



**SUPERSTAR**



# **Eurotunnel Le Shuttle:** journeys challenge pack

Suitable for **7 to 11-year-olds**



# Start using CREST SuperStar

The activities in this pack have been selected from our library of CREST SuperStar challenges. Children need to complete eight challenges to achieve a CREST SuperStar Award. If you want, you can mix and match challenges from different packs, as long as children complete eight SuperStar challenges.



## Preparation

1. Start by signing up for a CREST account: [crestawards.org/sign-in](https://crestawards.org/sign-in)
2. Select SuperStar Award and download a SuperStar Passport. Use the Organiser Cards in this pack to prepare for each challenge

## Run the challenges in this pack

1. Each challenge will take 45 minutes to an hour and involves hands-on investigation, decision making and group discussion. Children can use the Passport to keep track of the challenges they have completed.
2. Once you've completed all eight activities, log back into your CREST account at: [crestawards.org/sign-in](https://crestawards.org/sign-in)
3. Tell us about the children and the challenges they completed.
4. Finally, complete the delivery and payment details to order your certificates and badges.
5. Congratulations on completing CREST SuperStar!
6. If you want to use your own activities, that's fine! Find out more about what a SuperStar activity should look like here: [bsa.sc/crest-guiding-principles](https://bsa.sc/crest-guiding-principles)

## What next?

Why not challenge children further and try a full day project next? A CREST Discovery Day is a one day facilitated project, ideal for ages 10+. You can find out more and download all the resources you need here: [discoverylibrary.crestawards.org](https://discoverylibrary.crestawards.org)

Encourage others to take part in CREST projects. To get more ideas on how to get started visit: [crestawards.org](https://crestawards.org)

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**The Channel Tunnel**, which links Folkestone in Kent with Coquelles, Pas-de-Calais in France, celebrated its 25th anniversary in 2019.

To mark this milestone, **Eurotunnel Le Shuttle** has partnered with the **British Science Association** to bring the excitement of this fantastic feat of engineering to a new generation.

Our specially curated pack of **CREST SuperStar** resources is designed to support teachers of Key Stage 2 students to run fun, practical investigations with their class.

The enclosed activities explore a broad range of topics associated with the **Channel Tunnel** and its construction: geology, biodiversity, logistics, and, of course, travel and transportation.

We hope that you and your students enjoy learning a bit more about the Channel Tunnel as you work towards a **CREST SuperStar Award** through undertaking the challenges in this special collection.



# SUPERSTAR



# A Hole in my Bucket

## Organiser's Card



## About the activity

This activity is designed to get children thinking about materials, liquids and testing methods.

Just like the song 'There's A Hole In My Bucket', the children are asked to find a way to plug the hole in a container to stop water pouring out.

Through this activity you will support your group to:

- Carry out their own tests to compare different sticky materials
- Observe, measure and record results carefully
- Respond creatively, writing new lyrics for a well-known song.

## Kit list

- A selection of different materials for testing, eg: sticky tape, fabric, Blu-Tack, cotton wool, tissues, straws etc.
- Plastic containers with holes cut into the bottom
- Ruler
- Timers
- Washing up bowls or containers
- Measuring jugs
- Scissors
- Plastic aprons
- Paper towels



# What to do

1. Introduce the activity using the song 'There's a Hole in my Bucket', ask them if they think they can help Liza and Henry by finding out the best way to fix the hole in their bucket.
2. Give out activity cards and equipment to the children.
3. Explain that they will be using the equipment provided to test the best way to stop a leak.
4. Encourage children to discuss their ideas and how to carry out their investigations. Prompt questions:
  - What materials will they test?
  - How will they cover the leaky hole?
  - How will they make sure their test is fair?
  - How will they record their results?
5. Support children to conduct their tests and make their own records of their results. They could also take photographs or make drawings.
6. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want - the activity card suggests they could re-write the words to the song, using their findings.



## Discuss

Children may have difficulty keeping some tests fair, e.g. how to compare sticky tape with glue or Blu-Tack etc. The following prompts will help them to think about how to keep their tests fair.

Make sure they place a bowl under the bucket or cup to collect the leaking water.

If they use just one bucket for all of the tests, it must be dried thoroughly after each test. A new material might not stick properly to a wet surface and results will be inaccurate. If they succeed in stopping the leak, they will need a new bucket!

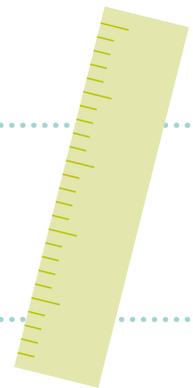
## Keywords

- Observation
- Measurement
- Volume

## Watch out!

Cut holes in buckets, cups or clean yoghurt pots before any tests begin and check that there are no rough edges around the hole.

When using water, make sure you have paper towels handy to mop up spills, especially on the floor.





# SUPERSTAR

## A Hole in my Bucket Activity Card

**Do you know the tune to this well-known song?**  
If not, see if you can find out about it.

There's a hole in my bucket, dear Liza, dear Liza  
There's a hole in my bucket, dear Liza,  
a hole.  
Then mend it dear Henry, dear Henry, dear Henry  
Then mend it dear Henry, dear Henry mend it.  
With what shall I mend it, dear Liza? . . .  
With a straw, dear Henry . . .  
The straw is too long . . .  
Then cut it . . .  
With what shall I cut it? . . .  
With a knife . . .  
The knife is too blunt . . .  
Then sharpen it . . .

With what shall I sharpen it? . . .  
With a stone . . .  
The stone is too dry . . .  
Then wet it . . .  
With what shall I wet it? . . .  
With some water . . .  
With what shall I fetch it? . . .  
With a bucket . . .  
BUT THERE'S A  
HOLE IN MY BUCKET!



### Your challenge

Liza and Henry need your help. Can you find something that will stop Henry's bucket from leaking?

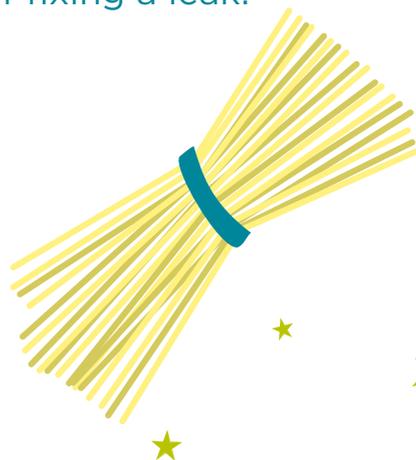
Liza suggests using straw to fix the hole. Do you think that would work well?

What about sticky materials? Would any of them be better for mending the hole in Henry's bucket?

Do some tests to find out the best method of fixing a leak!

### Discuss

- Which materials will you test?
- How many different materials will you compare?
- Does it matter how you use your material to fill the hole?
- What will you need to observe or measure in your tests?



# Getting started

We are going to use clean plastic drinking cups, with the same sized holes cut in the bottom of each, then try out our ideas.

**Some of your fellow investigators have some ideas!**

“I think we should try to fix the hole, then put water in and just watch what happens.”

“We could do some timing to find out how long it is before the water starts to leak out.”

“Let’s measure how much water leaks out in 2 minutes. We could put marks up the side of the ‘buckets’ to help us.”

**What do you think? Do you have another idea?**

## Test your ideas

You could use a table like this to record your findings:

| Material    | How much water leaked through? |
|-------------|--------------------------------|
| Blu-Tack    |                                |
| Sticky tape |                                |
| Glue        |                                |
| Chewing gum |                                |
| Straw       |                                |

## Share your ideas

Were there any problems with your tests? How could you improve them?

