

LEAP @



EXPLORE AND EXPERIMENT: HEADS AND TAILS

It is never too early to foster curiosity for science and nature!

Introducing science activities to young minds helps to develop independent thinking, problem solving and observation skills. Exploring wonderings about the world around them, children can build science language and use word to describe actions and ask inquiring questions.

**Here are some activities for you and a grown up to do at home.
Follow the number trail, get creative and have fun!**

1, CLICK HERE TO LISTEN TO...

"Heads and Tails Insects"
or find a book that you would like to read. We have given you some ideas on the next page.

2, LOOK AT THE PICTURES AND TALK ABOUT THE STORY...

3, MAKE SOMETHING

from the story. Have fun with the craft activities and if you can send us pictures of what you have made!

4, RETELL

the story in your own words using something you made things you have in your house or outside in the garden.

You can use the ideas and activities on the next few pages that our teachers have prepared.

The garden is a great place to explore and discover with your child.

Young children will find new ways of doing things, making connections and sharing ideas. Try not to give the answer but ask more questions!



HOW IS MY CHILD LEARNING?

Experiment and Explore

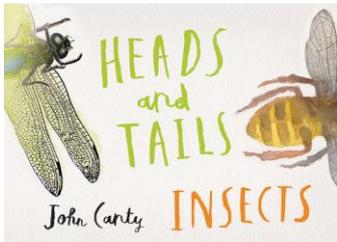
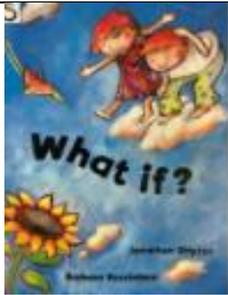
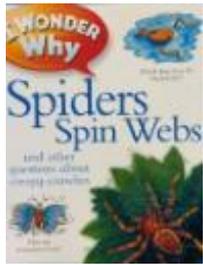
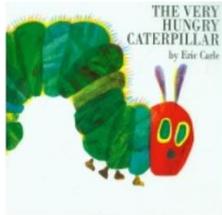
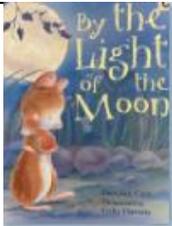
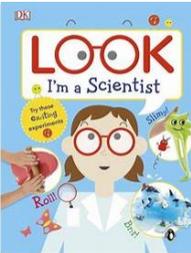
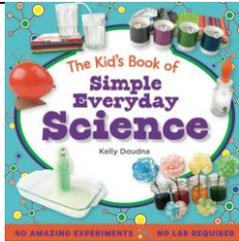
Children are naturally inquisitive and always full of questions. Engaging with science activities invites children to channel their enthusiasm for exploring, experimenting and solving problems. Encourage open-ended conversations using words such as 'I don't know so let's go and look or find out'. Fill your heads with wonderful ideas!

Helpful tips for early science education:

- The **process** is more important than the results. Don't always worry about finding the 'right' answer but **foster investigation skills and curiosity**.
- Make sure the activities are hand-on and fun. The **messier** the better so make sure you spend time **experimenting** outside.
- Extend the learning across other numeracy and literacy activities, talk about and record the results.

STEM stands for Science, Technology, Engineering and Maths. We add the A for Arts...to make it STEAM. When your child asks 'why', search for solutions together!

More science books to explore!

Questioning Skills

What does it..

- **feel like?** Close your eyes and tell me how it feels

- **look like?** Compare the size, shape, texture and colour

What do you think would happen if..

Why do you think....?

How does.....work?

Have you ever thought about...

Magnetic Ice



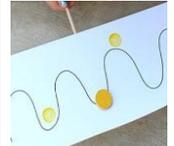
Stand Strong



Changing Colour



Move magnets



EXPLORING LIFE CYCLES

Find out about insects that go through lifecycles such as flies, bees, moths, beetles and ants.

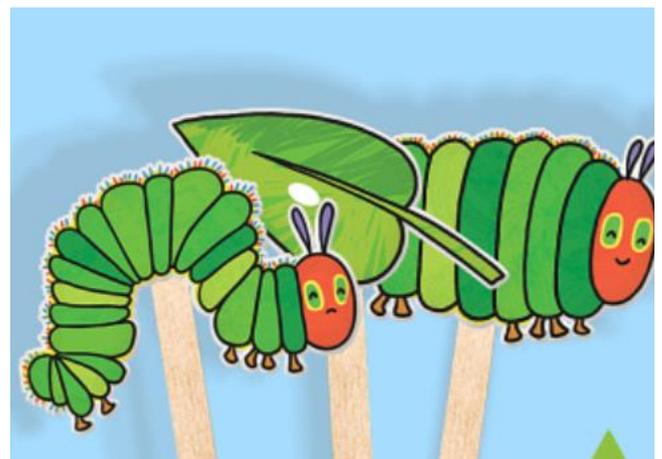
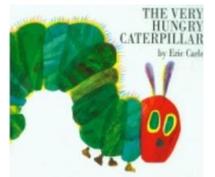
How are the cycles different to frogs and chickens?

