Sutton's Hidden Worlds

Explore 'Sutton's Hidden Worlds', and uncover the wonders in the environment around you; from the soil under your feet and the rocks in our buildings, to the creatures that live there.

In partnership with

UCL

In collaboration with Mel Simpson Dance and Saraswathi Sukumar

Funded by a Cultural Impact Award as part of the Mayor of London's London Borough of Culture programme.

Sutton STEAMs Ahead

SUPPORTED BY MAYOR OF LONDON

Made possible with Heritage Fund

Sutton

Let's explore Sutton!

Through Art & Science

Welcome to Sutton's Hidden Worlds

This activity pack is all about the hidden worlds of the environment around us. These activities are designed for your family to learn all about the environment through fun projects and games!
Explore animals and their habitats and the rocks and fossils on our High Street; test your creative writing skills with stories all about animals; and shake it all of with the dance of the blue butterfly.

Tell us what you think!

We would love to hear what you think of these activities! Please email jessica.gray@sutton.gov.uk, or fill in this form (or scan the QR code on the last page)

These packs have been designed in collaboration with UCL, Saraswathi Sukumar and Mel Simpson Dance.

Contents page

Animals and their habitats

Sutton Rocks!

Creative writing

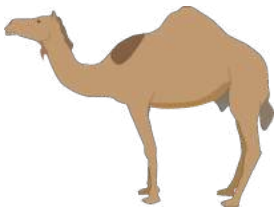
Let's Dance!

What's my habitat?

Direction: Match the animal with their habitat.

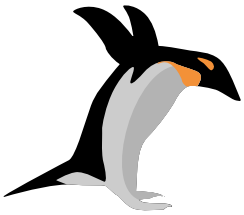
- forest

- desert

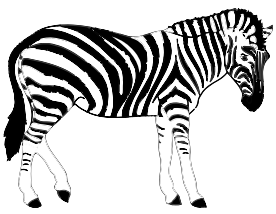


- grassland

- freshwater



- ocean



- polar

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Create a creature

Create a creature suited to your habitat, or to an imagined one! When drawing your creature, think about:

- How does your creature move?
- How is your creature going to get food and avoid being eaten?
- How is your creature going to stay warm or keep cool?
- How are they going to protect their young?

Home Sweet Home

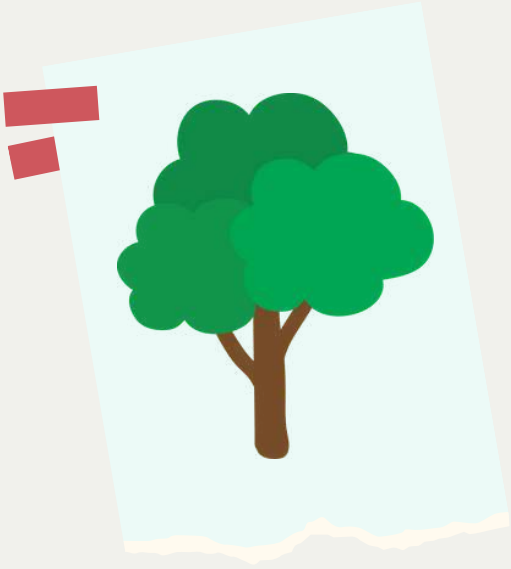
Explore your local environment (garden, park, school grounds) and identify an animal or plant. Answer the following questions about your chosen organism and its habitat.

Describe the plant/animal you have chosen:

Describe the habitat of the plant/animal:

Does it share this habitat with any other plants/animals?

How does your plant/animal interact with others? What does it eat? Is it eaten by anything? Does it use plants as shelter?



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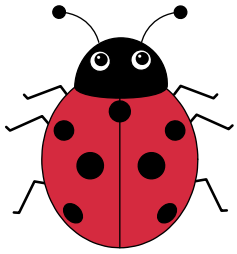
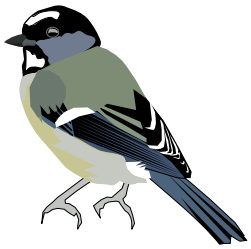
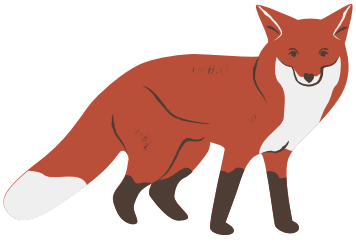
FOOD CHAIN

Connect the organism to it's place in the food chain.







