A LESSON TO USE AT THE START OF ALL OTHERS:

Go on a Nature Walk

Background

- We are no longer living in a world where going outside comes naturally to us. Bringing children outside the classroom on a nature walk to observe the outdoors actively connects them to it.
- At the start of each science lesson have a 10-minute nature walk, (though it can also be a lesson in itself, as seen below).

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things, environmental awareness and care	Plant and animal life, caring for the environment
SPHE	Myself and the wider world	Environmental care
Geography	Natural environments, environmental awareness and care	The local natural environment, weather, climate and atmosphere
English	Oral language, writing	Communicating, understanding, exploring and using

Before leaving the classroom

1. Remind the pupils that even though they are outside, the same rules apply as in the classroom.
2. Wear appropriate clothing and footwear, as necessary.
3. Get school management permission if going outside school grounds. Abide by your school's health and safety polices.
4. Bring a notepad and pencil, bug viewers, camera for pictures or collection bags, if required.
5. Split the class into groups of three or four to work together on tasks.
6. Stay out for 5-40 minutes by trying one or more of these tasks at a time.

During the lesson

Start by getting the pupils to name the month and season and to look at the sky and describe the clouds, wind speed and direction, temperature and rainfall. Then take your pick from below:

Make leaf rubbings	Make a skeleton with sticks	Find 5 mini-beasts	Leave bread crumbs for birds	Play tag or tip the can	Sketch a tree and its roots
Have a silent sound walk	Build tall stone stacks	Sketch wildflowers	Make a fairy fort	Have a woollies & wellies walk	Make bark rubbings
Take photos	Dig holes	Sketch clouds	Make mud pies	Walk barefoot	Hug a tree
Make pictures with leaves, twigs and stones	Collect items listed in a scavenger hunt	Collect sets of items or go on a maths trail	Find 5 different types of birds	Put a sheet under a tree and shake the tree	Collect and press wildflowers

Adopt a tree outside for the year and watch it grow and change.
Observe the leaves, flowers, fruit, seeds and bark.
Record observations in a notebook and sketch the tree over the course of the year.

After the lesson

Get the pupils to wash their hands and write in their diaries or scrapbooks five things they learned, and to stick in samples of items found, if time allows. Unnamed items can be researched and photos displayed.

Web Links

- www.adoptatreeproject.com and www.schoolearthed.ie/pdf/intouch/ZoomInOnTrees_JanFeb2012.pdf (first published in the INTO Intouch magazine) for ideas when focusing on a tree for a year.
- Have a Bring Your Own Device (BYOD) nature walk. Get the pupils to download the app Persil Wild Explorers to their own devices or school iPads.

SEPTEMBER

COMMON IRISH BUTTERFLIES MATCHING SETS ACTIVITY

HOW TO USE THE SET

- Photocopy, cut out and laminate six sets of the pictures and text about Ireland's most common butterflies.
- Divide your class into groups and ask them to match each picture to the correct piece of text.
- As the pupils are completing the task, give the name of a different butterfly to each group.
- Tell them that, at the end, the group will have to remember and relate a fact each about their butterfly.
- When groups are finished, give them their score out of eight.
- Finally, get each group in turn to stand up and relate facts about their butterfly.

Small Tortoiseshell

Rúan beag *Aglais urticae*

Fact File – This native orange, black and cream butterfly is found on the buddleia plant and lays its eggs on nettles.

Life Cycle – Adults usually come out of hibernation in March or April. They usually have two broods of young black and yellow caterpillars. The young drink nectar from plants in summer to help survive hibernation.

Small White

Bánóg bheag *Pieris rapae*

Fact File – The small and large white is also known as the "cabbage white" and is the enemy of gardeners.

Life Cycle – Females lay single eggs on the bottom side of cabbage and nasturtium leaves. Green caterpillars hatch from these eggs and eat holes in the leaves. Pupae can be found on walls or in sheds. Hatched adults or pupae hibernate.

