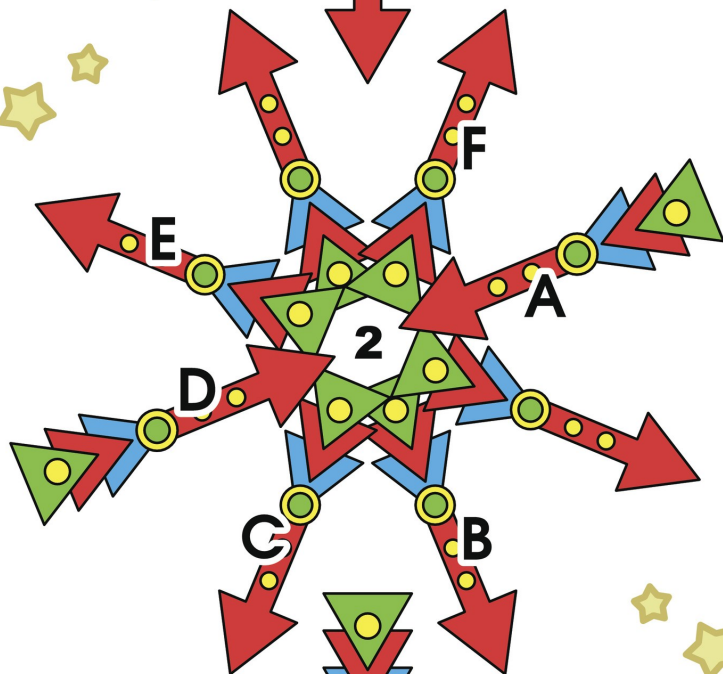
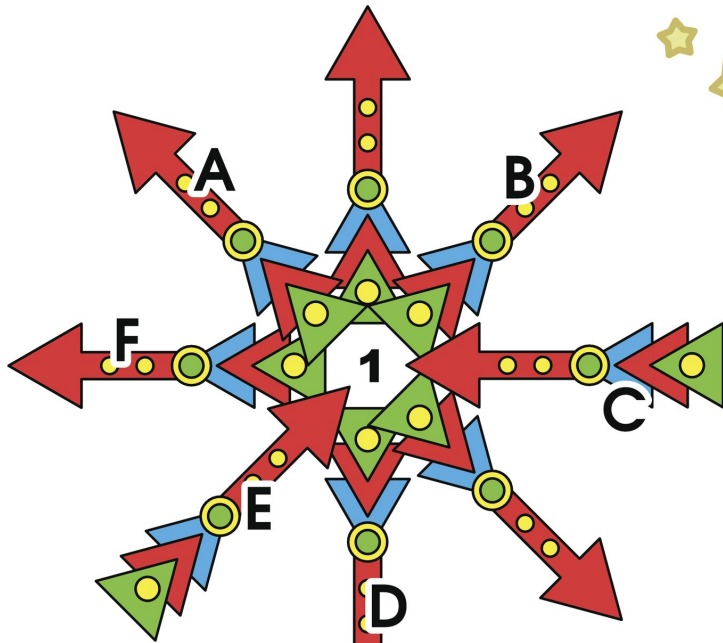
Then you could attempt the maze and think about which direction you are heading in each time you take a turn.