Producer

Primary consumer

Secondary consumer

Tertiary consumer

Predator

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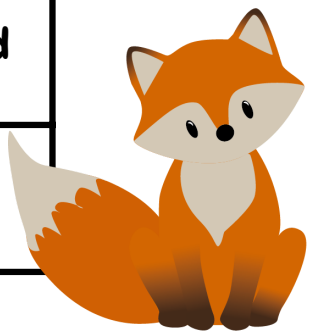
Food chain game

You will need

- A space to move around in
- Tokens

Give each child a number – 1, 2, 3 or 4 and a role in the food chain.

Number	Animal
1	Producer - plant
2	Primary consumer - insect
3	Secondary consumer - bird
4	Predator - fox



The producers / plants are given some tokens.

Each animal is allowed to take tokens from anything it eats i.e insects can take tokens from plants, birds can take tokens from insects.

Children can take one token at a time (to stagger the length of the game). Introduce each group at a time, i.e wait a minute and tell the insects to enter the game.

The aim is to see who ends up with the most tokens (energy) at the end of the game – *it should be the predators!*

How to make a bug hotel!

You'll need

- **sticks & twigs**
- **a plastic bottle or plant pot**
- **bark, moss and other natural materials**

1

Cut your bottle in half and cut the top off to make a cylinder shape

Arrange materials inside the bottle/plant pot. Arrange them along the length of the bottle. It's okay if they stick out!

2

3

Stuff the hotel with leaves, moss, pinecones and other materials to make it nice and cozy! Pick a spot in your garden and you're done!

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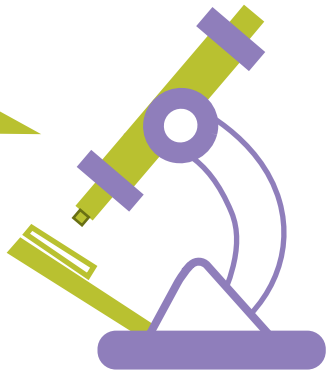
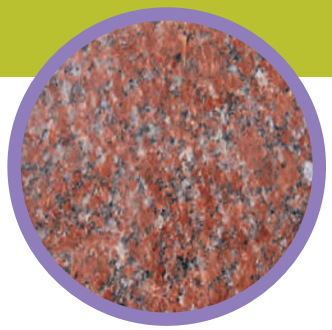
What's that Rock?



Limestone

- Limestone is a sedimentary rock.
- Look out for small pieces of fossils inside the rocks!
- Limestone is usually light grey or white and a soft rock that is easily scratched.

Granite



- Granite is an igneous rock.
- Contains crystals that are 5mm big (the same thickness as two £1 coins stacked together!). Geologists call this coarse-grained.

Slate

- Slate is a metamorphic rock.
- Dark grey in colour (but it can be red or light grey too!)
- The crystal grains are very small (so you won't be able to spot them!)

Sandstone

- Sandstone is a sedimentary rock.
- Look out for the grains of sand that have been cemented together.
- Sandstone is usually red or yellow.

All images are courtesy of Dr Ruth Siddall

SUTTON ROCKS!

All three types of rock can be spotted along Sutton High Street from billion year old igneous rocks to oyster shell fossils!

The high street mile post is made from **limestone**. This is sedimentary rock and contains oyster shell fragments!

Larkivite pillars can be found along St Nicholas Street. This is an igneous rock from Norway and is about 300 million years old!

Pale pink granite can be found in the entrance to St Nicholas Shopping Centre. This is a 288 million year old igneous rock!

St Nicholas Centre

Inside the shopping centre you'll find panels of **grey Gneiss.** This is a metamorphic rock from Italy and dates back to the Permian.

Sandstone can be found on Trinity Church. This is a cretaceous sedimentary rock originally from Kent!