How easy did you think it was to keep your tests fair? Why?

Which material should Liza and Henry use to fix a hole in their bucket?

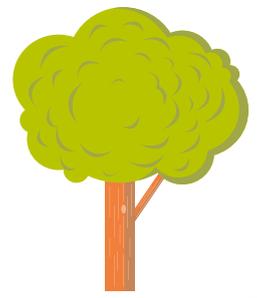
On which side of the hole should they stick it?

Why have you chosen this material?

**Why not re-write the words to the song to include what you have found out?**



# SUPERSTAR



# A Special New Tree

## Organiser's Card



## About the activity

This activity is designed to get children thinking about different types of trees and their different characteristics.

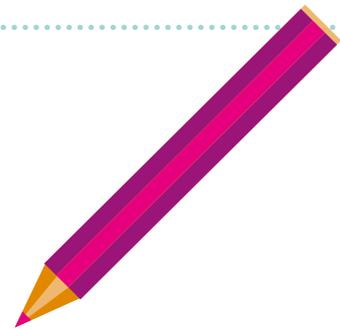
The White Cliffs Countryside Project is planting a new tree at Samphire Hoe. However, they're not sure which tree to plant and need a little help deciding. Lots of local residents have different ideas of what they would like from a tree.

Through this activity you will support your group to:

- Research different kinds of trees and their characteristics
- Do a survey to find out what tree characteristics their friends and family like
- Write a letter to The White Cliffs Countryside Project to recommend a tree based on their research.

## Kit list

- Access to the internet
- Plain paper to draw up the survey
- Tree guides to identify a range of trees and describe their characteristics
- Clipboards
- Pencils



## What to do

1. Introduce the activity using the 'letter' from the White Cliffs Countryside Project.
2. Give out activity cards and equipment to the children.
3. Explain that they will be conducting a survey to find out which characteristics different people like in trees. They will then need to do some research, using the tree guides or the website links on the activity card, to find out different characteristics of different trees, to decide which tree would be best suited.
4. Encourage children to discuss their ideas. Prompt questions:
  - What questions will they ask in their survey?
  - Who will they ask?
  - How will they record their results?
  - How will they make sure they get a range of opinions?
5. Support children to conduct their surveys and make their own records of their results. They could use the data they collect to make a table or a graph.
6. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want.

# Things to talk about

Children may not know the names of trees. You can help them by providing access to simple identification guides.

You can obtain a simple tree identification guide from [www.opalexplorenature.org/crest](http://www.opalexplorenature.org/crest)

## Take it further

Encourage the children to use a range of different ways to find out which tree might be best.

If they use the survey on the ACTIVITY CARD, encourage them to add, change or delete questions, and think about who to ask.

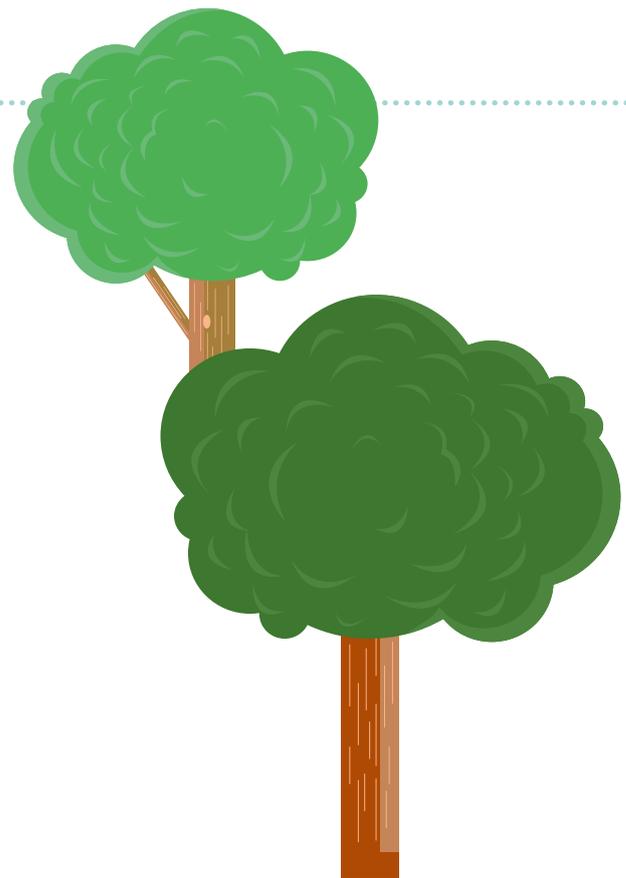
Encourage the children to make their own records, such as a table or a block graph.

## Keywords

- Survey
- Ecology
- Evergreen
- Native
- Habitat

## Watch out!

Remind children not to approach strangers to get them to complete the survey, unless they are accompanied by a responsible adult.





**SUPERSTAR**

# A Special New Tree

Activity Card

Dear Investigators,

We are going to plant another new tree for future generations to enjoy in Samphire Hoe Nature Reserve. But what tree should we plant? Can you help us to decide?

*C. Ferr*

Connie Ferr  
The White Cliffs  
Countryside Project

## Your challenge

The White Cliffs Countryside Project is planning a new tree at Samphire Hoe. Can you help them to decide which tree?

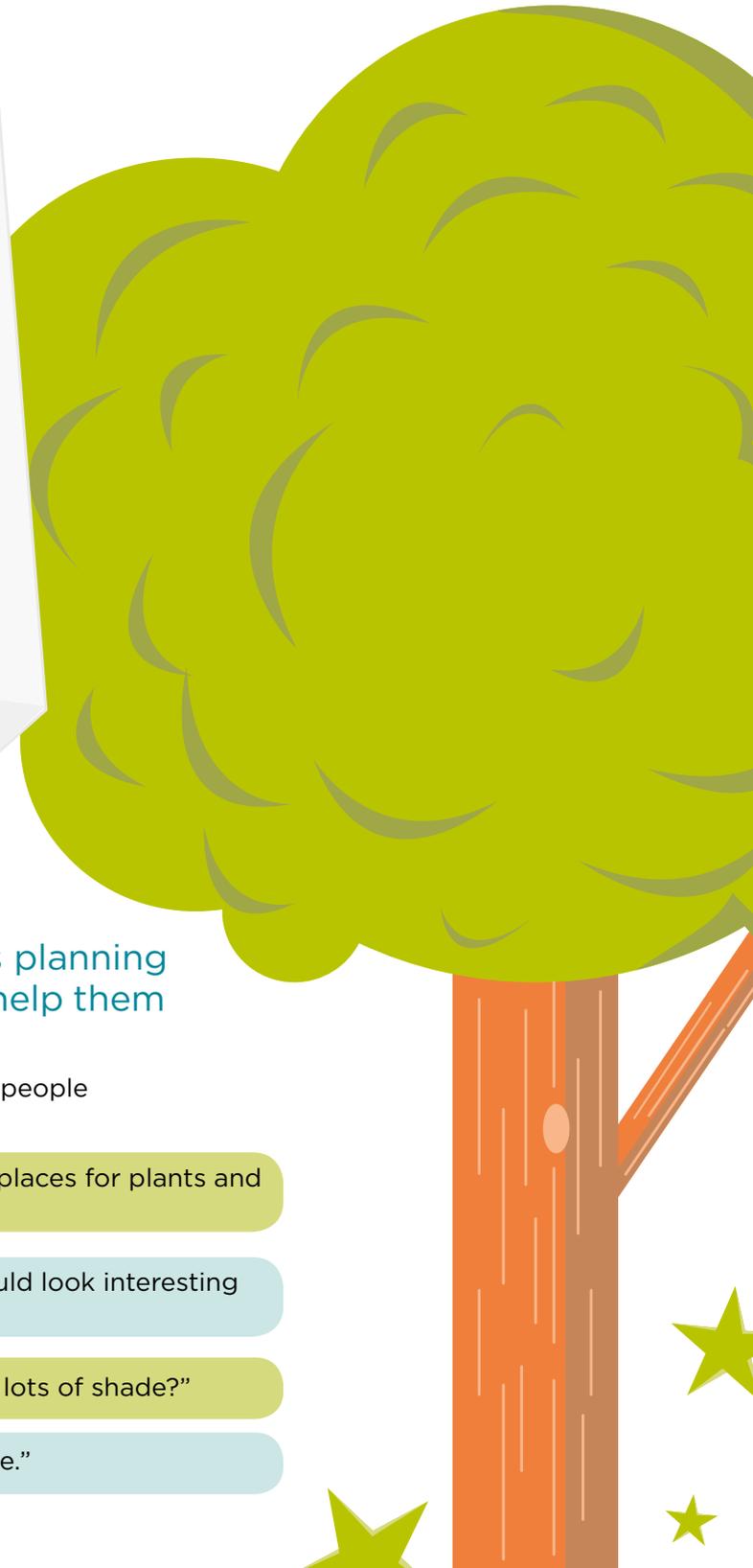
You will need to think about the different things local people want from the tree:

