

## Science –Soil Investigation

This week, as part of our rocks and fossils Science theme, we are going to investigate a soil's permeability. We grow much of our food in the soil, including fruit, vegetables, wheat and rice. The permeability of soils can affect which plants will grow and how well they can grow in a particular soil.



When describing the permeability of a material, we can say the soil is:

- **Permeable** – this means that liquids, such as water, can flow through it
- **Semi-Permeable** – some of the liquid manages to flow through
- **Impermeable** – liquids cannot flow through it.

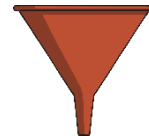
### What you will need:



Measuring jug



Water

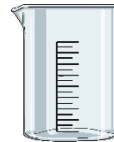


Funnel



Paper towel or coffee filter paper

Elastic band if you don't have a funnel



Plastic cup / beaker / plastic bottle or something to collect the water from the soil

**Old material will work too.**



3 different types of soil samples (about 5-6 tablespoons)

### The different soil types you could have are:

Garden soil – soil from your garden

Sandy soil – mix soil from the garden with some sand.

Rocky soil – mix soil from the garden with small pebbles or rocks

Multi-purpose compost peat free – if you have some

Multi-purpose compost with peat – if you have some

### Tasks:

Here is your list of tasks for this experiment. You will find the prediction and results chart on the following page. You can write out the prediction and draw the results table in your home learning books or you can print out the following page.

1. Choose/make your three different soil samples. You will need to have about 6 table spoons worth of soil for each sample.
2. Complete the prediction about the permeability of your chosen soils **before** you complete the experiment.
3. Carry out the experiment and record your results on the learning sheet on the next page. The instructions for the experiment are on the page after the learning sheet.
4. Talk about what you have found out.



# Investigating Soil Permeability



## My Soil Types:

Write your soil types in the boxes below.

<u>Soil 1</u>	<u>Soil 2</u>	<u>Soil 3</u>

## My Prediction

**Question:** What is the permeability of different types of soils?

I predict that the \_\_\_\_\_ soil will be the most permeable and the \_\_\_\_\_ will be least permeable. I think this because

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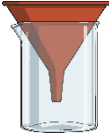


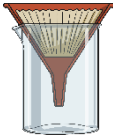


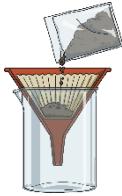


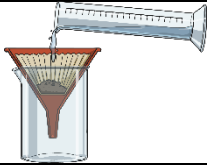
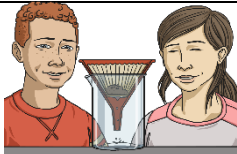
## My Results

Complete the experiment and record your results in the table below.

<b>Type of Soil</b>	<b>First observation</b> (describe what happened straight after you added the water)	<b>Further observations</b> (Describe what happened after 5 minutes)	<b>How much water went through?</b> (measure how much water has collected in the cup in ml)	<b>Is it permeable?</b> (Give a rank of 1-5 with <b>1</b> being the most permeable and <b>5</b> being impermeable)
Soil 1				
Soil 2				
Soil 3				

**Conclusion:** What have you found out? Was your prediction correct? Why do you think your chosen soil was the most permeable? Why do you think your chosen soil was the least permeable? Use your learning from last week to help you – especially about how soils are made. Write what you think in your home learning book.

## How to test the permeability of the soil

<u>Step</u>	<u>Instruction</u>	<u>Picture</u>		
1	Place the funnel in the beaker Or Get a plastic cup or container. Or Cut a plastic bottle in half.			
2	<b>Create the Filter System</b> Insert a coffee filter into the funnel Or Use strong kitchen towel / coffee filter / material and use an elastic band to attach it to the top of the plastic cup to stop it from sinking into the cup. You'll need to make sure the kitchen towel or material is a little inside the cup. Or Put the top of the bottle upside down into the bottom part of the bottle and insert coffee filter paper / paper towel / old material. Make sure the cap is off.			
3	Add the soil sample into your filter system. About 5-6 tablespoons. <b>Remember:</b> you must measure the same amount of soil for every test. 5 tablespoons of sandy soil, 5 tablespoons of multipurpose compost etc to make the experiment a fair test.			
4	Measure 300ml of water and pour it into the soil. Or Pour a cupful of water into the soil.			
5	Observe how quickly the water filters through the soil.			
6	After 5 minutes, observe what has happened and measure the water that has come out of the soil using a measuring jug. Record this amount on your results table in ml. Give the soil a rank 1-5 with 1 being the most permeable and 5 being impermeable			
7	Repeat for the next samples! Use the same amount of water each time to keep it a fair test.			

# Dinosaur Games!

Here are some ideas you could look at to inspire you on what game to create!

