

Year 1

BIA Science Term
by Term Scheme
of Work



الأكاديمية الإسلامية البريطانية
BRITISH ISLAMIC
ACADEMY

Term by Term Objectives

year 1

Year 1 Overview April to July ⁽¹⁾

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|--------|------------------------------|--------|--------|------------------------------|--------|--------|--|--------|--------|--|---------|---------|
| summer | Seasons Wonderful Weather | | | Seasons Wonderful Weather | | | Plants What's Growing In Our Gardens? | | | Plants What's Growing In Our Gardens? | | |

(1) Subject to change. Please visit the website or call-in for regular updates.

Term by Term Objectives

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|------|---|------|----------|
| week | 1 | Term | summer 1 |
|------|---|------|----------|

Science Year 1 Wonderful Weather

What do we know about weather?

Objectives

Think about what we already know about weather and look at how weather forecasters tell us what weather to expect. Make forecasts about the weather at school, using weather symbols and notes made 'on location' in the playground.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.



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ACADEMY

year 1

You Will Need

Provided Resources

- Weather symbols and Weather Symbol Snap
- Talking about Weather resource

Additional Resources

- Large sheets of paper
- Glue
- Pencils and clipboards
- Recording devices
- Enlarged maps of the school area (e.g. photocopied road map, aerial image on the IWB or Smart boards, simple outline drawn on sugar paper or vinyl maps of the UK)
- Sticky tack

Term by Term Objectives

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|------|---|------|----------|
| week | 1 | Term | Summer 1 |
|------|---|------|----------|

Science Year 1 Wonderful Weather



year 1

What do we know about weather?

Teaching and Activities

Teaching

- Consider what they already know about weather and generate questions.
- Make observations and respond appropriately.
- Look at weather forecasts and the symbols used by forecasters.
- Create weather forecasts about the weather at school.

Activities

- Consider what they already know about weather and generate questions.
- Go outside and look at the weather, observe the temperature, wind, etc.
- Apply their understanding by the dressing up of a teddy appropriately for weather conditions.
- Show their understanding, and ability to use their observations, by devising their own weather forecasts.

Investigation - exploring, pattern seeking

- Go outside and look at the weather. Observe the temperature and wind.
- Suggest how to dress a teddy or doll appropriately for the current weather conditions.

Vocabulary

Rain, snow, storm, thunder, lightning, cloudy, clothing, warm, cold, forecast

Term by Term Objectives

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|------|---|------|----------|
| week | 2 | Term | summer 1 |
|------|---|------|----------|

Science Year 1 Wonderful Weather

Weather Watching

Objectives

Go outside and observe the weather, drawing what you see and describing what you hear and feel. Then go back inside to create a seasons collage for the classroom.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.



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ACADEMY

year 1

You Will Need

Provided Resources

- Watching the Weather resource

Additional Resources

- Clipboards
- Pencils
- Cameras
- Large sheets of paper
- Felt-tips
- Collage materials
- Glue
- Paint & paint brushes
- Large sheets of cardboard or canvas
- Coloured paper (for the current season)
- Images of the summer season and art ideas

Term by Term Objectives

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|------|---|------|----------|
| week | 2 | Term | summer 1 |
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Science Year 1 Wonderful Weather



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ACADEMY

year 1

Weather Watching

Teaching and Activities

Teaching

- Observe, record and discuss the weather.
- Understand how the observed weather is typical (or not) of the weather for the season.
- Create a collage of the current season, weather and wildlife and compare to other seasons in the year.

Activities

1. Learn about the weather for the season and consider if the weather they are expecting is typical.
2. Understand more about the different seasons of the year, including the current season.
3. Consider the different elements of summer (current season) and represent in a group collage.

Investigation - exploring, pattern seeking

Take the temperature outside in the morning and the afternoon.
Record these observations in the classroom and discuss the changes.