Local resident one: "I think it should provide good places for plants and animals to live."

Local resident two: "It would be nice if the tree could look interesting all year round."

Local resident three: "Could we have one that gives lots of shade?"

Local resident four: "I think it should be a native tree."



# Discuss

Think about trees that you like.

How will you decide which tree is the best suited to The White Cliffs Countryside Project?

## Getting started

You could do some research about different kinds of trees. There's a simple guide to trees on the internet at [www.opalexplornature.org/crest](http://www.opalexplornature.org/crest) and <http://trees.luidp.net/en/index.php>

Do you have an idea about how you can investigate which tree to plant? Maybe you could do a survey to find out what other people think about trees.

## Test your ideas

Here is a survey you could use to find out which trees your family and friends think would be good to plant in Samphire Hoe Nature Reserve. Can you think of any other questions to add to the survey?

Name: \_\_\_\_\_

1. If you could choose a new tree to plant, what would it be?

\_\_\_\_\_

2. Why would you choose that tree?

Tick one or more boxes.

It provides a home for animals and plants

It gives lots of shade

It looks interesting all year round

It's a native tree

Another reason \_\_\_\_\_

\_\_\_\_\_

## Share your ideas

Which were the most popular trees in the survey?

What did you learn about trees?

Is there a tree that fits in best with what the local residents want?



# SUPERSTAR

## Be Seen Be Safe Organiser's Card



### About the activity

This activity is designed to get children thinking about reflection and light.

Children are asked to help Cosmic and Gem find out what materials will help railway workers be seen in the dark.

Through this activity you will support your group to:

- Test different materials to see how reflective they are
- Test to see if other variables make a difference to reflectivity
- Record their results and share them with the group.

## Kit list

You might ask children in advance to bring things that they think will help them to be seen in the dark.

- A selection of different materials e.g. different coloured T-shirts or fabrics, reflector armbands, foil, shiny paper, black paper, dark/light coloured objects
- Torches
- A place that you can partially blackout

## What to do

1. Introduce the activity using the story of Cosmic and Gem. Ask the children what they think will help people to be seen in the dark. Give out activity cards and equipment to the children.
2. Explain that they will be using the equipment provided to test the best way to be seen in the dark.
3. Encourage children to discuss their ideas and how to carry out their investigations. Prompt questions:
  - What materials will they test?
  - How will they test to see if they are reflective?
  - How will they make sure their test is fair?
  - How will they record their results?
4. Support children to conduct their tests and make their own records of their results.
5. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want.

# Things to think about

Some things produce light, e.g. a lamp, the Sun. We call these light sources. Other things can reflect light, but they don't produce light of their own, e.g. a mirror, aluminium foil, a white T-shirt. We call these reflectors. Some colours reflect more light than others. White is easier to see than red; red is easier to see than black.

Reflectors will be seen if there is a source of light. Even on a 'dark' night there is usually light around, especially in towns. A good reflector may be visible on a dark night because of this. Cat's eyes and reflective strips will also reflect the lights of cars. So people will need to wear something light coloured or shiny to be safe in the dark.

## Keywords

- Reflection
- Source
- Light
- Safety

## Watch out!



Make sure that children are not wandering around in the dark with sharp objects.

Make sure that the area is cleared of obstacles and dangerous substances





# SUPERSTAR

## Be Seen Be Safe Activity Card

Cosmic and Gem have been travelling through the Channel Tunnel on the Eurotunnel with Aunt Stella.

“Did you know the bottom of the Channel Tunnel is 250 feet below sea level?” says Aunt Stella.

“Wow, it must be really dark in the tunnel!” exclaims Gem.

“What happens when the tracks break on railways? How do the train drivers make sure there is no one on the line when they are driving along?” asks Cosmic

“Railway workers have to wear special clothing to make sure they are seen. Can you figure out what the best material to use is?” replies Aunt Stella.

### Your challenge

Help Gem and Cosmic figure out the best material to help railway workers be seen in the dark.

Cosmic thinks they need to wear something shiny

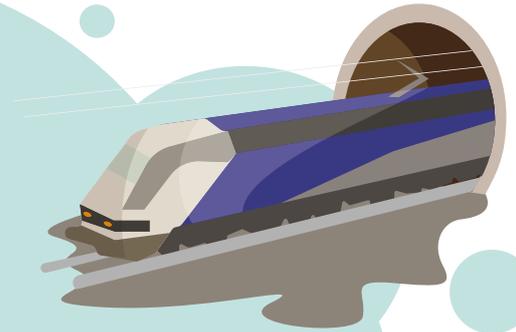
Gem doesn't think what they wear makes a difference

Aunt Stella thinks they need to wear something white

**What do you think?**

### Discuss

- Have you noticed what you can see in the dark?
- How will you find out if different materials can be seen in the dark?
- What will you do to make sure it is a fair test?



# Getting started

You need to compare how well each material can be seen. Make a dark space by drawing curtains, working in a corridor or other dimly lit area, to help you see the difference between good and bad light reflectors.

Which materials can you see the best?

What difference does having more light make? What can you see in complete darkness?

Do some colours work better than others?

## Test your ideas

Make a table to record your results.

| Material       | How well does it reflect? |                       |                |
|----------------|---------------------------|-----------------------|----------------|
|                | Complete darkness         | A little bit of light | A lot of light |
| Shiny material |                           |                       |                |
| White material |                           |                       |                |
| Dark material  |                           |                       |                |

## Share your ideas

How did your investigation go?

Was there anything you could have improved about your test?

Why not design something for Cosmic and Gem to wear?

## Extra things to do

Find out if you can see reflectors in total darkness.

Design a warning poster to help children to be safe at night.