Trinity Church

Limestone can be spotted on the corner of the high street dating back to the Upper Jurassic! You can even spot oyster shell fossils!

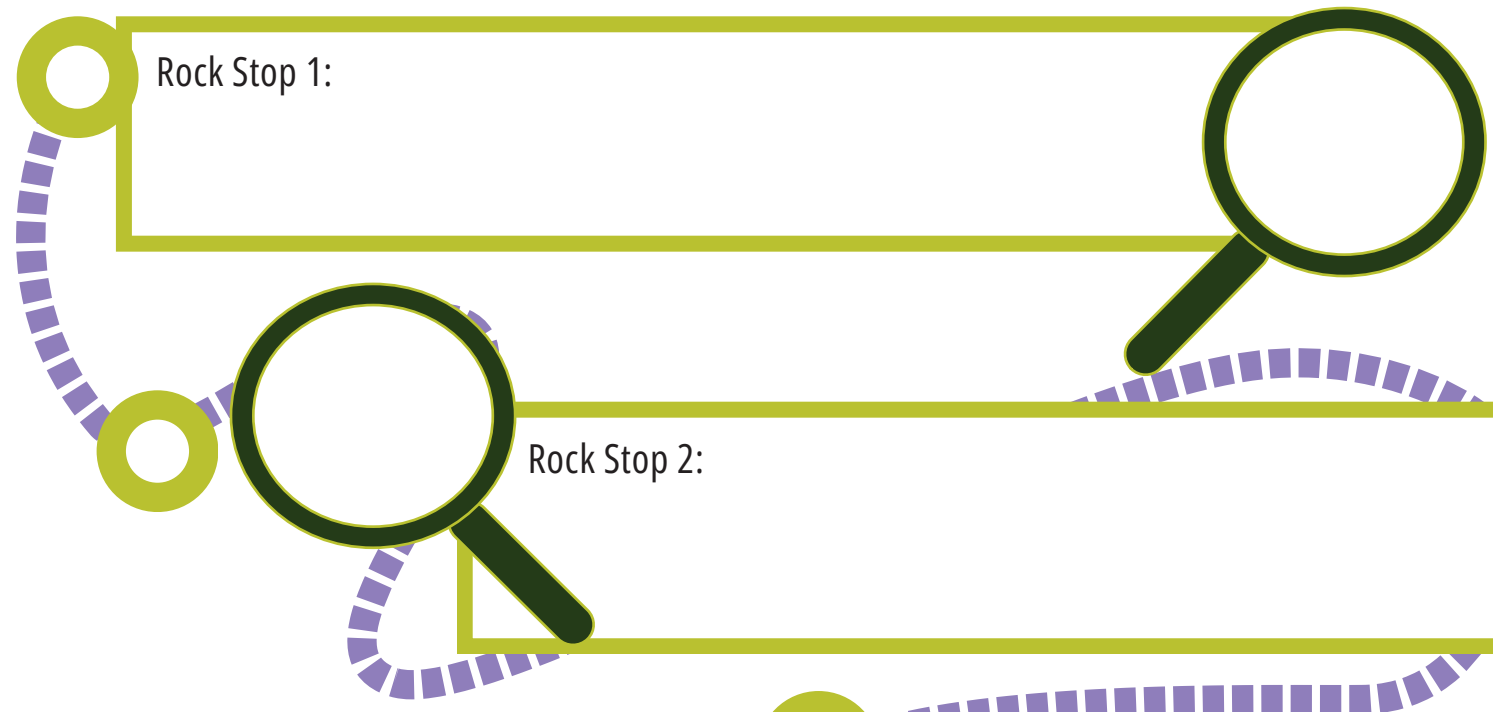
Red granite can be spotted as large columns outside Bank Chambers. This rock is igneous and came from Sweden.
This rock is 1.4 billion years old.