Vocabulary

Rain, snow, storm, thunder, lightning, warm, cold, forecast, summer, autumn, winter, summer, seasons

Term by Term Objectives



Year 1

week

3

Term

summer 1

Science Year 1 Wonderful Weather

Shadow fun

Objectives

Go outside and have fun with shadows. Make them jump, chase each other and play shadow tag. Draw round them to see if they change during the day.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

1. Ask simple questions and recognise that they can be answered in different ways.
2. Observe closely, using simple equipment.
3. Perform simple tests.
4. Identify and classify.
5. Use their observations and ideas to suggest answers to questions.
6. Gather and record data to help answer questions.

You Will Need

Provided Resources

- How to make shadow puppets

Additional Resources

- Torches (if not sunny)
- Chalk
- Globes
- Lolly sticks
- Black card & scissors
- Old OHP or projector



week

3

Term

summer 1

Science Year 1 Wonderful Weather

Shadow fun

Teaching and Activities

Teaching

- Understand that the day length changes each day and varies from season to season.
- Investigate shadows and their shapes.
- Consider the questions: Does my shadow always look like that? What was it like first thing in the morning? Is it better to - play shadow tag at lunchtime or after school?

Activities

1. Understand that the day length changes each day and varies from season to season.
2. Explore shadows and how they change during the day.
3. Consider what life would be like if the sun didn't rise and create daylight.

Investigation - exploring, researching and analysing secondary sources

Play shadow tag and look at the shape of shadows.

Consider the questions: Does my shadow always look like that? What was it like first thing in the morning? Is it better to play shadow tag at lunchtime or after school?

Track a shadow by observing and measuring it over time.

Make a bar chart of paper strips of shadow length plotted against time intervals.

Vocabulary

Shadow, sun, earth, spin, day, night, light, dark

Term by Term Objectives

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| week | 4 | Term | summer 1 |
|-------------|----------|-------------|-----------------|

Science Year 1 Wonderful Weather

Your weather station: rainfall

Objectives

Look at weather in the playground, at the rain falling and what it sounds like. Design a weather station to help collect data about the weather at school. Make a rainfall gauge and record the results.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources

- How to make a rain gauge
- Recording Rainfall resource

Additional Resources

- Plastic bottles & measuring jugs
- Duct tape
- Marker pen
- Scissors
- Small stones

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| week | 4 | Term | summer 1 |
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Science Year 1 Wonderful Weather

Your weather station: rainfall

Teaching and Activities

- Consider what effect rain has on us and our daily lives.
- Design and make a weather station.
- Record the rainfall over a period of time.
- Make predictions about the results from the rainfall gauges.
- Use the scientific vocabulary: weather, rainfall, precipitation and data.

Activities

- Talk about rain and how it affects our lives.

Design and make a rainfall gauge.

Set the rainfall gauges up in the playground and understand how to record the rainfall over a period of time.

Make predictions about the results from the rainfall gauges.

Use the scientific vocabulary: weather, rainfall, precipitation and data.

Investigation - exploring, pattern seeking

- Set the rainfall gauges up in the playground and record the rainfall over a period of time.

Vocabulary

Weather, rainfall, precipitation, data

Term by Term Objectives



year 1

week

5

Term

summer 1

Science Year 1 Wonderful Weather

Your weather station: wind direction

Objectives

Look at the wind in the playground and wonder if there is a link between wind direction and rainfall. Does the wind change direction during the day? Make a wind-sock to measure the direction of the wind in the playground.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources '

- How to make a wind sock
- Daily Weather Watch and Watching the Weather resource
- My Beaufort Scale sheet

Additional Resources

- Plastic bottles
- PVA glue
- Tissue paper & ribbons
- String
- Chalk

Term by Term Objectives



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year 1

week

5

Term

summer 1

Science Year 1 Wonderful Weather

Your weather station: wind direction

Teaching and Activities

Teaching

- Make a wind sock to measure wind direction.
- Observe and record wind direction over time and notice patterns between rainfall and wind, and changes in direction.
- Use the scientific vocabulary: wind, direction, gauge, patterns and data.