# SUPERSTAR

# Cheesy Challenge

## Organiser's Card



## About the activity

This activity is designed to get children thinking about how milk is changed into cheese. Cosmic and Gem are confused about how milk turns into cheese. Can the children make their own cheese?

Through this activity you will support your group to:

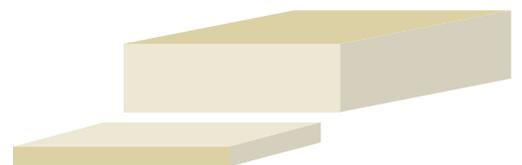
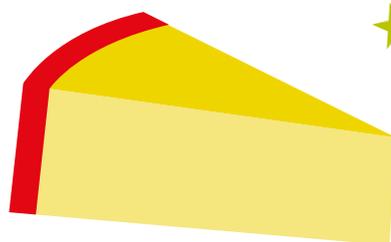
- Think about what they already know about cheese
- Make their own cheese
- Research other milk products

## Kit list

- A cup of semi skimmed or skimmed milk each
- Lemon juice (or vinegar)
- A spoon, a bowl (for heating in the microwave) or a small pan (for heating on the cooker)
- A sieve, a bowl and a piece of very clean, thin cloth to strain the milk
- Salt
- Other flavourings (optional)

## What to do

1. Introduce the activity using the story.
2. Give out activity cards and equipment to the children.
3. Explain that they will be making their own cheese today.
4. Encourage children to discuss their ideas and how cheese is made.
5. Support children to follow the cheese recipe on the activity card and make their own records of their results.
6. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want.



# Things to think about

Skimmed milk works well for this activity. The fat, which is used to make other milk products such as cream, is not needed to make cheese.

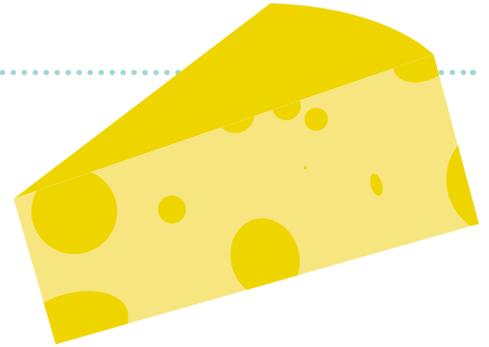
If you leave the cheese for a while to let more of the liquid drain out you will get a slightly firmer cheese.

The liquid (whey), which is left over after making the cheese, can be used in recipes to make food such as bread, soup and cakes.

Lots of children may be dairy or lactose intolerant. As with previous activities, you could encourage them to find out what happens if they use alternative.

## Keywords

- Milk
- Curdling
- Cheese
- State
- Reversible changes
- Irreversible changes



## Watch out!

The milk needs to be heated. This must be done with adult supervision. Cover tables with clean paper cloths. The cheese can be eaten if everything has been kept clean. Do not eat the cheese unless it is fresh.





# SUPERSTAR

## Cheesy Challenge

### Activity Card

Cosmic and Gem are having a picnic. They are tucking into glasses of cool milk and tasty cheese sandwiches. Aunt Stella brought back lots of tasty cheese from France. She was able to carry lots of it because she crossed the Channel in her car with Eurotunnel.

“Isn’t it amazing that they can turn a white runny liquid into cheese?” Cosmic wonders out loud.

Gem stops chewing and looks at the cheese and then at the milk. She has a puzzled look on her face.

“How do they do that?” Gem asks.

“It’s fascinating! We need to do some investigating. I think a little bit of chemistry might help.”



### Your challenge

Can you help Cosmic and Gem find out how milk is turned into cheese?

### Discuss

Take a look at some cheese and milk. Talk about what you already know about it.



# Getting started

## Cheese Recipe

### Ingredients

A cup of semi skimmed or skimmed milk

Lemon juice

A spoon, a bowl (for heating in the microwave) or a small pan (for heating on the cooker)

A sieve, a bowl and a piece of very clean, thin cloth to strain the milk

Salt and other flavourings (optional)

Clean hands, equipment and table

### Method

1. Pour 1 cup of milk into a bowl or small pan. Heat it in the microwave or on the cooker until the milk just begins to boil. If it is on the cooker, keep stirring to stop it burning.
2. Remove from the heat. Add lemon juice a few drops at a time and keep stirring gently.
3. Keeping adding lemon juice until the milk starts to go very lumpy (curdle). Let it cool.
4. Put a sieve on top of a bowl and put a cloth in the sieve.
5. Pour the milk into the sieve and let all the liquid (the whey) run through into the bowl. The lumps (called curds) will stay in the cloth.
6. Lift up the cloth and gently squeeze out more of the liquid.

**You have now made some cheese!**

Add a little salt and any other flavours that you like.

## Test your ideas

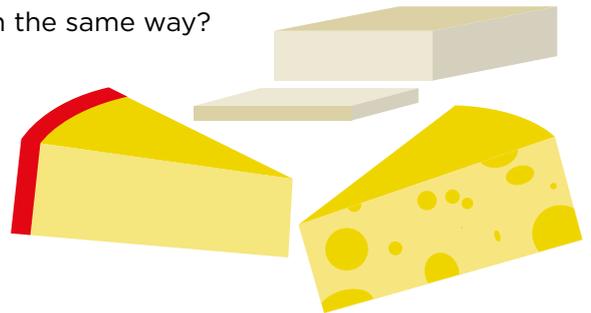
Is cheese only made from cow's milk?

What different types of cheese are there? Are they all made in the same way?

Do people eat cheese everywhere around the world?

When was cheese first made?

Can the whey be used for anything?



## Share your ideas

What kind of cheese have you made?

Does it look like any of the cheese that you buy in the shops?

What does it taste like?

Make a poster showing how a little chemistry helps to turn milk into cheese. Put it on display.

## Extra things to do

Here are some other milk products. Can you find out how they are made and what they are used for? Not all milk comes from animals. Can you spot which ones do not and find out more about them?

**Yoghurt**

**Lassi**

**Cream**

**Butter**

**Condensed milk**

**Kaymak**

**Sour cream**

**Ghee**

**Smetana**

**Clotted cream**

**Creme fraiche**

**Buttermilk**



# SUPERSTAR

## Fossil Folly

### Organiser's Card



### About the activity

This activity is designed to get children thinking about dinosaurs.

Dina Digg isn't sure how to put together a dinosaur in the right way. Can the children help to work out the best orientation?

Through this activity you will support your group to:

- Investigate the strength and stability of dinosaur shapes
- Think about why dinosaurs come in different shapes and sizes
- Record and present their findings

### Kit list

- Soft modelling clay
- Art straws
- Pipe cleaners
- Cocktail or kebab sticks

### What to do

1. Introduce the activity using the story of Dina Digg. Ask the children what they know about dinosaurs, what do different dinosaurs look like?
2. Give out activity cards and equipment to the children.
3. Explain that they will be designing and making models of different dinosaur shapes.
4. Support children to design and build their models. Encourage the children to think about size, shape and weight.
5. Support the children to design and carry out tests on their models and to make their own records of their results.
6. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want.



# Things to think about

Children will explore the effect of changing the shape and size of body parts i.e. head, neck, legs, body, tail. They may just want to build dinosaurs that they know about.

It is important that they are open-minded and try out different possible combinations of body shapes for strength and stability. This activity is not about classification, although it should help children to make connections between body shape, size, and lifestyles of dinosaurs.



## Keywords

- Dinosaurs
- Bones
- Shapes

## Watch out!

Remove the pointed ends of wooden sticks.