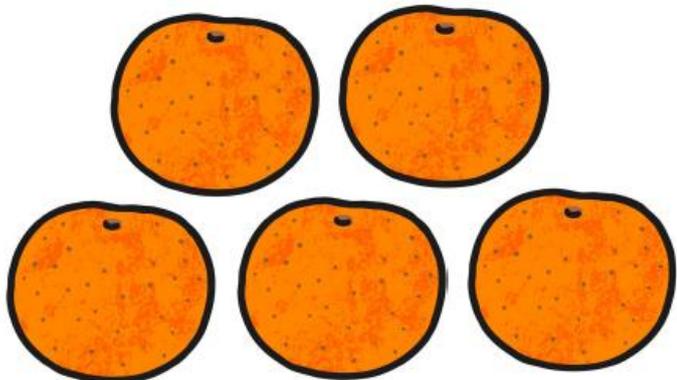
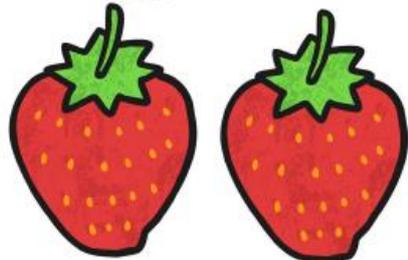
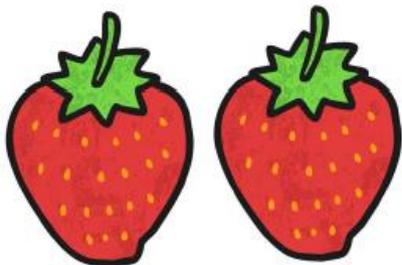
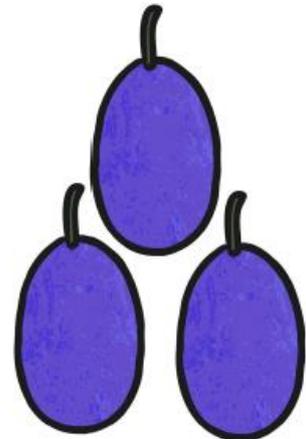
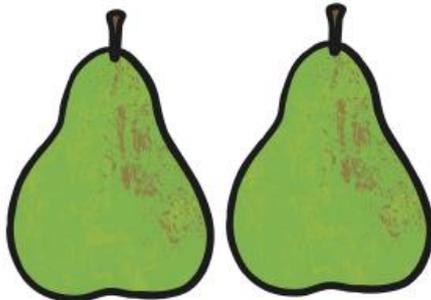
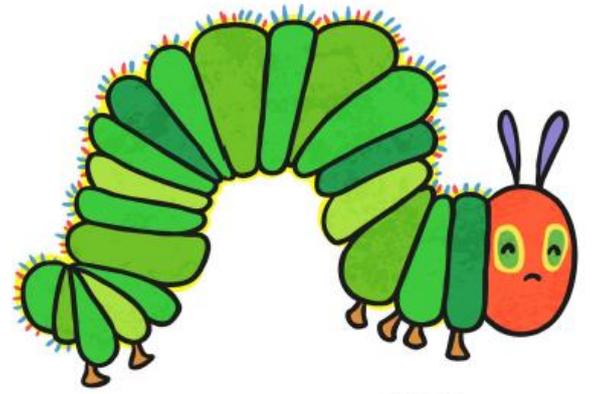
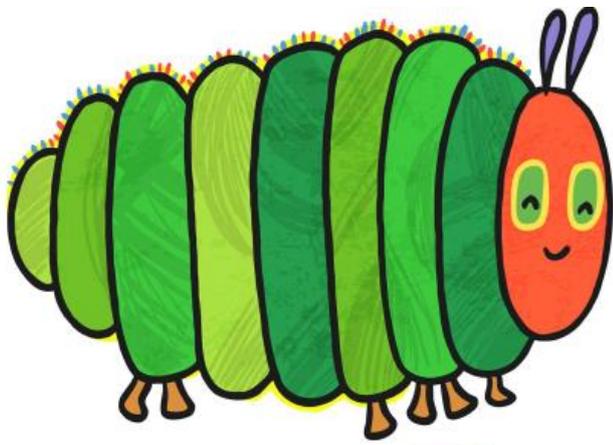