Sutton Station

All images are courtesy of Dr Ruth Siddall

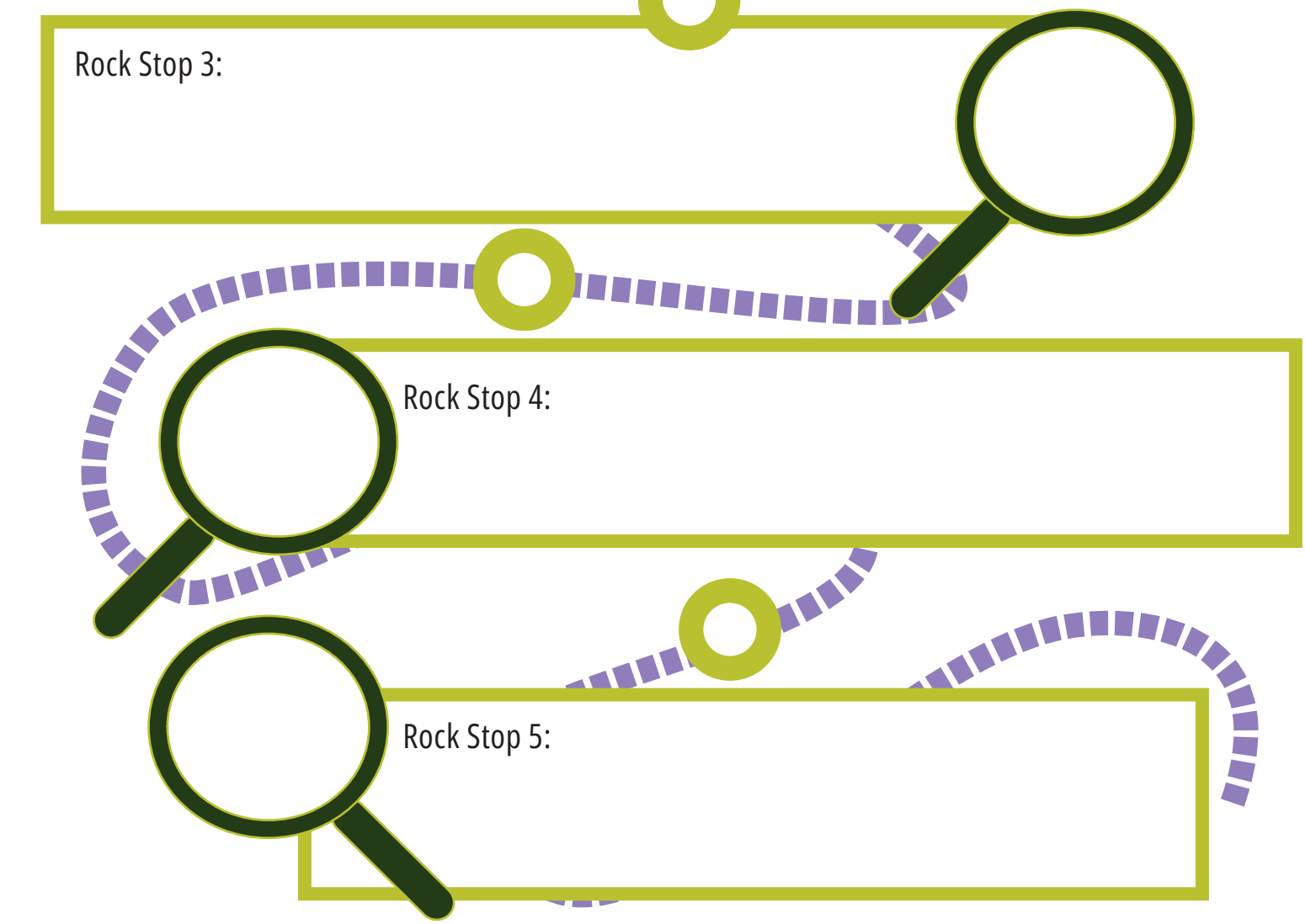
My Rock Tour!

Rock Stop 1:



Rock Stop 2:

Rock Stop 3:



Rock Stop 4:

Rock Stop 5:

Evolution Option 1: Creative Writing Activity

Cartoon by © Saraswathi Sukumar

Imagine this: thousands of years into the future, the River Wandle (a river that runs through the Borough of Sutton) has dried up. One species of fish, known as the three-spined stickleback, has evolved and it can now live on land. Write about this fish that now lives on land.