# SUPERSTAR

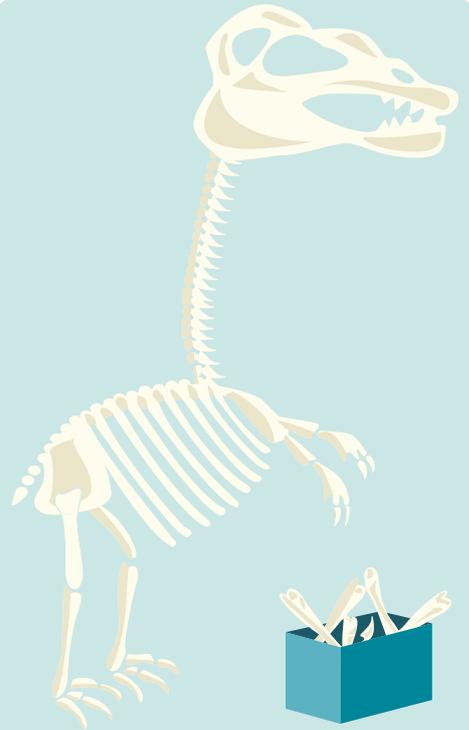
## Fossil Folly

### Activity Card

A box of bones has been delivered to Dina Digg at the Dinosaur Museum and she has tried to put them together, but she's not sure she's got it right.

The bones were discovered during the excavation of chalk marl and shale during the building of the Channel Tunnel.

No one has ever seen a living, moving dinosaur, but lots of dinosaurs' bones have been found. Putting them together is not always an easy job. There have been plenty of dinosaur debates about the right way to assemble a skeleton.



### Your challenge

Can you help Dina Digg to figure out how to put the dinosaur bones together? Is it a new dinosaur, unlike any ever found before? Has she got it wrong?

### Discuss

**Do you have a favourite dinosaur? What did they look like?**  
**A few other investigators have had some ideas:**

I like the ostrich dinosaurs like Gallimimus. Their long legs helped them to run very fast.

My favourite is the 26m long, plant-eating Diplodocus. It was built like a suspension bridge - with a very long neck and tail.

Stegosaurus rules! It was a medium sized dinosaur with a solid body and short legs. It had tail spikes and defensive plates on its back.

My vote goes to the agile Velociraptor. A small but deadly carnivore! It ran on two legs and had a long stiff tail that acted as a counterbalance.

Iguanodon's the one for me. It had a small head but a bulky body and a stiff tail. This meant it could stand on its back legs as well as walking on all four feet.

# Getting started

**Make model dinosaurs to find out which combinations of body shapes are:**

- Most stable on two legs
- Most stable on four legs
- Best for reaching high leaves

Which combinations work and which ones do not?

Scientists compare fossil bones with the skeletons of living creatures to work out how to fit them together. Do the shapes that you made remind you of any living or extinct animals?



## Test your ideas

**Make a table to show which shapes work well together. Can you explain why?**

| Body shape | Stable on two legs | Stable on four legs | Good for reaching high leaves |
|------------|--------------------|---------------------|-------------------------------|
|            |                    |                     |                               |
|            |                    |                     |                               |

Now decide whether the dinosaur put together at the Dinosaur Museum is definitely a dinosaur or a dinosaur disaster!

## Share your ideas

You could design a poster for Dina Digg at the Dinosaur Museum. You could include:

- Drawings or photos of your dinosaurs and your ideas about why they were successful or not
- Pictures of different dinosaurs that match the shapes that you have made
- Explanations of why some dinosaur shapes helped them to survive.





# SUPERSTAR



# Journey Stick

## Organiser's Card



## About the activity

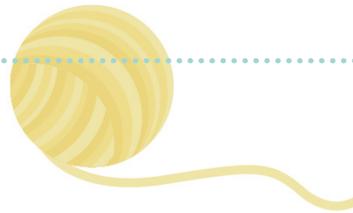


The children have been asked to follow in the footsteps of the Aboriginal Australians and create a journey stick. This has objects attached in chronological order to remind them of their journey and to help with storytelling.

When Australian Aboriginals went on long journeys they tied objects to a stick. They would start at one end of the stick and work along it as they travelled. The objects would help them to remember events and experiences on their journey and to tell others of their adventures.

In this activity, the children will collect objects to make their own journey stick.

## Kit list



- Sticks (children might choose their own)
- Something to fasten the objects to the stick e.g. string, tape, cotton thread, elastic bands
- Coloured wool or strips of fabric in a large tray or little bags for each group. They can represent places and events on the journey e.g. blue wool for water or red fabric for the sun setting as the journey ended.

## What to do

1. Read the ACTIVITY CARD to familiarise yourself with the activity.
2. Check the Kit list to ensure you have collected the necessary resources.
3. Set the scene by discussing the idea of the journey stick. It helps to think about Aboriginal people. There are many websites giving background information
4. Show the children a stick and discuss possible ways of recording things on the stick. Remember to think about recording events as well as objects.
5. Give children time to discuss what they might find and experience on their journey. They might also help to plan their route.
6. Remind children about safety and plants they must not pick.
7. Set the groups off on their challenge. If they go in different directions to increase the variety, you may need to ask additional adults to help you.
8. Remind the children to record things in order and not to have too many items.
9. Give the children about 20 minutes for their journey.
10. When the children return give them time to discuss what they are going to talk about.
11. Form a circle and share stories of their journeys using the journey sticks.

# Things to think about

Encourage the children to attach their own items to the stick and to record events and experiences as well as objects.

Some plants are poisonous or irritate skin. Others are rare and should not be collected. If you are uncertain, check with someone or avoid the area.

Children should avoid pulling whole plants out of the ground.

Animals should not be attached to the stick!

This activity will be most successful outdoors, but could be carried out indoors, if appropriate.

## Take it further

Sticks also have another significance for Aboriginal people. Sometimes they were called talk sticks. Whoever held the stick was allowed to talk while everyone listened. You could use your journey sticks in this way when the children are sharing their ideas.

## Keywords

- Journeys
- Travel
- Mementos

## Watch out!

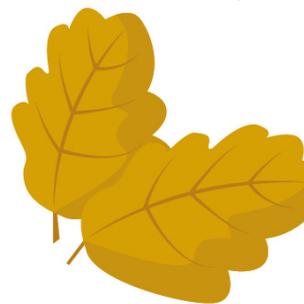
Children must wash their hands after the event. No fingers in mouths!

Avoid poisonous or prickly plants.

Avoid going too close to water.

Think about the number of adults needed if you are working outdoors.

If you go outside school grounds, make sure you follow school and local authority procedures



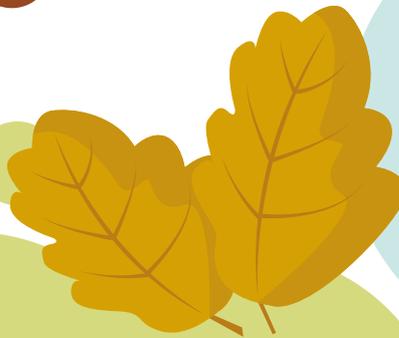


# SUPERSTAR

# Journey Stick

## Activity Card

When Australian Aboriginals went on long journeys they tied objects to a stick. They would start at one end of the stick and work along it as they travelled. The objects would help them to remember events and experiences on their journey and to tell others of their adventures. Imagine you are travelling to France from your home town, on Eurotunnel le Shuttle. What kind of items do you think you might add to your journey stick?