Red Admiral

Aimiréal dearg *Vanessa atalanta*

Fact File –This is a visitor to Ireland from May to September. It is dark brown and white with a red stripe on each wing.

Life Cycle – Females lay single eggs which look like tiny gooseberries on nettle leaves which the black caterpillars then eat. Its life cycle takes 8 weeks from beginning to end. Most do not survive our winter.

Speckled Wood

Breacfhéileacán Coille *Pararge aegeria*

Fact File – This native brown, black and white butterfly hides in woods and hedges. Adults fight for their own feeding areas.

Life Cycle – The female lays one or two eggs which are tiny clear spheres, on grasses. Tiny green caterpillars then feed on the grass. After pupating, adults hibernate for winter. Up to three broods can be hatched in a season.

Common Blue

Gormán coiteann *Polyommatus icarus*

Fact File – This native blue butterfly is found all over Ireland. Adults can be found in groups of up to 100.

Life Cycle – Adults are seen between May and September. White eggs are laid one at a time on the bird's-foot trefoil, white clover and thistle plant which the green caterpillars then eat. They then pupate and hibernate.

Orange Tip

Barr buí *Anthocharus cardamines*

Fact File – Males have orange tips on wings, but females' tips are black. Found in lanes, river banks and meadows.

Life Cycle – Orange eggs are laid on leaves of the cuckoo flower or garlic mustard. They hatch into green caterpillars that then turn into green pupae and hibernate. Adults come out the following spring.

Painted Lady

Áilleán *Vanessa cardui*

Fact File – The black, orange and white painted lady butterfly is a visitor to Ireland in summer. It begins its journey in North Africa in spring and travels through Europe. Thistles and nettles are its main food.

Life Cycle – The life cycle from egg to adult is 3 weeks. The caterpillars are spiky, black and yellow and eat nettles. Hatch out in class with packs from www.insectlore.co.uk. Adults travel back to Africa in autumn, travelling 2,000km per month.

Peacock

Péacóg *Inachis io*

Fact File –This is the most beautiful Irish butterfly with four false eyes on its wings to scare away predators. It can also make a hissing sound by rubbing its wings. It is found in gardens, woodlands and hedges.

Life Cycle – Females lay up to 400 green eggs together in spring or summer on nettle leaves. Black caterpillars hatch and eat the leaves. Adults come out of pupae and feed on nectar before hibernating for winter.

Small Tortoiseshell

Small White

Red Admiral

Speckled Wood

Common Blue

Orange Tip

Painted Lady

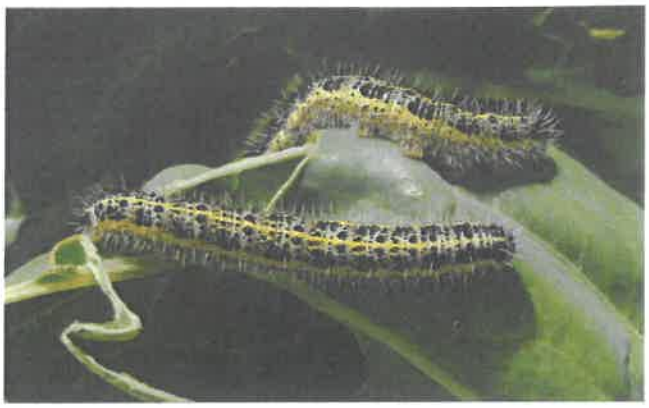
Peacock

September

IRISH BUTTERFLY ACTIVITIES FOR PUPILS

Background Info and Fun Facts

- September is a great time to watch the caterpillar of the cabbage white butterfly. The adult butterfly lays between 40 and 100 eggs at a time on cabbage and nasturtium plants.
- Caterpillars of the large white butterflies are black, white and yellow. They live on the outside of plants, as they contain a toxic substance, which makes them a disgusting meal for predators!
- Small white caterpillars are green and yellow and are better camouflaged.



