

Your child is learning about the colours red, blue, green and yellow. The colours were first introduced to the children in Junior Infants using stories, games and poetry.

Research has shown that when parents engage actively in their child's education, s/he is more likely to perform well in school. The child is more likely to be happier and have higher self-esteem, which leads to better progress across all subjects on the curriculum.

Colours at home

Talk to your child about the colours red, blue, green and yellow. Ask him/her to name objects around the house that are these colours, for example:

Red items: apples, roses, cars, balloons, tea set, cups, mugs, clothes, hats, scarves, meat, etc.

Blue items: bluebells, butterflies, footballs, cots, clothes, prams, tent, Garda uniform, sky, etc.

Green items: frogs, grass, trees, leaves, hedges, clothes, markers, Irish jerseys/flags, etc.

Yellow items: Wellington boots, bananas, daffodils, sun, sunflowers, cars, buses, balls, coats, butter, cheese, etc.

Game: I spy...

Take turns with your child playing the game 'I spy' by saying: 'I spy with my little eye something with the colour red/blue', etc.

Game: Find the colour

Gather together a number of red, blue, green and yellow objects. Scatter a number of red, blue and red objects on the kitchen table, but put only one yellow object in the set. Ask your child to pick out the one yellow object. Vary the game by having only one red, green or blue object among the other coloured objects.

Read and discuss

Read the fairy tale *Little Red Riding Hood* and discuss the colours as they crop up in the text.

Poetry

- Before reading, ask your child to talk about the title of each poem.
- Ask him/her what things, objects or items might be mentioned in each poem before you read.
- Read the four poems to your child over a number of days and discuss what each one is about.

Red

Red is an apple,
Red is a rose,
Red is the colour of
My frozen, icy nose.

Blue

Blue is the ocean,
Blue are my eyes,
Blue is the sky where
The lonely eagle flies.

Green

Green is the grass,
Under both my feet,
And green is the broccoli
My mother makes me eat.

Yellow

Yellow is a lemon,
Yellow is a star,
Yellow is the sun
In the sky so far.

Mary Flynn

- Check to see if any of the items s/he predicted earlier were mentioned in the poem.
- Over time, s/he may memorise some or all of the poems.
- Encourage your child to think about: why the poet's nose might be frozen/icy; why the eagle might be lonely; why we should eat broccoli.

Your child is carrying out a wide range of matching activities. These activities are introduced using objects that are known to them or using concrete materials found in everyday life. They are also learning a number of matching games.

Matching pairs of identical objects

Gather together a number of pairs of household objects, e.g. two spoons. Pick up an object and ask your child to find its match for you, e.g. a cup to a cup/mug to mug/spoon to spoon, etc. Your child needs to acquire the mathematical language for matching. You can help him/her by asking some of the following questions: *Show me a match for the cup. Is the mug a match for the cup? How are the cup and the mug different? How are they the same?*

Matching related pairs of objects

Take a number of household objects and ask your child to find a related pair – objects that are not identical but are connected/related to each other, e.g. cup to a saucer; knife to a fork; sock to a shoe, etc.

This can lead to a discussion about other things that might be considered to be related pairs of objects, e.g. dog to a bone/mouse to cheese/squirrel to a nut/horse to a stable/pen to writing paper/sandwich to a lunchbox/pencil to a pencil case, etc.

Match the fridge magnets

Place a number of pairs of identical fridge magnets on the fridge door – letters/animals or anything that is to hand. Ask your child to put the similar/identical pairs of objects together on the fridge door.

Match the socks

When the washing is dry, ask your child to help you match the socks into pairs – this is a fun and practical way to learn mathematics.

Memory card game

Get a standard pack of playing cards. Place all the cards face down on the kitchen table or on the floor. This game can be played by up to five players. The players take it in turns to turn over two cards each. The object of the game is to find as many matching pairs of cards as possible. If the player finds a matching pair, s/he keeps the cards and is given another turn. If s/he does not find a pair, the cards are shown to the other players and placed face down on the table. The game continues until all cards on the table have been matched. The player with the most pairs wins the game.

Snap

This card game can be played by two–five players in the home. Divide the pack of cards into equal numbers. It doesn't matter if one or two players have an extra card. One player starts the game by placing a card face upwards on the table. The next player then places a card on top of the first on and so on. The game must move quickly and players should not hesitate when placing their cards on the table. The object of the game is to spot consecutive cards that are pairs. The first player who sees the pair and places his/her hand on the pair while shouting out 'Snap' or 'War' wins the pile of cards. The game continues until one player has all the cards.

Things that come in pairs

Talk to your child about objects that usually come in pairs, e.g. glasses, sunglasses, scissors, clippers, headphones, socks, shoes, skates, twins, etc. and body parts that are in pairs, e.g. eyes, ears, lungs, legs, etc.

Talk about a pair

Ask your child to collect as many objects in the home as s/he can that come in pairs. S/he may be asked by the teacher to bring in a pair of objects and to talk about the pair. Encourage him/her to practise what s/he might say.

Your child is revising counting sets of objects from 0–10. S/he is also revising work done on the numbers 0–5 as well as work done on sets/groups of five over the coming days. Your child needs to know the mathematical language associated with the numerals 0–5, e.g. How many?, trace, write the numeral, colour, count, ring, row, yellow, green, blue, red, and, make, is the same as, etc.

Counting to 10

Place ten objects that are to hand (spools, beads, spoons, counters, cups) on the table and ask your child to count them forwards and backwards.

Music

Sing the following song with your child:

Ten Green Bottles

Ten green bottles hanging on the wall,
Ten green bottles hanging on the wall,
And if one green bottle should accidentally fall,
There'll be nine green bottles hanging on the wall.

Continue all the way down to:

One green bottle hanging on the wall,
One green bottle hanging on the wall,
And if one green bottle should accidentally fall,
There'll be no green bottles hanging on the wall.

Numerals 0–5

Practise writing the numerals 0–5

Practise writing the numerals 0–5 with your child using a pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numerals with their finger.

Variation: Use playdough/plasticine/shaving foam to make the numerals 0–5.

Game: What's my number?

Have your child stand with his/her back to you. Trace one of the numerals 0, 1, 2, 3, 4 or 5 on his/her back. The object of the game is for your child to guess the numeral you are tracing. When your child answers correctly, s/he gets the opportunity to trace one of the numerals 0–5 on your back.