## Your challenge

Go on your own journey and make a journey stick with a friend. Share your journey stick with other people. Think about how this journey might vary depending on where you are.

## Discuss

Talk to your buddy.  
Where will you go?  
What might you find or experience?  
How will you attach the items to the stick?



# Getting started

Think about how others can guess where you have been. For example, if you passed an old oak tree, you might want to collect a leaf or an acorn.

If you saw a robin, you might tie some red wool on your stick. How could you show it was sunny when you started your journey?

## Test your ideas

Look very carefully as you travel.

Remember to start at one end of the stick and work across to the other end.

Can others tell where you have been?

Does the stick help you to remember your journey?

## Share your ideas

Talk about your journey to your friends.

You can display your journey sticks for others to see. Can they tell where you have been?

## Extra things to do

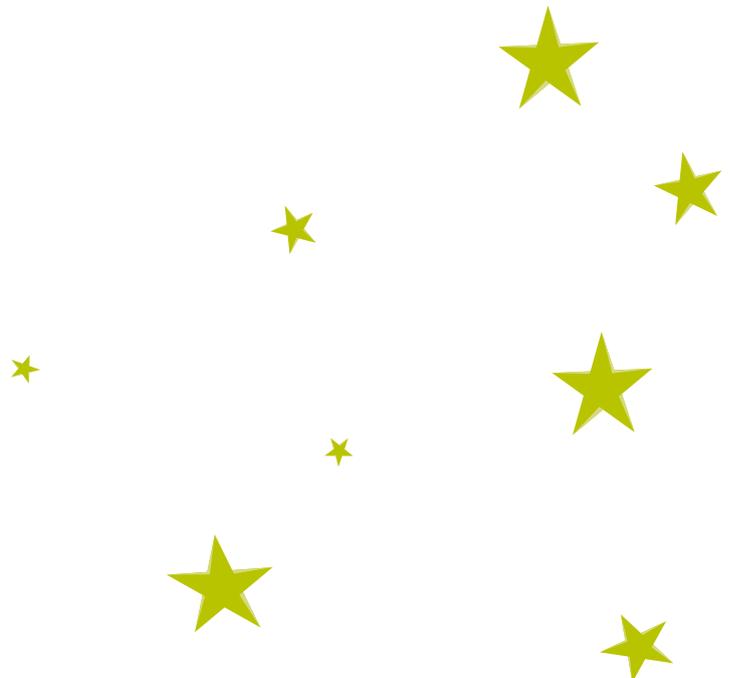
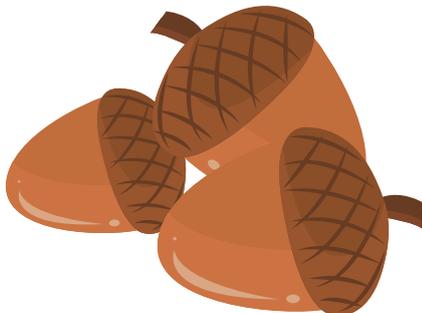
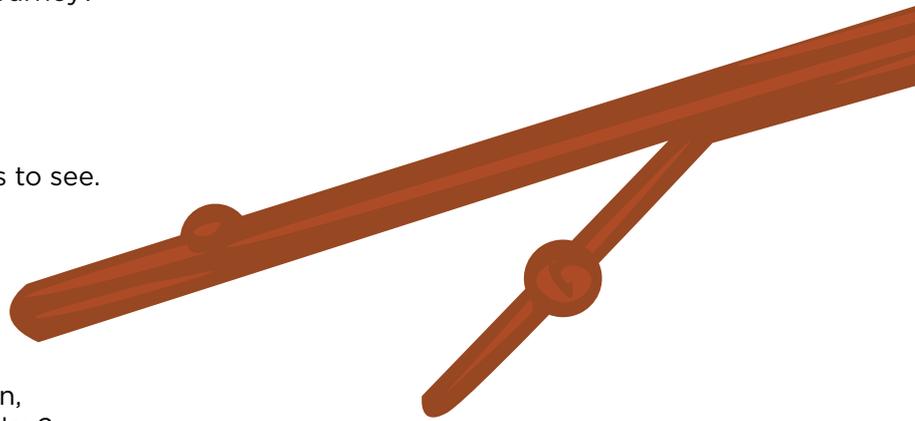
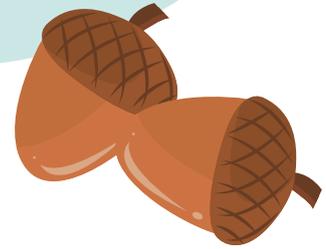
What other journeys can you make?

If you are going on any trips or holidays soon, why not try this method to record your holiday?

How are your sticks different for each journey?

Can you make a simple map of your journey?

Can you find out more about how the Aboriginal people use their journey sticks?





# SUPERSTAR

## Tunnel Tourists Organiser's Card



### About the activity

This activity is designed to encourage children to think about how to communicate information to a range of audiences.

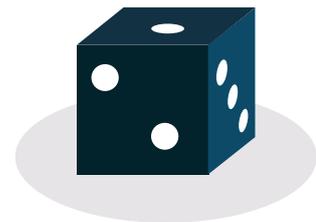
Cosmic and Gem are travelling to Normandy with Aunt Stella. They are travelling in their car with Eurotunnel (the railway shuttle which carries passengers in cars, vans and other vehicles) and decide to make a game about the Channel Tunnel.

Through this activity you will support your group to:

- Research facts about the building of the Channel Tunnel and the fascinating operations of Eurotunnel
- Design and test ideas about the best way to communicate these using a board game format
- Share their ideas about how to do this

### Kit list

- Sheet of paper or card to make the game board
- Small objects for playing pieces
- A dice
- Colouring pens or pencils to decorate your game
- Internet access to research the Channel Tunnel and Eurotunnel and/or use the fact sheets on the next page



### What to do

1. Introduce the activity using the story at the beginning of the Activity Card.
2. Give out the Activity Cards and the info sheets.
3. Explain that they will be designing a board game based around the challenges and successes of the building of the Channel Tunnel. They will need to do some research on board games and facts about the Channel Tunnel and Eurotunnel to help design their game.
4. Encourage children to discuss their ideas. Prompt questions such as:
  - What game might work to share facts?
  - What didn't you know about the Channel Tunnel and Eurotunnel?
  - Which facts are most engaging?
  - How will you test your ideas?

5. Support children to research, design and test their game, thinking of the best way to share the facts and what will engage people the most.

6. Ask the children to share their ideas, including their completed game. You could even run a board game night at your school for friends and family.

## Things to think about

You can either use the fact sheet or visit [eurotunnel.com/uk/build](http://eurotunnel.com/uk/build) to find facts about Eurotunnel.

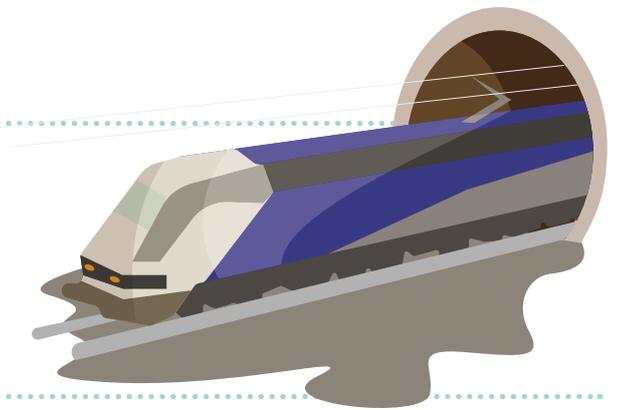
## Take it further

Children could also design counters to use on the board or a storage box designed to fit their game.