**FUN FACT:** The 'Great Wall' in China took more than 2000 years to build.



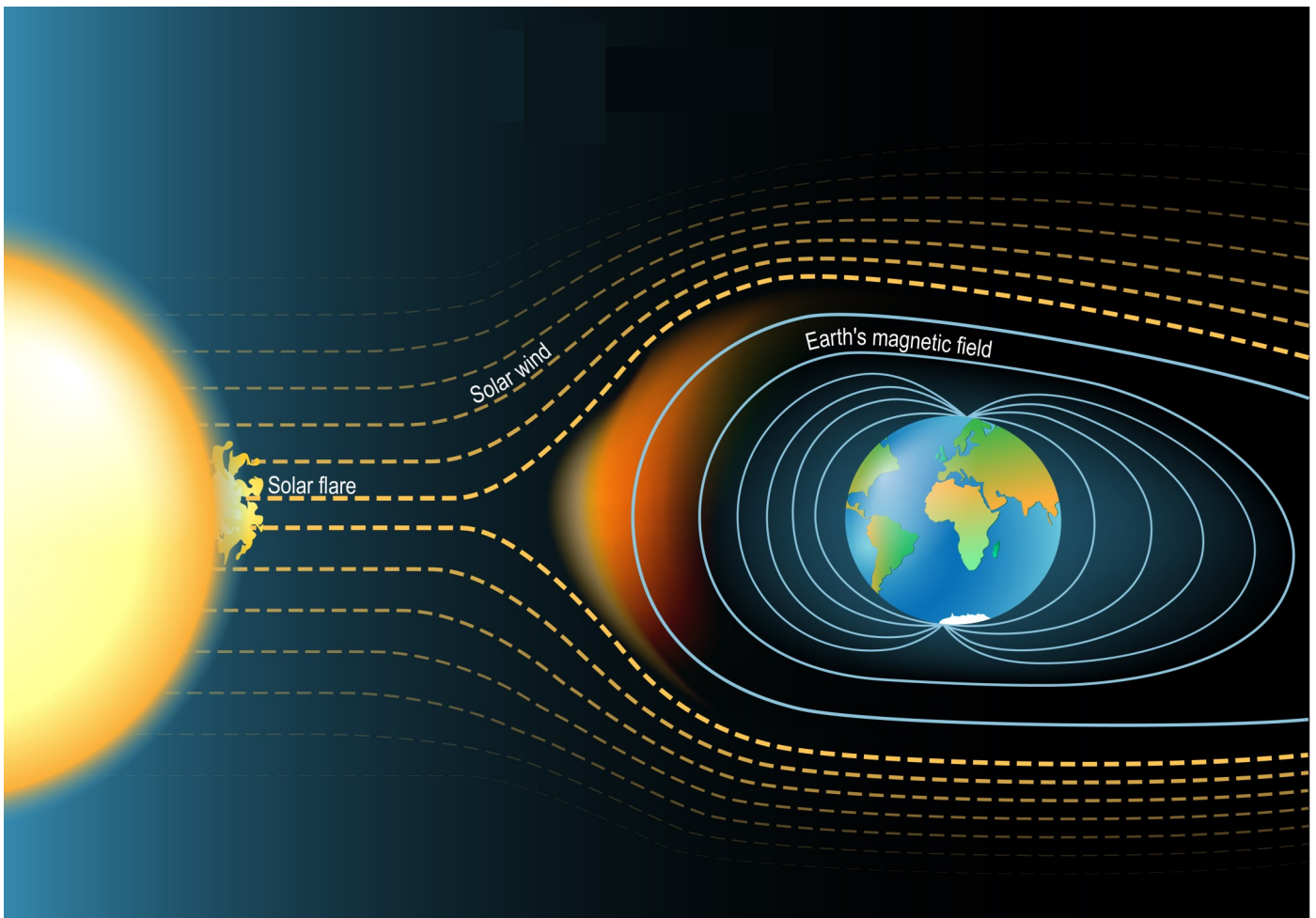
In which direction does the arrows B, C, D, E and F point when the arrow A points to the north?



**ANSWER:**

1: B - E, C - NW,  
D - SW, E - E,  
F - NW;  
2: B - W, C - NW,  
D - S, E - NE,  
F - SE;  
3: B - SW, C - SE,  
D - SW, E - E,  
F - SE;  
where N=north,  
NE=north-east,  
E=east,  
SE=south-east,  
S=south,  
SW=south-west,  
W=west,  
NW=north-west.

# The forces at work



Did you know there is effectively a giant magnet within the Earth, and just like any magnet it has a north and south pole?

The inner core is a solid metal ball, and the outer core is a liquid form of the metals.

The two cores spin and create magnetism.

Magnetism is caused by the motion of electric charges.

Every substance is made up of atoms.

Each atom contains electrons, which spin around the core of an atom and their movement creates electric charges.

In most substances equal numbers of electrons spin in opposite directions, which reduces their magnetism.

But in substances such as iron, nickel and cobalt, most of the electrons spin in the same direction.

This makes the atoms in these substances strongly magnetic.

Scientists call these metallic elements 'ferromagnetic'. You

can make objects containing these substances, a sewing needle for example, into temporary magnets.

To do this the magnetic object must enter the magnetic field of an existing magnet.