## Dinosaur Snakes and Ladders



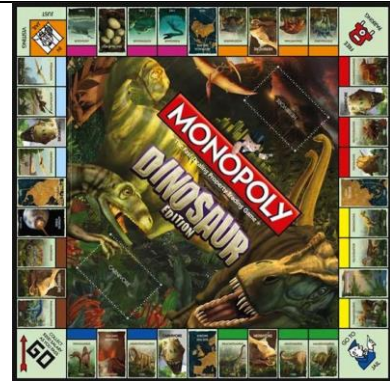
## Dinosaur Quiz Cards



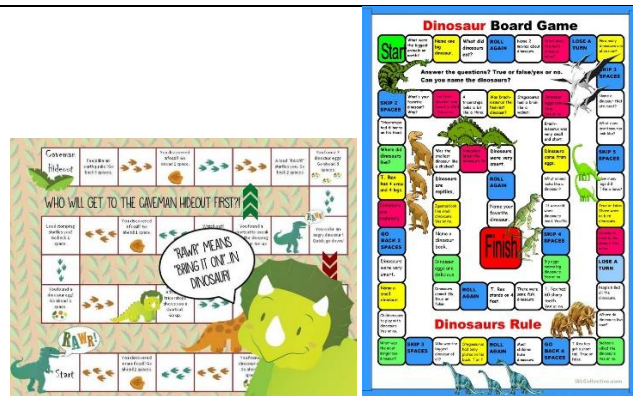
## Dinosaur maths board game



## Dinosaur Monopoly



## Dinosaur board game



## Dinosaur matching game



## Dinosaur Top Trumps Game



## Dinosaur Bingo





## Dinosaur Games!

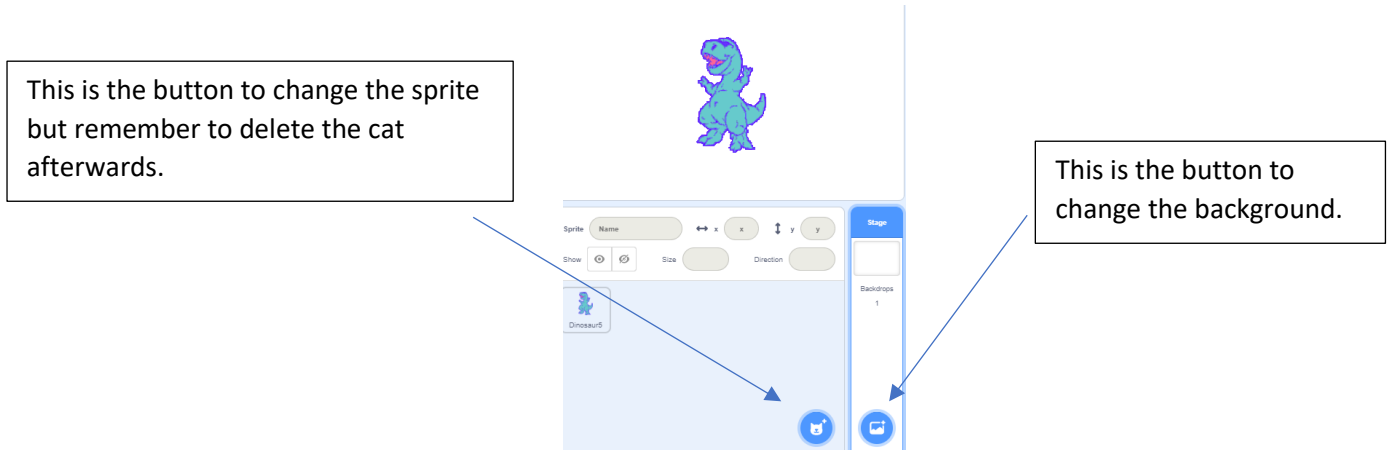
### Scratch

You will find scratch on this website: <https://scratch.mit.edu/download> .

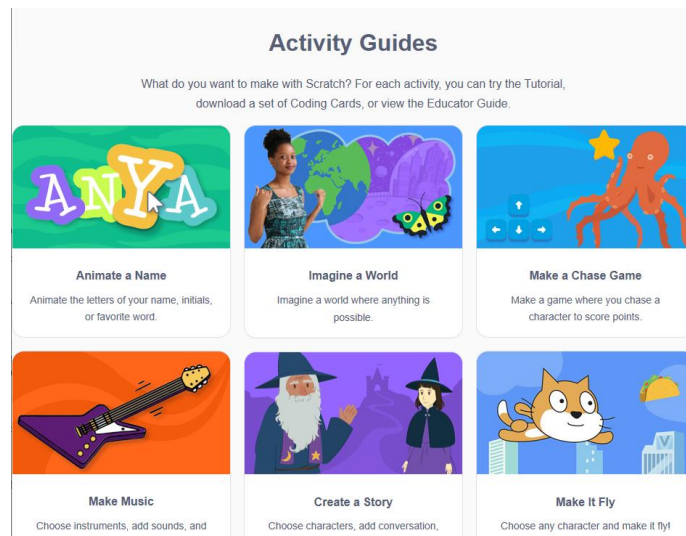
You **MUST** ask your parents for permission first to download Scratch and install it.