- Plant buddleia shrubs around your school and some nasturtiums and cabbages in raised beds then you will always have butterflies. Also leave a wild space in school for nettles and thistles to grow as some other butterflies lay eggs on these plants.

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things, materials	Animal life, materials and change
English	Oral language, writing	Writing independently in a diary

Study Caterpillars in a Viewer (Junior and Senior)

1. Cut the bottom off a 5-litre water bottle with a strong pair of scissors.
2. Fill a jar with water, turn the 5-litre bottle upside down and attach to the lid of the jar with masking tape.
3. Place the cabbage leaves, with five or six eggs on the stems, into the jar and block it up with cotton wool so caterpillars won't fall in the water!
4. Place the J-Cloth over the top of the 5-litre bottle and tie with an elastic band.
5. Keep the viewer in class. Get the pupils to keep a diary of changes they see.
6. Remove caterpillars with a paint brush when cleaning the viewer. Empty out caterpillar waste, water and wood and replace the latter two. Watch the caterpillars change to pupae and when they do, leave the container in a shed over the winter.

7. In late spring they will emerge as butterflies and can be released in a ceremony at school.

Resources

Masking tape, a 5-litre plastic water bottle, jar, cotton wool, J-Cloth, elastic band, cabbage leaves and five or six cabbage white caterpillars.

Web Links

- Check out www.schoolearthed.ie/paddys-school-garden/video-sep-caterpillar.html for a video of this lesson by Paddy Madden and www.schoolearthed.ie/pdf/intouch/WorkingInTandem_Sept11.pdf (first published in the INTO *Intouch* magazine).
- Cheat and see the full life cycle of non-native painted lady butterflies in just 3 weeks by ordering hatching sets on www.insectlore.eu. Everything is delivered. Just make sure to do this activity in autumn and not winter or spring, as the released butterflies will die in the cold.

October

HYACINTH BULB EXPERIMENT[2]

Background Info and Fun Facts

- The wild hyacinth comes from Turkey and the Middle East.
- The common garden hyacinth is mainly grown in the Netherlands for perfume.
- World Hyacinth Day takes place on 7th March each year.
- In the Victorian era language of flowers, the hyacinth in general is a symbol of sport or play, while the blue hyacinth stands for sincerity.

- As with other bulbs, the beauty of the hyacinth is that all the food is stored in the plant so it only requires water to grow.
- Be careful as some people find that hyacinth bulbs irritate their skin.

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things, materials	Plant life, materials and change
Mathematics	Data	Recognising and interpreting data
English	Writing	Writing independently in a diary

Lesson Content

1. Cut the top off three plastic bottles and place a hyacinth bulb on the top, as shown in the picture.
2. Fill the bottles with rain water (or tap water poured and left to stand for a week before use).
3. Fill one bottle with water 3cm short of the top, one 6cm and one 9cm.
4. Place a bulb on top of each bottle, as shown in the picture, and place in a press with the door slightly ajar.
5. Ask all pupils to estimate which bulb will flower first and why.
6. Measure and record growth in each bulb weekly in a hyacinth diary.
7. Check every week and top up with water, when necessary.
8. Remove from the press when shoots are 4–5cm high and place somewhere in the class in view.
9. Discuss results and conclusions. When the flower has withered, remove from the plastic container and plant outside.

Resources

Three hyacinth bulbs, three empty 2 litre plastic bottles, scissors, marker, rain water.

Web Links

- Check out www.schoolearthed.ie/paddys-school-garden/video-sep-hyacinths.html to see a video by Paddy Madden on how to plant a bulb in a bottle.

2. Source for this lesson: Paddy Madden

October

PLANT A TREE[3]

Background Info and Fun Facts

- Up to 6,000 years ago, forests of oak, ash, elm, birch and hazel covered Ireland's landscape. By 1900 less than 1% of these forests remained. We are still one of the least forested countries in Europe, with forests covering only approximately 6% of the land.
- Trees are important for their timber, beauty, and habitats for birds, mammals and insects. They also provide clean air and have had a huge impact on our culture and society.
- Native trees attract more species of organisms to live on them than non-native trees. The oak, willow and birch are habitats for many more insects than the recent visitor, the horse chestnut.