When you rub a magnet along a needle it becomes magnetised.

We know that all magnets have a north and south pole.

The magnetic force from a magnet flows from the north pole to the south pole, and it creates a magnetic field around a magnet.

Have you ever tried to push two magnets together?

**CONTINUED PAGE 13**



**FUN FACT:** Earth is protected by a geomagnetic field - the magnetosphere.

EARN ONE  
HOUR IN  
YOUR  
PASSPORT



# Compass making

## FROM PAGE 12

If you try to push them together at the north poles they repel.

The same thing happens if you attempt to push two south poles together.

But the north and the south poles are attracted to each other.

When you rub a sewing needle (which is generally made of iron and carbon, and plated in nickel) in one direction 20-30 times on a magnet, the atoms in the needle line up in one direction.

The force generated by this process creates a magnetic field.

A needle that has been made into a

temporary magnet can be used as a simple compass.

You can do an experiment to test this.

*All you need is a bowl of water, a sewing needle, a magnet, and something to float your magnetised needle on - a leaf will generally do the job, or you could cut out a round piece of wax paper or polystyrene.*

*We suggest you ask for help from an adult family member.*

*If you don't own a magnet, you can magnetise your needle by rubbing the blunt end against your hair 50 to 100 times.*

*Once magnetised, place your*

*needle in the water on top of your flotation device.*

*Floating the needle allows it to align with the Earth's magnetic field, which will pull at the opposite poles of the needle.*

*If your experiment works, one end of the needle will be pointing north, and the other south.*

The southern pole of your needle will be attracted to the Earth's magnetic North Pole, and vice versa.

But how do you know which end is north and which is south?

Perhaps you can give that some thought, and see what solutions you can come up with.

**FUN FACT:** Some animals use the Earth's magnetic field to navigate.

UNIVERSITY of  
**TASMANIA**   
— Peter Underwood Centre

 Tasmanian  
Government



# Raise the school flag

DO flags interest you?

We think they are very interesting, and so do a lot of other people, because there are flag societies all around the world.

These are groups of people who come together to share knowledge and find out more about flags.

The history of what we recognise as flags today, a piece of cloth with a distinctive design and colours, dates back thousands of years.

You might therefore think that the study of flags, which is known as vexillology, would have existed for a long time also.

But the term vexillology was coined by American Dr Whitney Smith in the late 1950s.

Dr Smith founded the Flag Research Centre in Boston, USA, in 1962, and many other flag associations have been established since then.

Vexillology comes from the Latin word *vexillum*, which was a square flag carried by Roman soldiers.

A person who studies flags is called a vexillologist, and a person who designs flags is a vexillographer.

One popular use of flags is to represent countries. The flag of

Design a flag for your school. Think about what colours and symbols best represent your school.

Vexillologists suggest:

- Keeping your design simple.
- Using symbols that mean something.
- Using two or three basic colours.
- Avoid using lettering.
- Avoid copying other flags.



Denmark is the oldest national flag still used, and the cross design was adopted by several other Nordic countries - Norway, Finland, Sweden and Iceland.

The flag of the Netherlands is the oldest tricolour flag (red, white and blue in this case), but it inspired several other nations' flags, including France, Russia, Italy and Mexico.

The National Flag of Australia features the Union Flag (Union Jack) of the United Kingdom in the top left corner.

Australia's flag also has a large white seven-pointed star (the Commonwealth star) and five smaller stars that represent the Southern Cross constellation. Its original design was chosen in 1901 from entries in a

competition, but it is not the only flag people associate with this country.

The Australian Aboriginal flag, designed by artist Harold Thomas in 1970 to represent the Aboriginal people of Australia and their spiritual connection to the land, is also recognised as an official 'Flag of Australia'.

The top half of this flag is black to symbolise Aboriginal people.