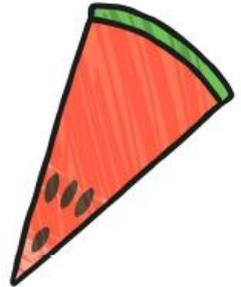
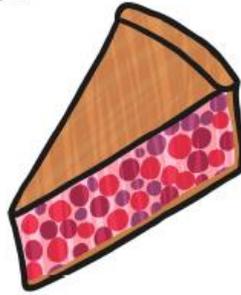
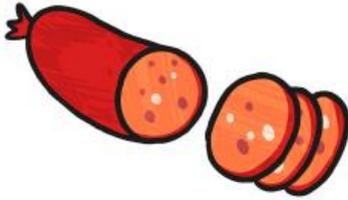
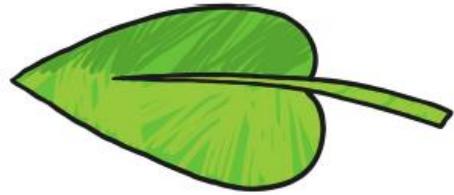
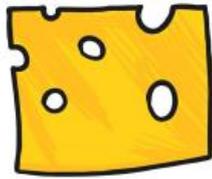
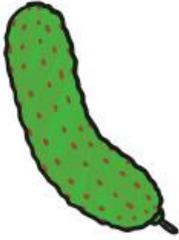
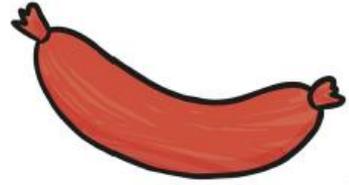
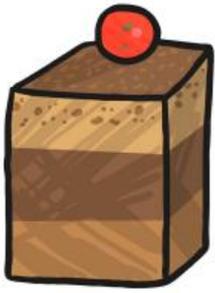
Make a puppet theatre and share the story about the lifecycle of a butterfly. Cut out the pictures and tape them to paddle pop sticks.



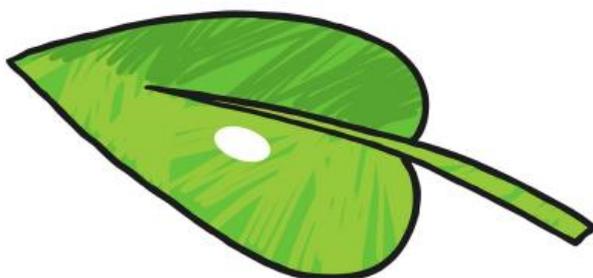
DISCOVER THE WORLD OF MINIBEASTS IN GARDENS NEAR YOUR HOUSE. DRAW WHAT YOU CAN SEE. WHAT ARE THE INSECTS DOING?







twinkl www.twinkl.co.uk



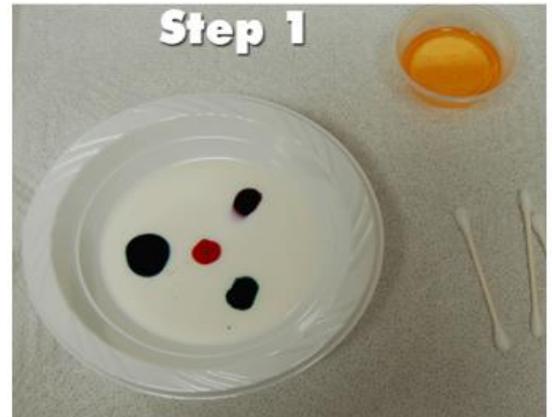
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**DRAW AND LABEL YOUR
FAVOURITE INSECT.**



MOVING MAGIC MILK

1. Pour the milk into the bowl. Be careful not to move the bowl, you want the milk as still as possible.
2. Put one drop of each colour in different places in the milk.
3. Put just a tiny amount of soap on the end of the cotton swab, then touch it to one of the colours. WOW!
4. Let the experimenting begin!
5. To clean up, just pour the milk down the drain. *Do not drink it.*



THINK. GUESS. RECORD. SHARE.

I guess that...

I saw...

SOME QUESTIONS!