There is a suggestion to use snakes and ladders as the game to adapt, but if children have other ideas encourage them to explore these.

## Keywords

- Eurotunnel
- Channel Tunnel
- Tracks
- Tunnel
- Excavate



## Watch out!

Come up with some fair play rules for games to avoid arguments.



# SUPERSTAR

## Tunnel Tourists Activity Card

Cosmic and Gem are going on a trip to Normandy with Aunt Stella, travelling through the Channel Tunnel in their car with Eurotunnel.

**Aunt Stella** The Channel Tunnel took over five years to build, and over 13,000 people worked on the project.

**Gem** Wow, that sounds really difficult, I bet they had some challenges along the way!

**Cosmic** It would be great if we had a game to play on this journey - maybe we can make one about the Channel Tunnel?

**Gem** I have a pen and paper with me, we could use these to make our game. Aunt Stella, do you know any more facts about the Channel Tunnel and Eurotunnel?



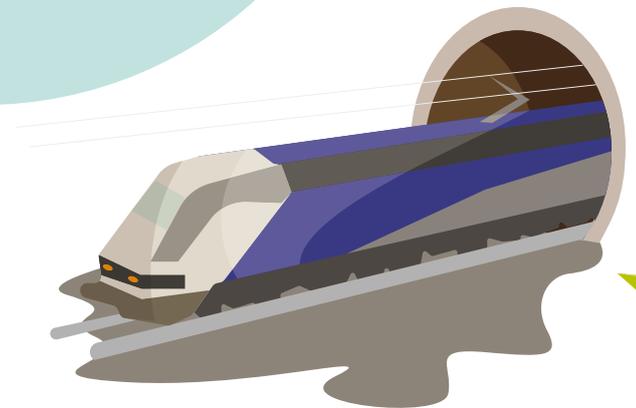
### Your challenge

Cosmic and Gem want to design a board game based on the challenges faced during the building of the Channel Tunnel. Can you help them research the Channel Tunnel and design your own board game?

### Discuss

Think about board games that you like - how could you design a new game based on these?

How will you decide which game is most suitable?



## Getting started

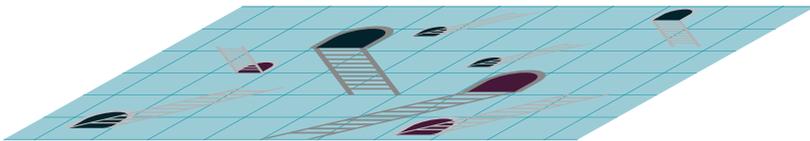
Use the sheets provided by your teacher to learn about the Channel Tunnel and how it was built. Choose some interesting facts you could use in your game and think about how you will include them.

## Test your ideas

You could create a game called 'tracks and tunnels', based on the game snakes and ladders. When you land on a square with a problem, you move down the board through a tunnel. If you land on a square with a benefit, you can move up the board along a track.

Test your game out with your friends to make sure it works. Why not host a board games night at your school for family and friends?

When testing your ideas why not find out which facts about the Channel Tunnel and Eurotunnel people find most interesting?



## Share your ideas

What did you learn about the Channel Tunnel and Eurotunnel?

Did the game you designed work?

What problems did you face?

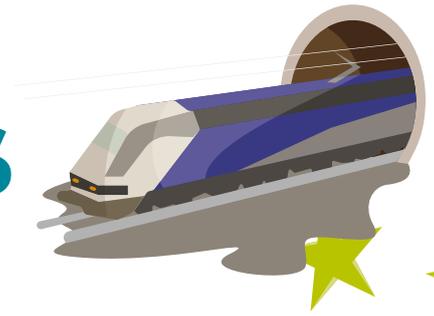
Is there a specific board game that works best as a base for the game?



**SUPERSTAR**

# Tunnel Tourists

## Fact Sheet



At 37.9km (23.5miles), the Channel Tunnel is the longest under-sea tunnel in the world.

Eurotunnel Le Shuttle has carried more than 26 million trucks since it opened in 1994.

Dinosaurs were wandering the Earth when the chalk layer that the Tunnel cuts through was deposited during the Cretaceous period, 66 million years ago.

380,000,000 tonnes of freight have been transported via the Tunnel since it opened.

Over 2 million dogs and cats have travelled with Eurotunnel since it opened, representing 80% of all pets crossing the Channel.

11 boring machines were used to make the Tunnel. In total they weighed 12,000 tonnes.

185 million passengers have travelled through the Tunnel since 1994.

4.9 million cubic metres of Chalk Marl were excavated during construction and used to create Saphire Hoe in Kent and a hill at Le Fond Pignon in France.

13,000 engineers, technicians and workers helped construct the Tunnel.

80 million vehicles have boarded the Shuttle since it opened.

26 million roses are delivered through the Tunnel each day.

1 million express delivery parcels travel through the Tunnel each day



# SUPERSTAR

## Under Your Feet Organiser's Card



### About the activity

This activity is designed to get children thinking creatively about nature.

Stella Storyteller is struggling for inspiration for her latest story book.

It's the story of two special children who wake up one morning and find themselves the size of ants. Can the children help to find a challenge for the intrepid duo?

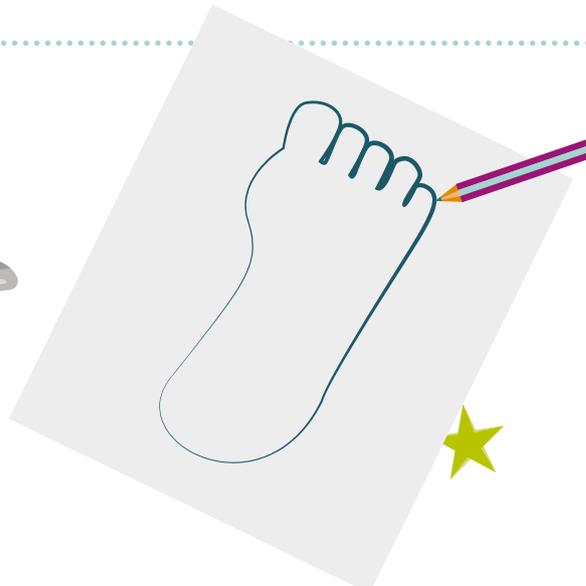
Through this activity you will support your group to:

- Think about the world around them from a different perspective
- Investigate and explore what living things they can find outdoors
- Record their thoughts and ideas and present them to share with the group



### Kit list

- Cut out 'feet' for children to record their results on - you might want to provide a template as children's feet are usually too small
- Cut out 'holes' for children to place on the ground and look through
- Hand held magnifiers
- Identification charts or books
- Drawing materials - thin coloured markers or pencils etc.
- Digital camera (optional)