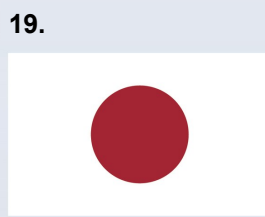
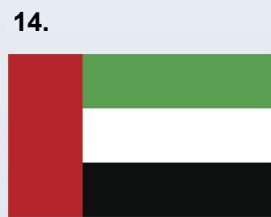
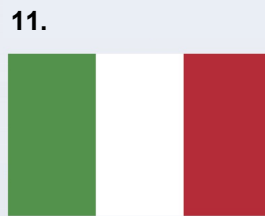
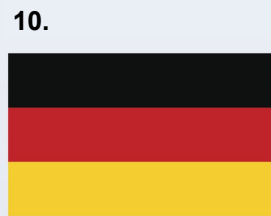
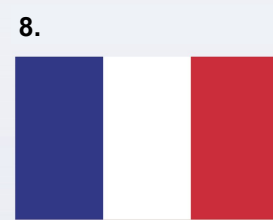
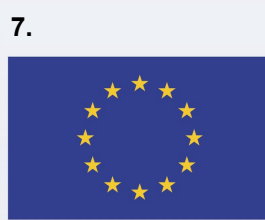
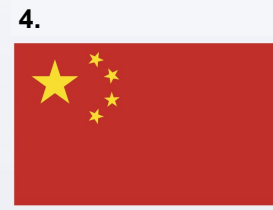
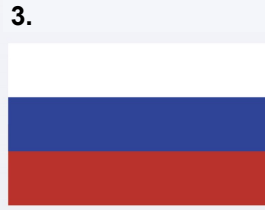
The red in the lower half stands for the earth and the colour of ochre, which has ceremonial significance.

The circle of yellow in the centre of the flag represents the Sun.

**FUN FACT:** The Olympic flag has five rings to represent five continents.

# Match the flags

... below to their countries



**ANSWERS:** 1. United Kingdom; 2. USA; 3. Russia; 4. China; 5. Australia; 6. Canada; 7. European Union; 8. France; 9. Spain; 10. Germany; 11. Italy; 12. Brazil; 13. Argentina; 14. United Arab Emirates; 15. Greece; 16. Israel; 17. India; 18. South Korea; 19. Japan; 20. Switzerland.

Guess the country?



u s

Guess the country?



e

Guess the country?



N i



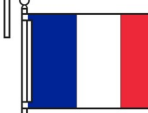
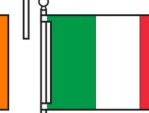
**FUN FACT:** There are three national flags that differ on their reverse side.

## Learn Country Flags. Addition Worksheet

8+6	16+5	9+9	8+8	9+6	7+13
8+9				9+7	
7+6					
6+5	7+5	5+12	7+16	9+12	9+4
14+7				6+12	
7+8					
5+9	10+10	5+14	13+9	15+5	10+9
11+8				14+9	
11+9					

13, 14, 16, 23 - red. 15, 17, 19 - white. 11, 12 - blue.  
21 - black. 22 - orange. 18 - yellow. 20 - green.

## Learn Country Flags. Addition Worksheet

		
Austria	Belgium	Bulgaria
		
Estonia	France	Germany
		
Hungary	Ireland	Italy




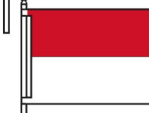


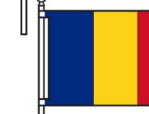
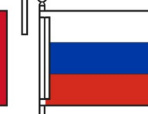

13, 14, 16, 23 - red. 15, 17, 19 - white. 11, 12 - blue.  
21 - black. 22 - orange. 18 - yellow. 20 - green.

## Learn Country Flags. Subtraction Worksheet

23-19	21-4	26-16
19-11	24-5	17-9
29-25	18-9	21-5
21-11	20-16	15-8
26-19	30-24	28-17
	28-13	
29	24-18	29-15
14	30	22-8
	13	30-19
	27	25-8
	18	

9, 10, 11 - red. 6, 7, 8 - white. 4 - dark red. 19 - green.  
17 - yellow. 14 - blue. 16 - light blue. 15 - dark blue.

## Learn Country Flags. Subtraction Worksheet

		
Latvia	Lithuania	Luxembourg
		
Monaco	Netherlands	Poland
		
Romania	Russia	Ukraine

9, 10, 11 - red. 6, 7, 8 - white. 4 - dark red. 19 - green.  
17 - yellow. 14 - blue. 16 - light blue. 15 - dark blue.

This publication has been produced with the support of funding from  
Communities for Children South-East Tasmania.

The Peter Underwood Centre would like to thank Communities for Children for  
their support of the Children's University Tasmania program, and our member  
schools and students.



Funded by the Australian Government  
Department of Social Services