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things, environmental awareness and care	Plant life, caring for the environment

Lesson Content

1. Cut the top third off the carton and pierce some holes in the bottom for drainage.
2. Place some pebbles in the bottom of the carton.
3. Mix sand and potting compost in two equal parts and place on top of the pebbles.
4. Place the seed in the compost and cover with some more compost and sand mix.
5. Water the soil and leave the carton on a window sill or sheltered place.
6. Ask pupils to label the carton with their name, type of seed, class and date.
7. Water, as required, and watch for germination from March onwards.
8. Plant some extras, as they will not all germinate. That's nature for you!

Resources

A clean empty 1-litre milk carton, pebbles, scissors, play sand and seeds (easy to grow are acorn and horse chestnut). Check seed viability by placing seeds in water. Those that sink will not germinate.

Web Links

- Click on www.treeday.ie to find out more about Ireland's trees.
- www.schoolearthed.ie/paddys-school-garden/video-oct-sow-acorn.html for a video of this lesson.

3. Source for this lesson: Paddy Madden

October

GO ON A BAREFOOT WALK

Background Info and Fun Facts

- Not too long ago, everyone went barefoot during warm and dry weather. A lot of research findings presented now claim that walking barefoot helps with balance, sleep, wellness and posture.
- This is a great simple lesson for pupils to get mucky, close to nature and have fun all at the same time.
- This activity is one of the "50 things to do before you're 11¾", which was launched in 2012 by the National Trust in the UK.

Curriculum Links

Subject	Strand	Strand Unit
SPHE	Myself	Taking care of my body
Geography	Environmental awareness and care	Effects of human activities on the environment
English	Oral language, writing	Communicating, understanding, exploring and using

Lesson Content

1. Research an area of the school grounds or locally that is safe for a barefoot walk. It could simply be a piece of lawn, a muddy track, a forest floor, a stony path or, if you are lucky enough to have your school near the sea, on sand.
2. As you would do with any lesson, carry out an informal risk assessment to check that the path or area is free from any objects such as glass, sharp stones or poo!
3. Before taking off on the walk, ask the pupils to think of what it feels like when their bare feet walk on the ground. Is it tickly, sore, mucky or warm? Can they feel changes in the ground under their feet?

4. If you are feeling very adventurous, try some barefoot games, such as getting pupils to try and pick up pebbles between their toes, fold a jumper with their feet or have a tippy-toe race.
5. If muddy, ask pupils to wash their feet before entering the classroom again.
6. Get the pupils to recount their experiences as oral language and/or written exercises.

Resources

Bare feet, water and a towel to clean toes afterwards, plus a sense of adventure.

Web Links

- Google schoolsonline.britishcouncil.org/classroom-resources/schools-world-service/resources/school-journeys-barefoot-in-kenya-primary to see a great short video on Kenyan pupils who walk up to 15km to school each day barefoot!
- Have a look at www.nationaltrust.org.uk/50-things-to-do to see all 50 things to do before you're 11¾.

October

MUCK PAINTING

Background Info and Fun Facts

- Prehistoric paintings made with muck, ground up stones and animal fat have been found around the world, with some drawn as many as 40,000 years ago.
- In 1940, four boys out playing in France found their lost dog in a cave with art all over the walls. It turned out to be the Lascaux paintings which had been there for 15,000 years and are now world famous.
- Making muck paintings is a great way for the pupils to use fun outdoor materials while linking in with art from the past.
- The lesson can be as clean or as messy as you want it to be. Include it as an outdoor Aistear station, an outdoor visual arts lesson or inside, as a normal painting lesson. We are going for the wilder outdoor lesson here.