Here are some questions that you might want to think about as you write about this fish that now lives on land:

- How does this fish breathe on land?
- How does this fish move on land?
- Where does this fish live, for example: in trees, in people's houses, in the grass etc.?

[1] More information

Wandle River trail map:
https://wandlevalleypark.co.uk/wp-content/uploads/2017/05/Wandle-Trail-Map-Interactive.pdf

[2] Read more about the three-spined stickleback here:
https://www.wildlifetrusts.org/wildlife-explorer/freshwater-fish/three-spined-stickleback

Evolution Option Two: Creative Writing Activity

Cartoon by © Saraswathi Sukumar

Facts about kingfishers:

- **Kingfishers eat small fishes - they hunt them by diving into the water.**
- **Kingfishers tunnel into riverbanks and create a small room to lay their eggs in.**

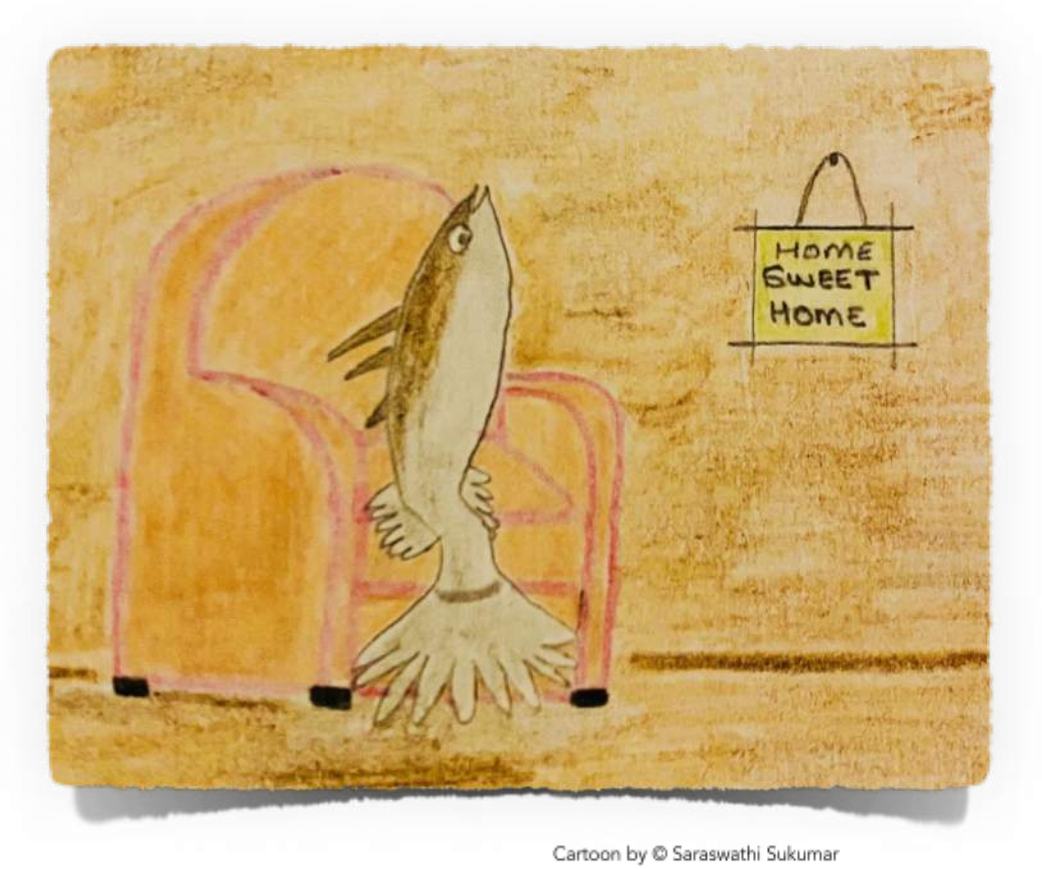
Imagine this: thousands of years into the future, Sutton's water-bodies have all dried up and all fish have become extinct. So the birds known as kingfishers have had to change what they eat and, as a result, they have grown teeth. Imagine that you are a dentist who takes care of the teeth of kingfishers. Write a short story in which a kingfisher visits your dentist practice. See if you can include one of the facts above in your story.