The numerals 0–5 around us

Highlight to your child or get him/her to tell you where s/he might see the numerals 0–5 around them, e.g. calendar, doors, streets, mobile/landline phones, prices in the supermarket, calculators, Lotto tickets, lanes in a race, scoreboards, registration plates, etc.

Plasticine/playdough numbers

If you have some plasticine/playdough, ask your child to make a number of small individual representations of the numerals 0–5 on the kitchen table/worktop.

Bring in, show and tell

The teacher may ask the children to bring in something that is connected to the number five, e.g. a five from a pack of cards. Ask your child to discuss their chosen item with you.

Combining and Partitioning Within Five

Combining sets with totals to five

Place three cups/toys/mugs/spoons, etc. on the kitchen table. Add another two objects and ask: *How many cups had we at first? How many more did we add to the set of three cups? How many cups have we altogether?* Show that 3 and 2 make 5 or 3 and 2 is the same as 5. Do this with as many objects as you can find around the house, e.g. clothes pegs, pens, markers, playing cards (add the two of hearts to the three of hearts to get the five of hearts).

Partitioning sets with totals to five

Place five objects on the table and ask: *How many objects in this set?* Partition (break up) the set by placing a pencil through the set to show 5 makes 2 and 3. Ask your child to use the pencil to make as many partitions of 5 as s/he can.

Your child is learning about numbers that go before, after and between other numbers. This is revision of work done in Junior Infants. S/he is also introduced to the **plus** (+) and **equals** (=) signs for the first time. This is done by means of games and activities using concrete materials.

Before/After/Between

Your child needs to know the mathematical language associated with before, after and between – What number/numeral, in between, in the middle, in front of, just after, just before, next to, beside, etc.

What I do before and after

Talk to your child about things s/he does before/ after significant events in his/her day and ask some of these questions:

- *What do you do before you get dressed in the morning? (I wake up/jump out of bed, etc.)*
- *What do you do after you get dressed in the morning? (I walk to the bathroom/wash my teeth/go downstairs/tie my shoelaces, etc.)*

Numbers – Before, after and between

Place some numeral cards 0–5 on the table in random order. Write the numerals on pieces of cardboard/paper/Post-it notes. Ask your child to arrange the numerals in order from 0–5. Now ask him/her some of the following:

- *Which numeral/number comes just after 2/3/4, etc.?*
- *Which numeral comes before 1/2/3, etc.?*
- *Which numeral comes between 2 and 4?*
- *Which numeral comes between 1 and 3?*
- *Which numeral comes two places before 3?*
- *Which numeral comes three places before 5?*
- *Which numeral comes two places after 3?*
- *Which numeral comes three places after 0?*
- *Which numeral comes between 3 and 5?*
- *Which numeral comes between 0 and 2?*

The Plus (+) and Equals (=) Signs

Game: Listen to the whistle – twice!

Tell your child that you are going to blow on a whistle (or an instrument) a number of times and then stop for a few seconds. You will then blow on it a number of times again. Tell him/her to count the number of times the whistle was blown, for example: Blow the whistle three times. Stop for a few seconds. Then blow the whistle once more. Then ask your child the following questions:

- *How many times did I blow the whistle the first time? (Yes, three times.)*
- *How many times did I blow the whistle the second time? (Yes, one time.)*
- *How many times did I blow the whistle altogether? (Yes, four times.)*

Variation: If you don't have a whistle you could bounce a ball instead.

So, in the sum above, 3 and 1 make 4.

Use Post-it notes or pieces of paper on which to write the words 'and', 'make' and the digits.

Your child is now ready to replace the word 'and' with the plus sign (+) and the word 'make' with the equals (=) sign.

Explain that the + sign means **and** or **plus** and the = (equals) sign means **the same as** or **makes**.

Using new Post-its, ask your child to replace 'and' and 'make' in the number sentence so the sentence now reads: $3 + 1 = 4$.

Do this with a range of similar numbers with totals to 5 or under.

Your child is comparing a range of objects according to one attribute only at a time. S/he compares three objects according to height, length and width. These comparisons are introduced to the children using stories, games and poetry. The concept of tall/short is quite difficult and can easily be confused with length, i.e. long/short. It is only with practice that the use of short, shorter and shortest in both instances will become natural to the pupil. It is of vital importance to use a **baseline** when comparing objects, i.e. that objects start from the same starting point.

Height – Tall and Short

Talk to your child about objects in the home that are tall/short; taller/shorter; tallest/shortest.

Ask him/her to name some things around the house or neighbourhood that are tall/short, e.g. members of the family, houses, tower blocks, trees, pencils, bottles, cabinets, etc.

Your child needs to learn the words tall/taller/tallest and short/shorter/shortest. Try to find some objects around the house that look similar but are of differing heights, e.g. three candles, three flower vases, three plants, etc. Place the candles on the table in any order (it doesn't matter which candle is tallest). Ask some questions, such as:

- *Is the first candle as tall as the middle candle?*
- *Is the middle candle taller than the last candle?*
- *Which candle is the shortest/tallest of all?*
- *Is the last candle shorter than the first candle?*

Now change the order of the objects and ask similar questions, for example:

- *Is the first candle still the tallest one?*
- *Is the middle candle now the shortest candle?*

Ask your child to give reasons for his/her answers.

Length – Long and Short

Talk to your child about objects in the home that are long/short; longer/shorter; longest/shortest.

Ask him/her to name some things around the house or neighbourhood that are long/short, e.g. ties, belts, shirts, trousers, ribbons, skipping ropes, thread, string, rope, nails, ladders (on ground), straws, roads, paths, etc.

Try to find some objects around the house that look similar but are of differing lengths, e.g. three belts, three ribbons, three pieces of thread, etc. Place the three belts on the table in any order (it doesn't matter which belt is longest). Ask the same type of questions used in tall/short, for example:

- *Is the first belt as long as the middle belt?*
- *Is the middle belt longer/shorter than the last belt?*

Game: The three pencils

Make an imaginary pencil by holding up your two index fingers about 8/10cm wide and say: *My pencil is long*. Have your child copy/mirror your actions and say: *My pencil is long*. Now put your arms out about 20cm wide and say: *This pencil is longer than my pencil*. Have your child mirror your actions and repeat the phrase. Now place your arms as far as they can go and holding up your index fingers, say: *The giant's pencil is the longest of all*. Again, have your child mirror your actions and repeat the phrase. The same can be done using the words short, shorter and shortest.