Curriculum Links

Subject	Strand	Strand Unit
Visual Arts	Paint and colour	Painting
History	Early people and ancient societies	Stone-age people, Australasian people

Lesson Content

1. Discuss cave paintings or aboriginal art with the pupils and the natural materials used. The YouTube video below is a good starting point.
2. Collect some soil outdoors in containers. If possible, try to get samples of different colours. Remove any stones or poor worms.
3. Add some water and mix to the consistency of paint.

4. Get the pupils to paint with the muck paint and a paint brush. You may have a theme for them or stick with the idea of a painting that will be viewed in thousands of years' time.
5. If you want to be very adventurous, you can get them to paint it on a stone or rock outside.

Resources

A bucket or plastic box, soil, compost, water, thick paper, paintbrushes, cottonbuds, appropriate clothing if in inclement weather (for the best lessons!).

Web Links

- Google https://www.youtube.com/watch?v=V6I1ZyJjqrs to show the pupils a great video on the best cave paintings in the world.
- https://www.earlychildhoodireland.ie/work/quality-practice/play/mud-play/ for some more ideas at infant level for mud play.

November

COMMON IRISH TREE LEAVES MATCHING SETS ACTIVITY

HOW TO USE THE SET

- Photocopy, cut out and laminate six sets of the pictures and text about Ireland's most common tree leaves.
- Divide your class into groups and ask them to match each picture to the correct piece of text.
- As the pupils are completing the task, give the name of a different leaf to each group.
- Tell them that, at the end, the group will have to each remember and relate a fact each about their leaf.
- When groups think they are finished, give them their score out of eight.
- Finally, get each group in turn to stand up and relate facts about their leaf.

Ash

Fuinseog *Fraxinus excelsior*

Fact File – Ash is native to Ireland. Its leaves cannot survive frost and so it is one of the last trees to come out in leaf in spring from a black bud. Its leaf is made up of a long stem with three to six pairs of light green leaflets.

Uses – Hurley sticks, snooker cues, firewood and furniture. One hectare of ash forest can make 3,800 hurleys.

Alder

Fearnóg *Alnus glutinosa*

Fact File – Alder is native to Ireland. Trees can grow in water and are found in damp areas. Their leaves are round, leathery, dark green and sometimes confused with hazel. When cut, the pale wood turns orange.

Uses – Clogs, charcoal, furniture and construction. Alder timber was used to build bridges in Venice.

Oak

Dair *Quercus*

Fact File – There are two types: sessile (national tree of Ireland) and pendunculate. The oak hosts more wildlife than any other tree. A single green leaf has four to six rounded lobes on each side.

Uses – Construction, furniture, flooring, kitchens and ship building. The oak is the king of trees.

Sycamore

Seiceamar *Acer pseudoplatanus*

Fact File – The sycamore is not native to Ireland but is now a very common tree in hedgerows. Its single leaf, which grows from a green bud, has five toothed points. They get black tar spots on them in autumn.

Uses – Furniture and kitchenware. Flowers are a source of nectar for insects. Sycamores make "helicopter" seeds.

Rowan

Caorthann *Sorbus aucuparia*

Fact File – Native tree which grows all over Ireland, especially on hills. It is so hardy it grows inside the Arctic Circle! Green leaves have a long stem and six to seven pairs of sharp leaflets. The Celts called it the wizard's tree.

Uses – Engraving and craft wood. Ice cream can be made with the vitamin C-filled, bright red berries!

Holly

Cuileann *Ilex aquifolium*

Fact File – Its leaves are spiky to stop animals eating them and are a glossy, green colour. Holly berries are a great food for birds in winter. Eating them will give you stomach cramps! It is bad luck to cut a holly tree down.

Uses – Chess pieces, Christmas wreaths and chariot wheels and spears in olden times. Its wood is very hard.

Hawthorn

Sceach gheal *Crataegus monogyna*

Fact File – The thorny hawthorn is native to Ireland and is usually found in hedges where its white scented flowers appear in May. Its leaf, which is edible, is small with three to five pointed lobes.

Uses – Firewood, and its nectar and red berries are used by wildlife. Linked with fairy life and bad luck to cut down.