# What to do

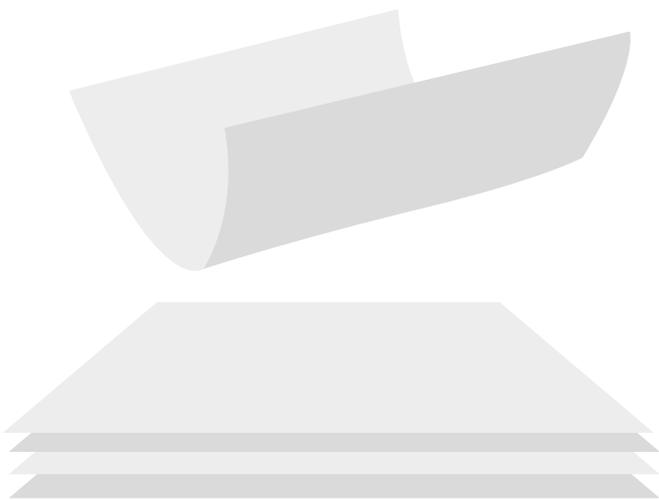
1. Read the ACTIVITY CARD to familiarise yourself with the activity.
2. Check the Kit list to ensure you have the necessary resources.
3. Set the scene by discussing the news story
4. Give children time to talk about what it might be like to be so tiny. Encourage them to think about what they might encounter.
5. Help them to create their cut out 'feet' if they are struggling.
6. Remind them of safety issues before you go outside.
7. Try to look in different places outdoors to find a range of interesting living things – remember to get children to include plants as well as animals and anything else that is interesting.
8. You might want to look at one place together to encourage children to look very closely.
9. If there is time, record a couple of places before returning indoors.
10. When they return indoors, encourage children to find out more about what they have seen and to think about the story.
11. Give children time to share their ideas. You could put all the 'feet' on display. Can people tell where each 'foot' was drawn?
12. They could write the story for Stella or draw pictures of what it might be like to be so small living in these places.
13. There are extra challenges on the ACTIVITY CARD. These can be used if there is spare time or if children want to try out more ideas at home and earn a bonus sticker.



# Things to think about

Children may need to be encouraged to look closely. You may wish to create an example of what their filled in 'feet' might look like when they are finished. You should draw everything you can see including pebbles, sticks, the texture of tree bark or soil, spiders' webs etc.

Try to encourage children to include details of the animals, plants etc. in their stories rather than just writing about battles with giants!



# Take it further

There is a wide range of things to be found under your feet, even in areas that look fairly barren. The focus of this activity is to get children to be aware of this range of living things. It also helps them to get some sense of where living things are found by studying and comparing the small environments enclosed within the foot shape. You could use PE or maths sorting hoops to focus on a small area. However, children find using the cut out feet more engaging.

Do not worry if you cannot identify everything that is found. Looking closely and describing and drawing what has been seen are far more important than naming things.

## Keywords

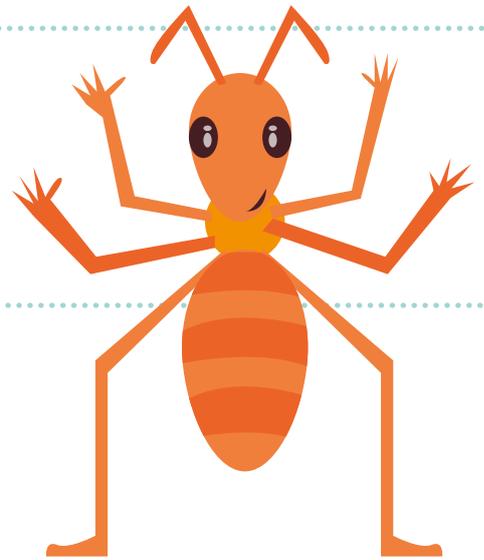
- Outdoors
- Nature
- Insects
- Challenge
- Storytelling

## Watch out!

Follow the organisation's safety code for working outdoors. Check the area first to look for dangerous plants or other items such as broken glass, sharp stones, etc. Avoid areas regularly used by dogs.

Ensure that animals are treated with care.

Wash hands carefully after the activity outside.





# SUPERSTAR

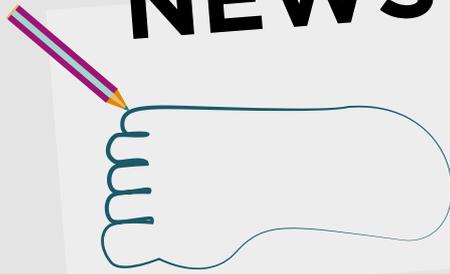


# Under Your Feet

## Activity Card

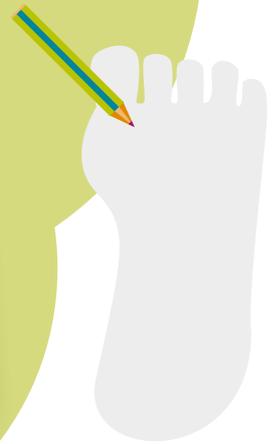
You've come across an article in the news:

### NEWS



#### Storyteller's tiny dilemma

Good news! Children's writer, Stella Storyteller, is writing her latest book. It's the story of two special children who wake up one morning and find themselves the size of ants. They go on a journey through Samphire Hoe Nature Reserve and encounter all sorts of difficulties because of their size. But Stella is stuck for ideas! What would create a challenge for our intrepid duo? Can you help?



### Your challenge

Find out what's under your feet and create one of the adventures to go in Stella Storyteller's new book.

### Discuss

What animals, plants and other tiny things might you find if you look closely under your feet in Samphire Hoe Nature Reserve?

What would it be like if you were very small?

What would you find if you climbed a tree?



# Getting started

Cut a big foot shape out of a piece of card. Keep the cut out foot and the hole that's left.

Place the cut out hole on a patch of ground and look carefully at what you find there.

Then record what you see by drawing on the cut out foot. Include all the plants and animals and anything else you see such as rocks, twigs and spiders' webs.

You can place the cut out hole in another place such as a field, a tree trunk or bare soil and record the results on the back of the cut out foot

## Test your ideas

You are not going to bring any living things indoors, so you need to make sure you record very carefully what you see. Use a magnifier to help you. You could take digital photographs or look things up using identification keys or books.

## Share your ideas

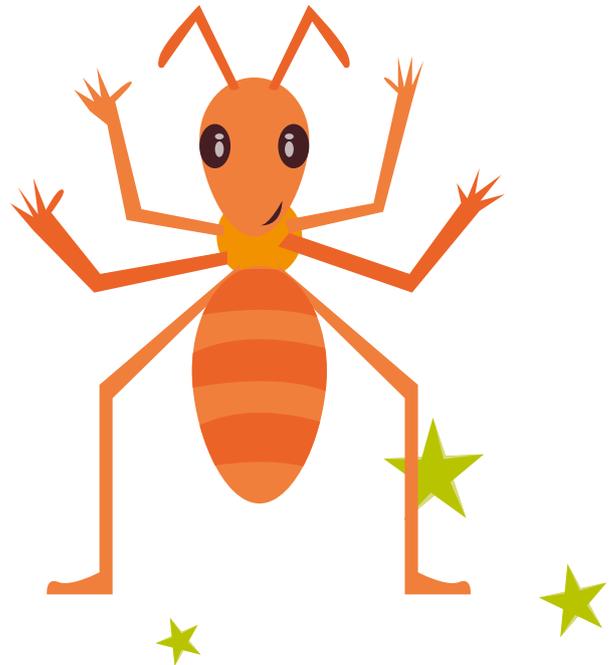
Talk about what you have found. Then share your ideas for one of the adventures to go in Stella Storyteller's book.

## Extra things to do

Think about other places where you could look under your feet. What do you find?

Will you find different things under your feet each day?

How can you encourage more living things into your garden or school grounds?





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