Width – Wide and Narrow

Talk to your child about objects in the home that are wide/narrow; wider/narrower.

Ask him/her to name some things around the house or neighbourhood that are wide/narrow, e.g. school bags, rulers, ribbons, books, television screens, lunchboxes, scarves, belts, clocks, birthday cards, windows, doors, gates, etc.

As with work on height and length, find three objects of differing widths, e.g. three books, three candles, three cooking pots, and compare.

Counting to 20

When children count numbers correctly, they are displaying an ability to recognise and count numbers in the proper order. Counting should become a fun activity for about five minutes every day. It is vitally important that, as well as being able to count forwards from 1, your child is also able to count backwards from 20. S/he should also be encouraged to count forwards or backwards from different starting numbers, e.g. 9, 12, 17, etc.

Music

Revise the song 'Ten Green Bottles' which was learned earlier in the year:

Ten Green Bottles

Ten green bottles hanging on the wall,
Ten green bottles hanging on the wall,
And if one green bottle should accidentally fall,
There'll be nine green bottles hanging on the wall.

Continue all the way down to:

One green bottle hanging on the wall,
One green bottle hanging on the wall,
And if one green bottle should accidentally fall,
There'll be no green bottles hanging on the wall.

Poetry

Say the poem 'Ten Fingers' with your child and get him/her to do the actions with you:

Ten Fingers

I have ten fingers
(hold up both hands, fingers spread)
And they all belong to me, *(point to self)*
I can make them do things –
Would you like to see?

I can shut them up tight *(make fists)*
I can open them wide *(open hands)*
I can put them together *(place palms together)*
I can make them all hide *(put hands behind back)*

I can make them jump high *(hands over head)*
I can make them jump low *(touch floor)*
I can fold them up quietly *(fold hands in lap)*
And hold them just so.

Counting to 20

Place 20 objects that are to hand (spools, beads, spoons, counters, cups) on the table and ask your child to count them forwards and backwards.

Counting game: Listen and count

It is important that your child learns to count forwards and backwards from a given number. Ask your child to count forward from a given number, e.g. 12. Drop a number of beads/sweets/counters, etc. into a biscuit tin. Say: *I am starting from 12. I am going to drop some beads into the biscuit tin. Listen carefully for the sound of the dropping beads.* S/he can silently count forward from 12 as each bead is dropped into the biscuit tin. When you stop, ask your child: *How many beads are in the tin now?* Do this a number of times using different numbers each time.

Autumn

Talk to your child about things that usually happen during the autumn season, for example:

- Leaves turn brown and fall off the trees (that is why autumn is called 'fall' in the US).
- We gather up the leaves and put them on the compost heap (to rot) to be used later to help grow crops/vegetables.
- The squirrel gathers nuts for his/her winter sleep which is called hibernation.
- The farmer saves the hay and puts it in different shaped bales.
- Vegetables such as potatoes, carrots and cabbage, and fruits such as apples and strawberries are harvested.

Poetry

Read the poem 'Down, Down!' about autumn and discuss the main things that happen.

Down, Down!

Down, down!
Yellow and brown.
The leaves are falling
Over the town.

The leaves are falling
One by one.
Summer's over.
School's begun.

Your child is learning about the numeral 6. S/he needs to know the mathematical language associated with the numeral 6 – How many?, trace, write the numeral 6, colour, count, ring, row, red, green, blue, yellow, etc.

Writing the numeral 6

When teaching the children to write the numeral 6, say: *Start at the dot. Come down and around and around again.* (See *Busy at Maths Home/School Links Book*, p.7.)

Practise writing the numeral 6

Practise writing the numeral 6 with your child using pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numeral 6 in the sand with his/her finger. You can also revise writing the numerals 0, 1, 2, 3, 4 and 5.

The numeral 6 around us

Highlight to your child or get him/her to tell you where s/he might see the numeral 6 around them, e.g. calendar, doors, streets, mobile/landline phones, prices in the supermarket, calculators, Lotto tickets, lanes in a race, scoreboards, registration plates, etc.

Making sets of six

Place a number of small objects that are normally around the house on the table, e.g. clothes' pegs, apples, grapes, spoons, tins of food, toys, etc. Have three plates on the table in a row. Ask your child to put six clothes' pegs on the first plate. Now ask him/her to put six apples on the middle plate and six toys on the last plate. Explain to your child that each plate has a set of six objects.

You can extend this activity by dividing a sheet of paper into six equal parts and drawing lines down the creases – the lines will then be the outline for each separate set of six.

Game: What's my number?

Ask your child to stand with his/her back to you. Trace one of the numerals 0, 1, 2, 3, 4, 5 or 6 on your child's back. S/he must guess the numeral. Reverse roles and ask your child to trace a numeral from 0–6 on your back. You then have to guess the numeral. This gives your child practice at writing the numerals 0–6.

Things that come in sixes

Talk to your child about objects that usually come in sixes, such as:

- six eggs (half a dozen)
- six legs on an insect (eight legs on a spider)
- six strings on a guitar
- six sides on a die (dice) or cube.

Poetry

Read and discuss the poem 'To Be Six' with your child.

To Be Six

I can say the alphabet
 Right through from A to Z.
 And print my name, so nice and neat –
 Do you want to see?
 I can count
 To ones and twos,
 Ride a bike
 And tie my shoes.
 It's super duper
 To be six –
 So tall and smart
 And full of tricks!

Game: Snap sixes

Take a standard pack of playing cards. Divide the cards as evenly as possible among 2–4 players. Each player holds the cards face down – no player should see the cards. The players take turns putting a card down. The object of the game is for the players to detect the six card. If a six is placed upwards on the table, the first child to say 'six' while putting his/her hand on the card wins. The game continues until one player has all the cards.

Combining objects within six

Place four objects, e.g. apples, on the kitchen table. Add two more objects and ask: *How many apples had we at first? How many more did we add to the set of four apples? How many apples have we altogether?* This illustrates that 4 and 2 make 6.

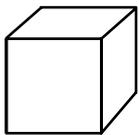
Partitioning objects within six

Place six objects on the table and ask: *How many objects are in this set?* Partition (break up) the set by placing a pencil through the set to show 1 and 5 make 6.