Downy Birch

Beith chlúmhach *Betula pubescens*

Fact File – Its bark is white and smooth, giving it its name. The leaf is small, green and in the shape of a triangle. Very fast growing and loves wet and boggy soil. It only lives for 100–200 years.

Uses – Plywood, handles, and is a habitat or food source for over 300 types of wildlife.

Ash

Rowan

Alder

Holly

Oak

Hawthorn

Sycamore

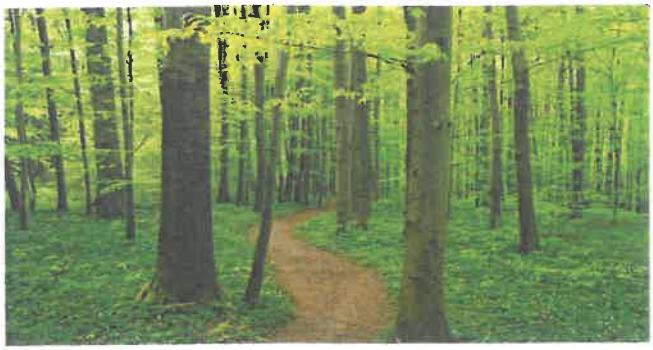
Downy Birch

November

IRISH TREE ACTIVITIES FOR PUPILS

Background Info and Fun Facts

- Trees provide wood for building and making paper, food from their fruit, such as apples, pears and plums and habitats for many living things.
- Trees are also known as the lungs of the earth. We breathe in oxygen and breathe out carbon dioxide. Trees do the opposite.



- Trees are also beautiful. Poems, stories, songs and paintings have all used trees as their inspiration.

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things	Plant life
Mathematics	Measures	Length
Visual Arts	Drawing	Making drawings

1. Find the Age of a Tree (Senior)

- You will need a measuring tape, string and a log to see rings.
- Explain to pupils that a tree trunk grows outwards by about 2.5cm per year and makes a ring. Show the pupils the rings on a cross-section of a branch or log. A new ring is made each year.
- Ask pupils to guess the tree age and the reason for their guess.
- Finally, get a pupil to bring a piece of string all the way around a tree trunk. Do this about 1.5 metres up from the ground. Then lay the string on the ground, marking its length (diameter of the tree).
- Measure the length of string with a measuring tape and get the pupils to divide this number by 2.5. This is the approximate age of the tree without having to cut it down and count the rings.

2. Make Leaf or Bark Rubbings (Junior)

- Find some trees outside with different leaves and bark.
- Get the pupils to close their eyes and feel the bark. How does it feel? Is it rough or smooth?
- Hold a piece of paper against the trunk and rub it with the side of the crayon. Do the same with other trunk barks.
- Then collect some leaves from different trees. Get pupils to close their eyes and rub them. How do they feel? Then put them on a hard surface, place a sheet over and rub them the same way as the bark.
- Get pupils to lay the sheets out and see if they can match the right bark with the right leaf.

Web Links

- Check out www.saps.org.uk/?text=Tree+Height+&option=com_qflarticlesfilter&view=articles&Itemid=0&qfl-search=1&modulename=Articles+Filter to find the height of a tree.
- Try www.youtube.com/watch?v=_ky1lIM_Gok for an informative video on the needs of a tree.

November

BUILD A HEDGEHOG HOTEL[4]

Background Info and Fun Facts

- It is hard to teach pupils about mammals when they are difficult to see in the wild. This lesson will raise awareness of them in the school environment and you may be lucky enough to find a winter lodger!
- Hedgehogs are not native but were brought to Ireland by the Vikings as a food source.
- They live in woodlands, gardens and hedgerows. They are carnivores. If one appears in your garden, feed it dog food and water. Their enemies are badgers, foxes, pesticides and cars.
- Hedgehogs have their young in June and feed them and teach them to prepare for hibernation from October to March. They must be 500g weight to survive hibernation.
- Hedgehogs are agile climbers and can swim. They also host lots of fleas.