Here are some questions that you might want to think about as you write about this scene:

•How many teeth does the kingfisher bird now have?
•What do these teeth look like?
•What sort of food do they now eat that they need to use their teeth for?
•What is the name of the kingfisher who visits you?
• Why are they visiting your dentist practice - is there a problem with one of their teeth or are they just there for a teeth-cleaning?

See following website for more information about this bird:
https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/birds/kingfisher/

Additional creative writing exercises



Cartoon by © Saraswathi Sukumar

Imagine this: when all the water-bodies in Sutton dry up, the three-spined stickleback fish burrows itself into the ground and learns to live underground. Write a short story about a fish who does this.

•What is the name of your main character?

•What methods does it use to burrow itself underground?

• How does its body change to adapt to living underground and without water?

• What does its new home underground look like, smell like, feel like, sound like and taste like?

Dance activity: small blue butterfly

Let's dance!

You will need:

- **A space to move around in**
- **Some music!**

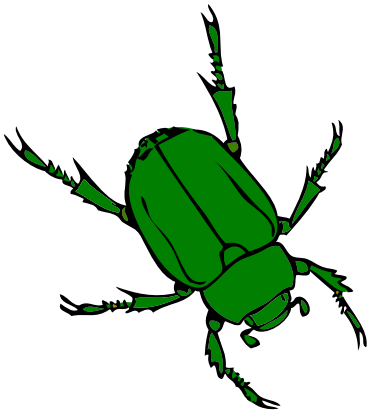
In this activity, we get to embody the life cycle of a small blue butterfly!

Step 1: Egg
Practice posing as an egg (small, round, curled up)
Step 2: Caterpillar
Move from your egg gracefully into practice caterpillar positions (like a long, wiggly, furry worm!)
Step 3: Chrysalis ('pupa')
Fold up and practice chrysalis positions (a protective shell-like structure)
Step 4: Adult Butterfly: Final stage of the metamorphosis. Encourage children to move gracefully: emerge and fly, move your wings, rise and fall, hop and jump!

Put it all together for a final dance show!

Dance activity: the stag beetle

Let's dance!



You will need:

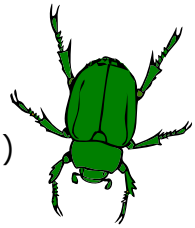
- **A space to move around in**
- **Some music!**

In this activity, we get to embody the life cycle of a stag beetle!

Step 1: Egg
Practice posing as an egg (small, round, curled up)
Step 2: Larva
Extend your arms and legs gracefully and practice your worm movements (long, wiggly, flexible and free!)
Step 3: Pupa ('cocoon')
Give yourself a hug and fold up (in a nice and round shell shape)
Step 4: Stag Beetle: Final stage of the metamorphosis. Stand up straight and show off your long arms (these are called 'pincers') reaching out in front of you. Encourage children to move arms around quickly from left to right while jumping and running freely in the open space!

The Courtship Dance

Get in partners, choose who is the male stag and who is female.
Female: crouch down and flap your hands near your face (these are your small pincers!)
Male: Run and flap your arms (pincers) in a circle around your dance partner



Beetle Battle!

Lock arms standing side by side and create tension moving away from each other, **hold that pose!**
Stand Opposite. With a really strong standing pose, lock your left arm, loosely with your partner's right arm. **Hold that pose! Then try the other arms locking.**
Face off! Face opposite your partner, at the same time jump up and land on the ground in a crouching position, posture your arms out in front of you. **Hold that pose!**

Sutton STEAMs Ahead

Thank you for taking part in the Sutton STEAMs Ahead Programme! We hope you enjoyed these activities.

We would love to hear what you thought of these activities.
Feedback is vital for us to improve our work and do future projects like this!
Please email any thoughts to Jessica Gray at jessica.gray@sutton gov.uk

Or please fill in this form by scanning the below QR code!

If you have any questions about the project, please contact: suttonsteamsahead@sutton.gov.uk.

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