Your child is learning about 3-D shapes (shapes with three dimensions – length, width/breadth, height or depth). S/he is also being introduced to some patterns using 3-D shapes. The shapes are introduced by means of games and concrete materials. Your child is now expected to know the names of the shapes: cube (ice cube), cuboid (shoe box/cereal box), cylinder (tin of beans/Pringles box) or sphere (ball/orange). S/he needs to know some of the mathematical language associated with 3-D shapes – names of boxes/cartons/packets, etc. that are similar in shape to those mentioned, shapes that can/can't roll, corner, straight edge, flat face, curved face, etc.

3-D Shapes

Point out to your child some shapes around the house or when out shopping that come in the shape of a cube, cuboid, cylinder or sphere. Some of the packets may be for sweets or other unhealthy products, so emphasise the value/necessity of healthy eating to your child.



Cube – A cube has six flat faces of equal size and eight corners, e.g. die/dice, Oxo cube, ice cubes, boxes, etc.



Cuboid – A cuboid has six flat faces with the opposite faces of equal size and eight corners, e.g. cereal packets, shoeboxes, pencil cases, books.



Sphere – A sphere is round in shape, has only one flat face and no corners, e.g. footballs, tennis balls, basketballs, marbles, some lights/lamps, moon/sun and other planets.



Cylinder – A cylinder has one round face and two, flat, circular ends, e.g. tins of beans/peas/soup, Pringles/Smarties boxes, packets of mints, fire extinguishers, etc.

Breaking/making shapes

Give your child a cereal packet/Pringles box/shoebox or any other box to hand in the shape of a cube, cuboid or cylinder. Ask him/her to cut carefully along the edges to highlight the different faces on the shapes. This will also help your child's manual dexterity. Show him/her how to use a scissors properly.

Variation: Help your child to stick the faces of your chosen 3-D shape back together using glue, Sellotape or Pritt stick, etc.

Game 1: I spy

Play the game 'I spy' with your child to find objects in the house that are in the shape of a cube, cuboid, cylinder or sphere, say: I spy with my little eye something in the shape of a... cereal box (cuboid), etc.

Game 2: Roll like a sausage

Ask your child to roll like a sausage. S/he needs to know what it means to roll as they are required to recognise shapes that can/can't roll.

Activity: Can it roll?

Take a number of different objects that are to hand and ask your child if it can/can't roll, e.g. ball, cup, book, tin of beans, scissors, pencil, etc. Ask some open-ended questions (questions that require more than a yes/no answer), e.g. *Why do you think the scissors won't roll? Why won't the tin of beans roll while it is standing upright? How might you make the tin of beans roll?*

Pattern

Cut out pictures of cubes, cuboids, spheres and cylinders from newspapers/magazines or ask your child to draw some of each shape (five should be enough). Ask your child to arrange the shapes in a simple pattern, e.g. cylinder, cube, cuboid, sphere, cylinder, cube. Now encourage him/her to make more difficult patterns, e.g. cube, cube, sphere, cylinder, cube, cube, etc. Then encourage him/her to increase the difficulty level, e.g. cylinder, cuboid, cuboid, sphere, sphere, sphere, cylinder, etc.

Your child is learning about the numeral 7. S/he needs to know the mathematical language associated with the numeral 7 – How many?, trace, write the numeral 7, colour, count, ring, row, red, green, blue, yellow, etc.

Writing the numeral 7

When teaching the children to write the numeral 7, say: *Start at the dot. Go across and then come straight down.* (See *Busy at Maths Home/School Links Book*, p.12.)

Practise writing the numeral 7

Practise writing the numeral 7 with your child using pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numeral 7 in the sand with his/her finger. You can also revise writing the numerals 0, 1, 2, 3, 4, 5 and 6.

The numeral 7 around us

Highlight to your child or get him/her to tell you where s/he might see the numeral 7 around them, e.g. calendar, doors, streets, mobile/landline phones, prices in the supermarket, calculators, Lotto tickets, lanes in a race, scoreboards, registration plates, etc.

Making sets of seven

Place a number of small objects that are normally around the house on the table, e.g. clothes' pegs, apples, grapes, spoons, tins of food, toys, etc. Have three plates on the table in a row. Ask your child to put seven clothes' pegs on the first plate. Now ask him/her to put seven apples on the middle plate and seven toys on the last plate. Explain to your child that each plate has a set of seven objects.

Plasticine/playdough numbers

If you have some plasticine/playdough, ask your child to make a number of small individual representations of the numeral 7 or one large representation of it on the kitchen table/worktop.

Setting for seven

Ask your child to set the table for seven people – seven cups, seven plates, seven knives, etc.

Things that come in sevens

Talk to your child about objects that usually come in sevens, such as:

- seven days in a week
- Snow White and the Seven Dwarfs
- The Seven Wonders of the Ancient World
- seven sacraments in the Catholic Church – Baptism, Confirmation, Eucharist, Penance, Sacrament of the Sick, Matrimony and Holy Orders
- seven colours of the rainbow
- seven oceans
- Seven Wonders of the Modern World
- the drink – 7-Up
- seven is the lucky number of Harry Potter.

Game: Snap sevens

Take a standard pack of playing cards. Divide the cards as evenly as possible among 2–4 players. Each player holds the cards face down – no player should see the cards. The players take turns putting a card down. The object of the game is for the players to detect the seven card. If a seven is placed upwards on the table, the first child to say 'seven' while putting his/her hand on the card wins. The game continues until one player has all the cards.

Game: What's my number?

Ask your child to stand with his/her back to you. Trace one of the numerals 0, 1, 2, 3, 4, 5, 6 or 7 on your child's back. S/he must guess the numeral. Reverse roles and ask your child to trace a numeral from 0–7 on your back. You then have to guess the numeral. This gives your child practice at writing the numerals 0–7.

Combining objects within seven

Place two objects, e.g. apples, on the kitchen table. Add five more objects and ask: *How many apples had we at first? How many more did we add to the set of two apples? How many apples have we altogether?* This illustrates that 2 and 5 make 7.

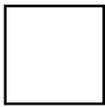
Partitioning objects within seven

Place seven objects on the table and ask: *How many objects are in this set?* Partition (break up) the set by placing a pencil through the set to show 3 and 4 make 7.

Your child is learning about 2-D shapes (shapes with only two dimensions – length and width/breadth). These shapes are introduced by means of games and concrete materials. S/he needs to know some of the mathematical language associated with 2-D shapes – names of the four shapes (square, rectangle, triangle and circle), straight side, curved side, flat face, corner.