Curriculum Links

Subject	Strand	Strand Unit
Science	Living things	Animal life
English	Oral language, writing	Communicating, understanding, exploring and using

Lesson Content

1. Put the materials needed on the board at the beginning of the week for pupils to bring in. Tick them off as they arrive.
2. Discuss the hedgehog life cycle and information about its life. Watch a great video on The Year of the Hedgehog at www.youtube.com/watch?v=8eXpBzDb098.
3. Ask the pupils to choose a quiet secluded area in the school grounds where a hedgehog might hibernate.
4. Cut a 15cm opening at the front of the box for entry.
5. Put the box in a black bag and place in a secluded area. Pack between the box and bag, as well as inside the bag, with straw, for insulation.
6. Place logs on top to keep in place. Secure with hammer and nails.
7. Place six bricks at the front to make a tunnel for entry (see pic).

Resources

Cardboard box, scissors, leaves, shredded paper or straw, black bin bag, six bricks, branches 1 metre long, hammer and nails.

Teacher Hints and Tips

- Arrange pupils to take turns to put each part of the hedgehog hotel in place, or arrange them in teams of four to see which group can make the best hotel.
- Get the pupils to complete a procedural writing entry in their SESE copies, outlining their lesson and what facts they remember about the hedgehog's life.

Web Links

- Check out www.schoolearthed.ie/paddys-school-garden/video-nov-hedgehog-house.html to see a video of Paddy Madden demonstrating this lesson.
- Click on www.activityvillage.co.uk/hedgehogs for printable hedgehog worksheets and art ideas.

4. Source for this lesson: Paddy Madden

November

CAR PARK MATHEMATICS I[5]

Background

- Every school has a car park and it is a great resource to carry out activities covering maths strands in one lesson.

Curriculum Links

Subject	Strand	Strand Unit
Mathematics	Number, shape and space, measures and data	Multiple!

Activity

1. Remind the pupils that even though they are outside, the same rules apply as in the classroom.
2. Wear appropriate clothing and footwear.
3. Divide the class into groups of three – a recorder, a checker and a timekeeper.
4. Photocopy this sheet for each senior group and just instruct junior pupils. Each senior group of three should have a sheet, measuring tape, watch, clipboard and pencil.

Measures

1. Junior: Put these things in order starting with the shortest (gate, wall, field, window, door).
2. Junior: How many seconds do you think it will take to drive a car from _____ to _____?
3. Senior: What time is it now? _____am/pm and ___:___ (24 hour clock).
4. Senior: Find the make and model of the three longest cars. _____

Shape and Space

1. Junior: Can you find Sammy circle, Rex rectangle? Hide shapes outside beforehand.
2. Senior: Find one example of symmetry you can see. _____

Number

1. Junior: In groups of five, run from ____ to ____. List who comes first, second, third, fourth and fifth.
2. Junior: How many front seats are there in two/three/four or five cars? _____
3. Senior: How many cars are there in total? _____
4. Senior: Pick any three cars. Which number plate has the highest value if A=1, B=2, C=3, etc.? Example registration plate 15 D 2412 = 15 + 4 + 2412 = 2431
   1. _____ 2. _____ 3. _____

Data

1. Junior: How many cars are there of each colour? Draw the amount of each on a chart.
2. Junior: Which car would you prefer to own and why? _____
3. Senior: Stand at the car park gate. How many vehicles pass the school in 5 minutes? _____
4. Senior: Make a simple graph on the back of this page of your results.

Web Links

- Log on to www.pdst.ie/ProblemSolving for ideas on activities for junior pupils and for excellent resources on maths activities for outdoors generally.
- Bring a digital camera out to take some pictures of your puzzles and tweet them to other schools, or put them on your school website.

5. This lesson is adapted from a resource by Sean Delaney, mathematics educator at the Marino Institute of Education. To find more resources check out seandelaney.com/resources-for-teachers/