Activities

1. Understand that wind direction is measured using a wind sock.
2. Observe the wind direction over time and notice any patterns between rainfall and wind.
3. Consider if the time of day has an effect on the wind direction.

Investigation - observing over time, pattern seeking

- Make a windsock to measure wind direction and a wind vane to measure the direction of the wind.

Vocabulary

Weather, rainfall, precipitation, data, wind, direction, gauge, patterns

Term by Term Objectives



year 1

week

6

Term

summer 1

Science Year 1 Wonderful Weather

Your weather station: temperature

Objectives

Measure the temperature inside the classroom and outside and wonder how different that would be in different seasons. Make a thermometer box to house a thermometer and use it outside in the playground.

Science Objectives

- i) Observe changes across the four seasons.
- ii) Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

1. Ask simple questions and recognise that they can be answered in different ways.
2. Observe closely, using simple equipment.
3. Perform simple tests.
4. Identify and classify.
5. Use their observations and ideas to suggest answers to questions.
6. Gather and record data to help answer questions.

You Will Need

Provided Resources

- Fake Snow Recipes
- How to make a thermometer box
- Measuring Temperature sheet

Additional Resources

- Ingredients for chosen fake snow method
- Sturdy plastic or wooden boxes that can stand on their sides
- White paint
- Thermometers
- Sticky tack
- Frozen lollies

Term by Term Objectives



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year 1

week

6

Term

summer 1

Science Year 1 Wonderful Weather

Your weather station: temperature

Teaching and Activities

Teaching

- Consider warm and cold weather and measure temperature.
- Understand air temperature changes across the seasons.
- Make a thermometer box to use outside to measure temperature.
- Use the scientific vocabulary: wind, direction, gauge, patterns and data.

Activities

1. Understand that warm and cold weather, including snow, can be specific to different seasons.
2. Understand that air temperature changes with the seasons, and that usually summer is hotter than winter.
3. Make a thermometer box to use outside to measure temperature.

Vocabulary

Weather, rainfall, precipitation, wind, direction, gauge, patterns, data, temperature, thermometer

Term by Term Objectives



year 1

week

7

Term

summer 2

Science Year 1 What's Growing In Our Gardens?

Going and growing outside

Objectives

Explore the outdoor area of school and look at plants that are growing. Talk about what they are and what they will look like when they are fully grown. Map out the school garden area and decorate with sketches, facts and labels.

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources

- Images and close-up drawings of fruit

Additional Resources

- Local fruit and vegetables
- Chopping boards
- Knives
- Sketch books
- Clipboards
- Camera
- Images and close-up drawings of fruit
- Magnifying glasses
- Large sheet of card
- Marker pens

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| week | 7 | Term | summer 2 |
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Science year 1 What's Growing In Our Gardens?

Going and growing outside

Teaching and Activities

Teaching

- Examine, draw and taste a range of fruits and vegetables that could be grown in a garden.
- Talk about experiences of growing plants or about someone they know who has a garden.
- Identify, label and sketch growing plants.
- Make a map of the garden plot, identifying the plants and predicting what they will turn into when they are fully grown. Label the map with any recognisable mini-beast habitats or sketches of mini-beasts found in the area.

Activities

1. Discuss a range of fruit and vegetables and make close observations and drawings.
2. Identify and closely observe plants outside the school building.
3. Make a collective map of the garden plot, labelling the plants and predicting what they will turn into when they are fully grown.

Investigation - exploring

Go outside to the school garden to look at plants.

Make a map of the garden plot, identifying the plants and predicting what they will turn into when they are fully grown.

Vocabulary

Plant, leaf, grow, weed, change, living, water, healthy, similar to, different from

Term by Term Objectives

week

8

Term

summer 2

Science year 1 What's Growing In Our Gardens?

One potato, two potato

Objectives

Look at different potatoes and potato products. Working in teams, prepare tubs for growing, and plant a chitted potato. As a team, how will you keep your potato plant healthy?