2-D shapes around us

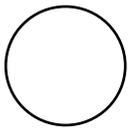
Point out to your child some objects around the house or in the environment that come in the square, rectangle, triangle and circle shapes. Emphasise that we are only looking for the shape at the front – not the 3-D shape.



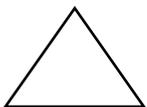
Square – Has one flat face with four straight sides of equal length, e.g. sides of boxes, dice, some floor/bathroom tiles, tabletops, some flowerbeds, some picture frames, windowpanes, etc.



Rectangle – Has one flat face with the opposite sides of equal length, e.g. most cereal packets, shoeboxes, pencil cases, books, television/computer screens, windowpanes, doors/door panels, sheets of paper, picture frames, fridges, freezers, skylights, photographs, chair seats, etc.



Circle – Has one, flat face and one curved side, e.g. clock faces, shapes on buildings, five circles in the Olympic flag, STOP sign, medals, traffic signals, hula hoops, cooker rings, mugs, cups, pots, pans, lollipops, etc.



Triangle – Has one flat face and three straight sides. The sides can be different lengths, e.g. ends of a Toblerone bar, YIELD sign, Snooker ball holder, etc.

Breaking/making shapes

Give your child a cereal box/shoebox or any other box to hand in the shape of a cube, cuboid or cylinder as done for 3-D shapes. Ask him/her to cut carefully along the edges to highlight the different faces on the shapes. This will also help your child's manual dexterity. Show him/her how to use a scissors properly.

Extension work: Help your child to stick the faces of your chosen 3-D shape back together using glue/paste/Sellotape/Pritt stick, etc. Emphasise that 2-D shapes make up each 3-D shape, e.g. two triangles and three rectangles make up the triangular prism (Toblerone bar), etc.

Poetry

Read/sing the poem/song 'Shapes'. It can be sung to the tune of 'Frère Jacques'.

Shapes

This is a square. This is a square.
How can you tell? How can you tell?
It has four sides,
All the same size.
It's a square. It's a square.

This is a circle. This is circle.
How can you tell? How can you tell?
It goes round and round,
No end can be found.
It's a circle. It's a circle.

This is a triangle. This is a triangle.
How can you tell? How can you tell?
It only has three sides,
That join to make three points.
It's a triangle. It's a triangle.

This is a rectangle. This is a rectangle.
How can you tell? How can you tell?
It has two short sides,
And it has two long sides.
It's a rectangle. It's a rectangle.

Sing the song again and ask your child to make each shape using his/her arms/fingers as s/he sings.

Measurement

Your child is learning about measuring a range of objects using non-standard units of measurement (cubes/multi-links/lollipop sticks, etc). They will not be introduced to the standard unit the metre until s/he goes into First Class. It is vital that your child learns the language of measurement – How long?, long, short, longer, shorter, longest, shortest, more, less, not as long, nearly as long as, about the same length as, about as long as, measure, estimate (guess), write.

Note: Estimation (rough, educated guess) is a skill that your child needs to practise. Give him/her many opportunities to estimate the lengths of different household objects, i.e. estimate how many cubes/lollipop sticks are needed to measure the length of an object. Then, get him/her to actually measure the object using cubes/lollipop sticks and to compare the results with their original estimates.

Get measuring

Collect a number of common household items that can be used as non-standard units of measurement (cubes, pencils, lollipop sticks, straws, markers, crayons, books, etc.), i.e. items that can be used for measuring.

Ask your child to estimate the length and width of some objects in the home, e.g. the table, using one of the non-standard units of measurement, e.g. lollipop sticks. Get him/her to record his/her estimate, e.g. eight lollipop sticks long and six lollipop sticks wide. Now get him/her to actually measure the length and width of the table using lollipop sticks. Have his/her compare his/her estimate with the actual measurement of the table. Use a number of different measuring tools to measure the table and try to elicit from your child what the best non-standard unit of measurement is:

- *How many cubes/markers/lollipop sticks did you need to measure the table?*
- *Which was the best measuring tool? Why? (The pencils were all different lengths/the cubes were too short and we needed too many of them/the lollipop sticks were all the same length and we didn't need too many of them.)*

Do this with a number of other objects, e.g. chair, windowpanes, doors, door panels, bed, bedroom, television, tiles, carpet tiles, etc.

Length and Width

Long and short things at home

Talk about objects in the home/neighbourhood that are long/longer/longest. Ask him/her to name some things around the house that are long/short, e.g. ties, belts, trousers, ribbons, nails, straws, roads, etc.

Wide and narrow things at home

Talk about objects in the home/neighbourhood that are wide/narrow. Ask him/her to name some things around the house that are wide/narrow, e.g. tie, scarf, chair, picture, etc.

Game 1: The three pencils

Make an imaginary pencil by holding up your two index fingers about 8/10cm wide and say: *My pencil is long.* Have your child copy/mirror your actions and say: *My pencil is long.* Now put your arms out about 20cm wide and say: *This pencil is longer than my pencil.* Have your child mirror your actions and repeat the phrase. Now place your arms as far as they can go and holding up your index fingers, say: *The giant's pencil is the longest of all.* Again, have your child mirror your actions and repeat the phrase. The same can be done using the words short, shorter and shortest.

Game 2: The three gates

Stand in front of your child. Hold up your two hands with palms outstretched about 8–10cm apart and say: *The gate to the house of the mouse was wide.* Have your child copy your actions and say: *The gate to the house of the mouse was wide.* Now put out your hands about 16–20cm apart with the palms in the same position as before and say: *The gate to the house of the dog was wider than the gate to the house of the mouse.* Have your child copy your actions and say: *The gate to the house of the dog was wider than the gate to the house of the mouse.* Now put your hands out as wide as possible and say: *The gate to the house of the giant was widest of all.* Have your child copy your actions and say: *The gate to the house of the giant was widest of all.* Do this a few times with your child and then ask him/her to say the poem/rhyme himself/herself.

Variation: Ask your child to make up a poem/rhyme of his/her own to show wide, wider and widest/long longer and longest.

Your child is learning about sets/groups of eight and the season of winter. S/he needs to know the mathematical language associated with the numeral (number) 8 – How many?, trace, write the numeral eight, colour, count, ring, row, red, green, blue, yellow, etc.

Numeral 8

Writing the numeral 8

When teaching the children to write the numeral 8, say: *Start at the dot, come down and make an S. Then go back up the opposite way.* (See *Busy at Maths Home/School Links Book*, p.18.)