- What did you notice?
- What happened when you added the soap?
- Why did you think that happened?
- Why did it stop moving after a while?
- What else did you see?

RAINBOW WIZARD'S BREW

This is a messy activity so maybe do it outside in play clothes!

Ingredients:

- Baking soda
- Food colouring
- Glitter
- Dish soap
- Vinegar
- Glass jar
- Small plastic containers
- Tray



Instructions:

Fill the jar halfway with vinegar, then add a few drops of one colour of food colouring and some glitter. Squeeze in some dish soap, stir, and place the jar on a tray. Now have your child add in a heaping teaspoon of baking soda, stir again, and watch the foaming begin! The soap makes it foam rather than fizz. To keep the reaction going continue adding baking soda and vinegar when the foam starts to slow. To make it change colours, add a tablespoon of vinegar mixed with one colour of liquid watercolour/food colouring every so often. Make sure to dump the coloured vinegar into the centre of the brew.

Tip: Stir It! My kids discovered that the more they stirred the mixture the faster and crazier the reaction!



Other ideas to explore with a grown up:

- Research how to make a bath bomb!
- Can you blow up a balloon with vinegar and bicarb soda?

You can check out the Wizrad's Bew video on this link:

<https://babbledablededo.com/20-science-projects-for-preschoolers/>

SKITTLES RAINBOW EXPERIMENT

You will need:

- 1 pkt Skittles (use these because they dissolve the fastest)
- 1/4 cup warm water
- white plate or bowl

Learn about rainbows:

- You will never be able to touch a rainbow
- A rainbow is created from reflection and bending light in drops of water.
- A rainbow is a full circle but because we see it from the ground we can only see half.



Activity

1. Arrange the Skittles in a single row coloured pattern around the edge of the plate. You can experiment using two colours, three colour, four colours...count as you go.
2. Pour over enough warm water to cover all the Skittles and the plate itself.
3. Watch and wait as a rainbow appears on the plate, the colours will move towards the middle and create a whirl of colour.

STEP 1. Arrange skittles



STEP 2. Pour water



Change it up...

- What happens when you use other liquids like milk?
- What could happen if you put a cookie cutter in the middle of the plate? What might happen to the water?
- How long does it take for the colour to run out of the skittle?

SWIMMING SPAGHETTI

Make spaghetti do tricks with this fun and fizzy experiment.

What You Need:

- uncooked spaghetti
- 1 cup of water
- 2 teaspoons of baking soda
- 5 teaspoons of vinegar
- tall clear glass

What You Do:

Put water and baking soda in the glass. Stir until the baking soda is dissolved. Break spaghetti into 3cm pieces. Put about 6 pieces in the glass. They will sink to the bottom.

Add vinegar to the mixture in the glass. Observe what happens to the pieces of spaghetti.

Add more vinegar as the action starts to slow down.



What's Going On:

When baking soda and vinegar are mixed together, a chemical reaction occurs. It produces a gas called carbon dioxide, which forms lots of bubbles on top of the mixture and smaller bubbles at the bottom of the glass. These little bubbles stick to the spaghetti and make it float to the surface, just as you do when you sit on a swimming pool noodle! When the spaghetti reaches the surface, the bubbles pop and the spaghetti sinks to the bottom.

Add drops of food colouring to see what happens. Do this after you have added the vinegar!

Talk about what could happen if you use noodles!

FUN WITH WATER

See how many objects it takes to make a full glass of water overflow.

What You Need:

- clear plastic cup
- small objects like pebbles, playdough balls or paperclips



What You Do:

Fill the cup to the top with water.

Guess how many paper clips it will take to make the water overflow. Write down your guess.

Carefully drop one paper clip at a time into the cup. Count how many it takes to make the water overflow. Was your guess close?

Look at the cup from the side. The water is bulging upward like a balloon!

More fun: Fill the sink or a dish with water.

Carefully lay a small piece of paper on top of the water. See how many paper clips you can put on top of the paper before it sinks. Try using different sizes of paper.

What's Going On:

Drops of water stick to each other. That is why the surface of the water bulged when you added the paper clips. Scientists call this surface tension. The surface tension of the water is what held up the floating paper until the weight of the paper clips became too heavy.

This is a great book to share together when talking about the concept of **FLOATING** and **SINKING** :

- Why do you think the book is called "Who Sank the Boat?"
- Does it spoil the ending?
- What do you know about the size and weight of a cow and a donkey?
- Which animal do you think could sink a boat?
- What things sink and what things float?