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.



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year 1

You Will Need

Provided Resources

How to chit potatoes sheet

Additional Resources

- Different varieties of potatoes
- Chopping boards & potato masher
- Chitted potatoes
- Tubs, bags or large cardboard boxes
- Soil
- Spades
- Lolly sticks

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| week | 8 | Term | summer 2 |
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Science year 1 What's Growing In Our Gardens?

One potato, two potato

Teaching and Activities

Teaching

- Share knowledge about potatoes, including how they are grown and in what forms we can eat them.
- Look at and compare different types of potato.
- Prepare tubs , plant chitted seed potatoes and make predictions.
- Consider what we need to do to encourage our seed potato to grow and produce lots of potatoes.

Activities

1. Share what they already know about potatoes, including how they are grown and in what forms we can eat them.
2. Consider the different types of potato, including their similarities and differences.
3. Work in teams to prepare tubs and plant chitted potatoes.
4. Consider what each team needs to do to look after the potato plants.

Investigation - exploring

- In groups, prepare tubs and plant chitted potatoes.

Vocabulary

Plant, leaf, grow, weed, change, living, water, healthy, similar to, different from, potato, chitting

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| week | 9 | Term | summer 2 |
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Science year 1 What's Growing In Our Gardens?

Garden centres and seeds

Objectives

Set up a garden centre in the classroom and plant seeds in a jar or bag. Predict what will happen and start to watch them grow. How will you keep your seeds healthy?

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

1. Ask simple questions and recognise that they can be answered in different ways.
2. Observe closely, using simple equipment.
3. Perform simple tests.
4. Identify and classify.
5. Use their observations and ideas to suggest answers to questions.
6. Gather and record data to help answer questions.

You Will Need

Provided Resources

- Different gardens resource
- Examples of classroom garden centres
- How to grow a bean in a bag
- My bean in a bag diary

Additional Resources

- Things for setting up a garden centre in the classroom - small plants, role play cakes, till, baskets, plastic food, paper, pens, card for signs etc.
- Dried bean seeds & paper towels
- Stapler & ruler
- Plastic bag (the A4 sized kind which seals at the top works best)



week

9

Term

summer 2

Science year 1 What's Growing In Our Gardens?

Garden centres and seeds

Teaching and Activities

Teaching

- Share knowledge about gardens and gardeners.
- Design and set up a garden centre in the classroom.
- Plant a bean in a bag and keep it in the classroom garden centre.
- Predict the outcomes of the bean and seeds and set up a diary to observe the growth over time.
- Consider what seeds need in order to be able to grow and how you can keep seeds healthy.

Activities

- Understand what a garden is and how varied they are.
- Design and set up a garden centre in the classroom.
- Plant a bean seed in a bag and consider what seeds need to be able to grow.
- Predict the outcomes of the bean seeds and set up a diary to observe the growth over time.

Investigation - observing over time

- Design and set up a garden centre in the classroom.
- Plant a bean in a jar and seeds in a bag and keep them in the classroom garden centre.

Vocabulary

Plant, leaf, grow, weed, change, living, water, healthy, different, seeds, garden centre

Term by Term Objectives



year 1

week

10

Term

summer 2

Science year 1 What's Growing In Our Gardens?

What lives in the garden?

Objectives

Go outside and look carefully at the plants and flowers. Understand more of the role pollen plays in the growing of fruit and vegetables and create a large pollen sculpture out of clay!

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources

- Who's eaten the plant? resource
- What is pollen? resource
- How to make a clay pollen grain

Additional Resources

- Clipboards
- Pencils
- Cameras
- Sketchbooks
- Air-drying clay
- Clay board
- Tools

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| week | 10 | Term | summer 2 |
|------|----|------|----------|

Science year 1 What's Growing In Our Gardens?

What lives in the garden?