Practise writing the numeral 8

Practise writing the numeral 8 with your child using pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numeral 8 in the sand with his/her finger. You can also revise writing the numerals 0, 1, 2, 3, 4, 5, 6 and 7.

The numeral 8 around us

Highlight to your child or get him/her to tell you where s/he might see the numeral 8 around them, e.g. calendar, doors, streets, mobile/landline phones, prices in the supermarket, calculators, Lotto tickets, lanes in a race, scoreboards, registration plates, etc.

Making sets of 8

Place a number of small objects that are normally around the house on the table, e.g. clothes' pegs, apples, grapes, spoons, tins of food, toys, etc. Have three plates on the table in a row. Ask your child to put eight clothes' pegs on the first plate. Now ask him/her to put eight apples on the middle plate and eight toys on the last plate. Explain to your child that each plate has a set of eight objects.

Things that come in 8s

Ask your child to come up with things that usually come in groups/sets of eight, such as:

- eight legs on a spider
- eight buns in packs for hamburgers/hot-dogs
- eight crayons in most packs
- eight bottles of water in most packs
- eight cans in some packs of soft drinks.

Game: Snap eights

Take a standard pack of playing cards. Divide the cards as evenly as possible among 2–4 players. Each player holds the cards face down – no player should see the cards. The players take turns putting a card down. The object of the game is for the players to detect the eight card. If an eight is placed upwards on the table, the first child to say 'eight' while putting his/her hand on the card wins. The game continues until one player has all the cards.

Playing card stories

Take a standard pack of playing cards and remove all the picture cards and the nines and tens. Ask your child to make number stories with the remaining cards, e.g. $3 + 5 = 8$. Write the + and = signs on Post-it notes.

Winter

Talk to your child about some things that usually happen during the winter season, for example:

- Deciduous trees have lost their leaves but evergreen trees such as the pine and fir still look green.
- It can be very cold and snow falls sometimes. We should look out for older people to make sure that they are warm and have enough food in their homes.
- Many animals such as the squirrel and hedgehog take their long winter sleep (hibernate).
- The weather can be very changeable. Some days can be bright and mild, while other days can be very wet and breezy.

Poetry

Read/sing the following poem/song with your child (sung to the tune of 'I'm a Little Teapot').

Little Snowman

I'm a little snowman, round and fat,
Here are my mittens,
Here is my hat.
Add a little scarf and a carrot nose.
You stand so tall when the cold wind blows.

Your child is learning about sets/groups of nine. S/he needs to know the mathematical language associated with the numeral/number 9 – How many?, trace, write the numeral nine, colour, count, ring, row, red, green, blue, yellow, etc.

Writing the Numeral 9

When teaching the children to write the numeral 9, say: *Start at the dot, come around and up and then come straight down.* (See *Busy at Maths Home/School Links Book*, p.23.)

Practise writing the numeral 9

Practise writing the numeral 9 with your child using pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numeral 9 in the sand with his/her finger. You can also revise writing the numerals 0, 1, 2, 3, 4, 5, 6, 7 and 8.

The numeral 9 around us

Highlight to your child or get him/her to tell you where s/he might see the numeral 9 around them, e.g. calendar, doors, streets, mobile/landline phones, prices in the supermarket, calculators, Lotto tickets, lanes in a race, scoreboards, registration plates, etc.

Making sets of nine

Make a simple clothesline by placing a piece of string between two chairs or by using Blu-Tack to hold the string in place across the kitchen table/wall. Give your child some clothes pegs and ask him/her to place nine clothes pegs on the clothesline. Ask your child to count as the pegs are placed on the line. When four/ five pegs are on the line, ask questions, such as:

- *How many pegs are on the line now?*
- *If we put two more pegs on, how many are there on the line then?*

Making necklaces of nine

Give your child a piece of string, twine or thread as well as nine beads, spools or buttons. Ask him/her to make a necklace. They can also make a necklace using nine bottle tops or circles/squares/rectangles/triangles cut out from A4 paper.

Setting for nine

Ask your child to set the table for nine people – nine cups, nine saucers, nine plates, nine knives, etc.

Game 1: Listen to the marbles!

Get a biscuit tin and some marbles/counters/buttons, etc. Tell your child that you are going to drop some marbles into the tin, stop for a few seconds and then drop some more marbles into the tin, e.g. drop five marbles into the tin, pause and then drop four more in. Then ask your child:

- *How many did I drop in first?*
- *How many did I drop in next?*
- *How many marbles did I drop in altogether?*

Encourage your child to try to remember the first number and to keep it in his/her head. Do the same with a number of other sums with totals up to and including nine. Start with some easy sums and progress to more difficult ones.

Extension work: Make this game more difficult by dropping three sets of marbles into the tin so the children have to add three numbers together.

Game 2: Snap nines

Take a standard pack of playing cards. Divide the cards as evenly as possible among 2–4 players. Each player holds the cards face down – no player should see the cards. The players take turns putting a card down. The object of the game is for the players to detect the nine card. If a nine is placed upwards on the table, the first child to say 'nine' while putting his/her hand on the card wins. The game continues until one player has all the cards.

Game 3: Domino nines

Give your child a box of dominoes. Ask him/her to find all the dominoes that make a total of nine.

Game 4: Dice nines

Take two dice. This game can be played with 2–4 players. The players take it in turns to throw the two dice. The object of the game is to get only totals of nine, e.g. a six and a three/a four and a five, etc. One player keeps the score. Whichever player has the most nines after a defined number of throws wins. The game should last for at least 10 throws from each player and can go up to 20 throws, if time permits.

Your child is learning about what usually happens in the season of spring. S/he is also introduced to direction (left and right) and should be able to follow simple instructions, e.g. take two steps to the left/right, etc.

Spring

Talk to your child about some things that usually happen during the season of spring, such as:

- The countryside begins to show new life after the winter.
- Buds begin to appear on the trees.
- Seeds are sown in the fields so that crops will grow to be harvested later in the warm summer.
- The squirrel and hedgehog wake up from their winter sleep.

Song

Sing/recite the following song (sung to the tune of 'Twinkle, Twinkle, Little Star'):

Spring

Spring, spring is coming soon.
Grass is green and flowers bloom.
Birds returning from the south.
Bees are buzzing all about.
Leaves are budding everywhere.
Spring, spring is finally here!