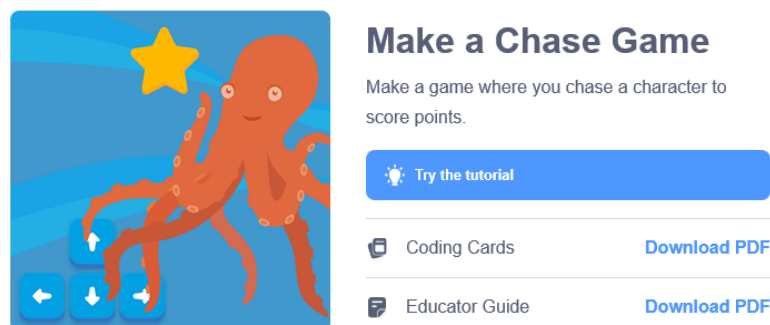
Once you have Scratch, have a go at making this chase game. You can change the background and the character too.



You will find the instructions on: <https://scratch.mit.edu/ideas> and click on “Make a Chase Game”.



Click on “Coding Cards – Download pdf” for the instructions. You **MUST** ask your parents for permission first.



You will need to follow the instructions really carefully as mistakes can easily happen.

You can always have a go then get an adult to help you code the game.

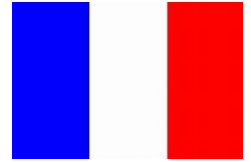
## Be Creative

Have a look at these images to show you how to make the dinosaur bone.



## French

This week, we are continuing with our French theme about animals but we will be adding colours to describe them! Remember, in French, the colour comes after the animal.



Complete the learning tasks below.

### Task 1





Revise how to say certain colours and animals in French. Here are a few games you can play. Play 'Colour labelling in French' and 'Animal labelling in French'.

<http://www.crickweb.co.uk/ks2french.html>

Have a look at the colour games on <https://www.lightbulblanguages.co.uk/estrellas-french-index.htm#col>  
Play and listen to some stories and games on <http://www.nicurriculum.org.uk/pl/>. Click French and bugs, birds & beasts

### Task 2

Match the animal and colour to the phrase. You can write the answers in your Home Learning book.

1	
2	
3	
4	

A	Un chat noir
B	Une souris blanche
C	Un poisson rouge
D	Une libellule bleue

### Task 3

Draw a picture in your Home Learning book to match the French phrase.






1	un lapin gris
2	un ours brun
3	un chien noir
4	un canard jaune

5	une vache noire et blanche
6	un tigre orange et noir
7	un perroquet rouge et vert
8	un serpent violet et bleu

### Task 4

Write the animal name and the colour that matches the pictures below.

Use the word walls on the next page to help you to decide how to spell the French colour. If the animal starts with le, you need to write the colour without an e (sometimes). If the animal starts with la, you need to write the colour with an e.

				
A	B	C	D	E

### Challenge:


Using the word wall to make up your own. Draw a picture of the animal and write the French and English phrase to match.



## Animals in French Word Wall

Use Google Translate to practice how to say these animal names.

le mouton 

l'âne (m) 

la souris 

la gerbille 

le cochon 

la chèvre 

le chat 

le hamster 

la vache 

le cheval 

le chien 

le perroquet 

la poule 

le canard 

le poisson rouge 

le cochon d'Inde 


le zèbre 

le perroquet 

le serpent 

le chimpanzé 



le lion 

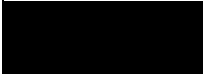

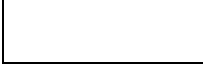


l'hippopotame (m) 

le tigre 

l'éléphant (m) 

## Colours in French Word Wall

Colour	French word if the animal starts with le	French word if the animal starts with la
	bleu	bleue
	rouge	rouge
	jaune	jaune
	vert	verte
	violet	violette
	Rose	rose

Colour	French word if the animal starts with le	French word if the animal starts with la
	noir	noire
	gris	Grise
	blanc	blanche
	marron	marron
	orange	orange



# World Chocolate Day



To celebrate World Chocolate Day, choose at least one of the activities below.

## Baking!

Bake something chocolatey.

Possible ideas could be chocolate cupcakes, brownies, or a chocolate cake! You could try making truffles too.

Remember to have an adult to help you bake this

## Where Does Chocolate Come From?

Create a PowerPoint about "Where Does Chocolate Come From?"

## Willy Wonka's New Chocolate Bar

Design a new chocolate bar that could be sold in local supermarkets.

Think about the wrapper design, what the chocolate bar will taste like and how much it will be.

## From Bean to Bar

Explore how Cadbury's or Nestlé use cocoa beans to produce into your favourite chocolate bar.

## Chocolate Sculptures

Chocolatiers like to make sculptures out of chocolate and only chocolate.

Design, draw and label a chocolate sculpture, which the chocolatiers could make.

## Word search

Create a chocolate themed word search using the names of 10-15 chocolate bars of your choice.

Give it to a family member to solve.

You can use the square paper in your books to do this.