Teaching and Activities

Teaching

- Explore the school garden (or a selected area of the playground).
- Examine plants for signs of them having been eaten. Consider what may have eaten the plants and what else might be living in that place.
- Look carefully at pollen and understand more about the role it plays in the growing of plants.
- Create large pollen sculptures out of clay.
- Use the scientific vocabulary associated with plants.

Activities

1. Examine plants for signs of them having been eaten and consider what is eating them.
2. Understand what pollen is and the role it plays in helping to make new plants.
3. Appreciate the wide variety of pollen grain designs and create large pollen sculptures out of clay.

Investigation - exploring

- Create large pollen sculptures out of clay and display, along with facts, in the classroom.

Vocabulary

Plant, leaf, grow, weed, change, living, water, healthy, pollen, flower



week

11

Term

summer 2

Science year 1 What's Growing In Our Gardens?

What is inside a flower?

Objectives

Ever wondered what is inside a flower? Take a look at flowers outside in the playground and then make a large model in the classroom.

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources

- Flower Song
- Ideas for junk flowers

Additional Resources

- Cut flowers
- Flowers from the playground
- Magnifying glasses
- Sketch books
- Chopping boards
- White paper
- Lots of junk modelling materials (tubes, boxes, cardboard, pipe cleaners, tape, etc.)



week

11

Term

summer 2

Science year 1 What's Growing In Our Gardens?

What is inside a flower?

Teaching and Activities

Teaching

- Find flowering plants and carefully examine them with a magnifying glass. Sketch and photograph them.
- Take a flowering plant to pieces and label the parts.
- Model a flowering plant using junk modelling materials.
- Understand the basic structure of a flower and the basic function of the main parts.

Activities

1. Carefully examine flowers with a magnifying glass and become familiar with the inside of a flower.
2. Make a large model of the inside of a flower using junk modelling materials.
3. Understand the basic structure of a flowering plant and the basic function of the main parts.

Investigation - exploring, researching and analysing secondary sources

- Find flowers outside in the playground and carefully examine them with a magnifying glass. Sketch and photograph them.
- Make a large model of the inside of a flower using junk modelling materials.

Vocabulary

Plant, leaf, grow, deciduous, evergreen, roots, stem, leaves, flower

Term by Term Objectives



year 1

week

12

Term

summer 2

Science year 1 What's Growing In Our Gardens?

What is inside a tree?

Objectives

Look around at all the different trees in the area. Do leaf and bark rubbings outside, talk about trees and then create a large piece of art on the playground floor.

Science Objectives

- i) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- ii) Identify and describe the basic structure of a variety of common flowering plants, including trees.

Working Scientifically

- Ask simple questions and recognise that they can be answered in different ways.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use their observations and ideas to suggest answers to questions.
- Gather and record data to help answer questions.

You Will Need

Provided Resources

- Images of trees
- Tree measuring challenge

Additional Resources

- Leaves from deciduous and evergreen trees
- Wax crayons
- Paper
- Tape measures or paper rulers
- Chalk
- Coloured paper
- Strips of material (browns, greens, orange)
- Skipping ropes
- Bags
- Large pieces of fabric

week

12

Term

summer 2

Science year 1 What's Growing In Our Gardens?

What is inside a tree?

Teaching and Activities

Teaching

- Note a variety of trees and discuss their similarities and differences.
- Take bark and leaf rubbings using paper and wax crayons.
- Represent a tree through playground art and record their art pieces.
- Invite another class to see their art work.

Activities

1. Explore the outdoor area, looking specifically at the trees.
2. Discuss and become familiar with the similarities and differences between evergreen and deciduous trees.
3. Represent a tree through playground art, using cloths, chalk and found materials.
4. Show an awareness of the role of the roots, bark, trunk, branches and leaves of a tree.

Investigation - exploring

- Do bark and leaf rubbings using paper and wax crayons.
- Understand the basic structure of a tree and what goes on inside.
- Represent the inside of a tree through playground art, using cloths, chalk and found materials.

Vocabulary

Plant, leaf, grow, deciduous, evergreen, roots, stem, leaves, flower, trunk, bark