Poetry

Read/recite the following poem:

Spring

Spring makes the world a happy place,
You see a smile on every face.
Flowers come out and birds arrive.
Oh! isn't it grand to be alive?

Directions – Left and Right

Your child needs to know some of the language associated with direction – left, right, move forward, backward, on, in, under, over, beside, down, etc.

Game 1: Floating bubbles

Get a bottle of bubbles or make your own using washing-up liquid. Carefully try to blow one bubble at a time. Encourage your child to describe where the bubble lands, e.g. *It landed on the chair*.

This can be extended by encouraging your child to add more descriptive language, e.g. *The bubble landed on the chair beside the goldfish bowl*.

Game 2: Placing items

Give your child a soft ball/book/pencil (any object of your choice). Give your child the following instructions:

- Place the book **over** your head.
- Place the book **on** your head.
- Place the book **under** your arm.
- Place the book **down** on the ground/floor.
- Place the book **beside** your foot.
- Place the book **in** the press.

Left and right instructions

Explain to your child that a way to distinguish the left hand from the right is that his/her left hand makes an L when looked at with his/her hands face down on the table. Give him/her the following instructions as practice:

- Raise your left/right hand.
- Place your right hand on your hip.
- Place your left hand on your head.
- Place your right hand under your chin.
- Place your left hand on your right knee.
- Place your right hand on your left knee.
- Place your right hand on your left shoulder.
- Place your left hand on your right shoulder.
- Point to your left/right ear.
- Close your left/right eye.
- Wink with your left/right eye.
- Stand on your left/right leg.

Song

Teach your child the following song:

The Hokey Cokey

You put your right hand in,
You put your right hand out,
You put your right hand in,
And you shake it all about,
You do the hokey cokey
and you turn around,
That's what it's all about.

Continue singing by replacing 'right hand' with the following:

- (2) left hand (3) right foot (4) left foot (5) head
(6) whole self.

Your child is learning about **ordinal number** (first, second, third and last), **weight** (heavier and lighter) and the **passage of time**.

Ordinal Number

First, second, third and last

Place four objects, e.g. a teddy, horse, camel and rabbit, in a row on the table (any objects to hand will do). Have them all facing in the same direction as if heading for the finishing line of a race. Ask your child:

- Which animal is in first place?
- Which animal is in second place?
- Which animal is in third place?
- Which animal is in last place?
- Which animal is between the horse and the teddy?
- Which animal comes just after the rabbit?

Now change the order of the animals/objects and ask:

- Which animal is in first place now?
- Is the camel still in second place?
- Which animal comes before/after the teddy now?

Game: Who is first or last?

Have four family members (including your child) line up. Give each one a Post-it or a piece of paper with 'first', 'second', 'third' or 'last' on it. Ask the participants to stand in the correct order facing the television/sofa, etc.

Weight

Heavy and light things at home

Allow your child have fun comparing the weight of a number of common objects that can be found in the home, i.e. guessing which object is heavier/lighter. It is important to have some heavy objects such as paperweights, stones, bricks, etc. to highlight that some small objects can be much heavier than big objects. Similarly, it is important to have some big objects such as feathers, balloons, etc. to highlight that some large objects are much lighter than smaller objects. We shouldn't judge the weight of something by its appearance alone.

Weighing two objects

Place a number of objects, e.g. cups, mugs, lunchboxes, apples, etc. on the table. Focus his/her attention on two of the objects at a time, e.g. a lunchbox and an apple. Have your child compare the weights of them. Ask questions, such as: *Which do you think is heavier/lighter? Why do you think that?* Ask your child to check his/her answers by weighing both objects by hand before checking with a scales or balance (a household scales will do).

Extension work: Pick up an object, e.g. marker, from the selection on the table and ask your child to identify some other objects that are heavier, lighter, about the same weight as the marker, etc.

Weighing three objects

Place a number of objects, e.g. spoons, oranges, plates, etc. on the table. This time, get your child to focus on three objects at a time. Get him/her to order the three objects from heaviest to lightest. Ask questions, such as:

- Which object is the heaviest/lightest?
- Why do you say that?
- Is it because of its size/shape?
- Is the teddy heavier/lighter than the car?
- Why did you say that the marker was lighter than the paperweight?

Allow him/her to check his/her estimates by weighing all three objects by hand before checking with a scales or balance.

Passage of Time

To illustrate the passage of time, carry out the following activities:

- See how many times s/he can bounce a ball in 10 seconds.
- See how many times s/he can skip in 10/15/20 seconds.
- Time how long it takes him/her to peel an orange.
- Time how long it takes him/her to swim a width/length in a swimming pool.
- Time how long it takes him/her to run around the garden.

Your child is learning about sets/groups of 10. S/he needs to know the mathematical language associated with the numeral/number 10 – How many?, trace, write the numeral 10, colour, count, ring, row, red, green, blue, yellow, etc.

Writing the numeral 10

When teaching the children to write the number/ numeral 10, say: *For the numeral 1, start at the top and come straight down. For the numeral 0, start at the top. Go around and around and around again. (See Busy at Maths Home/School Links Book, p.28.)*

Practise writing the numeral 10

Practise writing the numeral 10 with your child using pencil and paper. You could also put some sand in the lid of a biscuit tin and have your child write the numeral 10 in the sand with his/her finger. You can also revise writing the numerals 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.

Hopscotch

Play the game of hopscotch in the garden/driveway using chalk markings or mats with digit cards. This game is played by putting one foot down on the numeral 1, both feet on 2 and 3 and so on until you reach the numeral 10. You must avoid putting a foot on any of the lines.

Making sets of ten

Place a number of small objects that are normally around the house on the table, e.g. clothes' pegs, apples, grapes, spoons, tins of food, toys, etc. Have three plates on the table in a row. Ask your child to put 10 clothes' pegs on the first plate. Now ask him/her to put 10 apples on the middle plate and 10 toys on the last plate. Explain to your child that each plate has a set of 10 objects.

Making necklaces of ten

Give your child a piece of string, twine or thread as well as 10 beads, spools or buttons. Ask him/her to make a necklace. They can also make a necklace using 10 bottle tops or circles/squares/rectangles/triangles cut out from A4 paper.

Sing

Revise the song 'Ten Green Bottles' which was first introduced in Junior Infants.

Ten Green Bottles

Ten green bottles hanging on the wall,
Ten green bottles hanging on the wall,
And if one green bottle should accidentally fall,
There'll be nine green bottles hanging on the wall.

Nine green bottles hanging on the wall,
Nine green bottles hanging on the wall,
And if one green bottle should accidentally fall,
There'll be eight green bottles hanging on the wall.

Eight green bottles hanging on the wall.
Eight green bottles hanging on the wall...

(This is repeated until you get to the number one...)

One green bottle hanging on the wall.
One green bottle, hanging on the wall.
And if one green bottle should accidentally fall,
There'll be no green bottles hanging on the wall.

Game: 10 pin bowling

With your child, arrange 10 empty, plastic bottles/skittles in a perfect triangular shape. Take turns throwing a soft ball/beanbag to try and knock over as many of the 10 bottles/skittles as possible. Keep the score and the player to knock down the most pins wins the game.

Things that come in 10s

Ask your child to come up with things that usually come in groups/sets of 10, such as:

- 10 toes on our feet
- 10 fingers (including thumbs) on our hands
- 10 commandments
- 10 digits in most mobile phone numbers
- 10 bowling pins in each line
- 10 years in a decade.

Your child is learning about time (the clock in one-hour intervals) and how to read data from a chart. S/he is also learning to deal with sets that have more/less/fewer. Your child needs to know the language of time – hands, clock face, long/short hand, o'clock, numerals 1–12.

Time

Making a clock

You can make a clock with your child using cardboard. Cut out a circular piece of card. Cut two small pieces to act as hands. Stick the hands to the face using a brass fastener/clip. The clock hands can then be manipulated by your child. Ask your child to write the numerals 1–12 on the face in the correct order. You may need to help him/her do this as it can be quite difficult. (If you have an old clock to hand where the hands can be manipulated by your child, it's even better!) Remember that your child will not be officially introduced to the numerals 11 and 12 until First Class. Show your child a time, e.g. 7 o'clock and ask: *What time is it? How do you know it's 7 o'clock?* Do the same with a number of other times (make sure they are on the hour).

Rhymes

Read/sing the rhymes 'Hickory, Dickory, Dock' and 'Clock Song' (sung to the tune of 'The Wheels on the Bus').

Hickory, Dickory, Dock

Hickory, dickory, dock,
The mouse ran up the clock.
The clock struck one,
The mouse ran down,
Hickory, dickory, dock.

Clock Song

The hands on the clock go round and round,
Round and round, round and round.
The hands on the clock go round and round.
To tell us the time.
The short hand on the clock
Goes from number to number,
Number to number, number to number.
The short hand on the clock
Goes from number to number.
To tell us the time.

Data

Data can be organised in many ways in everyday life, from pictograms to bar charts to bar graphs, etc. In Senior Infants, your child is expected to represent and interpret data (information/objects, etc.) in two rows or columns. It is best to introduce your child to data by using a range of objects that are familiar to your child.

Making rows

Give your child some counters, buttons, Lego blocks, or 1c coins, etc. Ask him/her to make a row of five coins. Then ask him/her to place a row of four coins directly underneath.



These rows should be in one-to-one correspondence, i.e. your child should be able to see the coins in the bottom row that correspond to the ones in the top row. S/he should also be able to see that there is an extra coin in the top row. Ask questions, such as:

- How many coins are in the top row?
- How many coins are in the bottom row?
- How many more coins are there in the bottom row than in the top row?
- How many fewer coins are there in the bottom row than in the top row?
- What could we do to make the two rows have the same amount? (Add one more to the bottom; take one away from the top.)

Making columns

Give your child some counters, buttons, Lego blocks, 1c coins, etc. Ask him/her to make a column (tower) of eight counters. Then ask him/her to place a column of six counters beside it.

Ask questions as above about the columns.

Your child is learning about **1, 2, 5, 10** and **20 cent coins**. This is done by means of games, poems, songs and activities using concrete materials. Your child needs to know the mathematical language associated with money – dear, expensive, cheap, cheaper, Which is cheaper?, How many?, count, money, brown, copper, What colour is a... coin?

Note: Exposing your child to real coins is the best way to teach him/her. There is nothing better than hands-on experience.

Game 1: Matching coins

Collect as many 1, 2, 5, 10 and 20 cent coins as you can – there are usually lots of them around the house! Place them in a pile in the centre of the table. Give your child five boxes/cups/plastic cups, bags, etc. Write the amounts 1c, 2c, 5c, 10c and 20c on Post-it notes and place each Post-it note on one of the boxes. Ask your child to sort the coins into the correct boxes.

Shopping

Bring your child shopping with you and talk to him/her about the prices of different items. Get him/her to point out any price tags with 1c, 2c, 5c, 10c or 20c on them. If you are paying by cash and get copper in your change, ask your child to take it from the cashier. Ask him/her to tell you how much s/he received.

Game 2: Shop

Ask your child to help you make a play shop in a section of a room in the house. Collect a number of easily-sourced items – they can be items that you have bought in the shop. Use Post-it notes or pieces of paper as price tags. Place the price tags on/under the items. No item should cost more than 10c. Make up some questions about the items or get your child to make up some questions, for example:

- *How much does the packet of cereal cost?*
- *Which is dearer/more expensive: the apple or the orange?*
- *I have 6c. Have I enough money to buy the carrot?*
- *Which item is the dearest/most expensive/cheapest/least expensive?*

Monopoly

If you have the children's version of the board game Monopoly, play it with your child.

Poetry

Read the poem 'My Coins' with your child. This is revision of work done in Junior Infants. Children can do actions to this poem by holding up the appropriate number of fingers for each coin, when mentioned.

My Coins

I know a little poem.
It isn't very funny.
It's about my cent coins
And how to count my money.

A cent means there's just one
And two cent means there's two.
We know that two means one and one
And to have two cent is really fun.

Five cent means five.
That means two and two and one.
When I have five cent,
Off to the shop, I run.

Cian Murtagh

Game 3: Trading up my coins to 10c

This game is played with three or more players. Place coins in the middle of the table – this is the bank. Assign the role of banker to one of the children. The first player throws a die. S/he is given the number of coins that the die shows, e.g. if the die shows a four, the banker gives him/her four 1c coins. Once the first player receives his/her coins, s/he trades them with the banker for coins of a higher denomination, e.g. 2c + 2c. The other players take their turns, throwing the die and trading their coins accordingly. The object of the game is to keep trading the coins until a player has five 10c coins. So on the first player's next turn, if s/he throws a six, for example, s/he will have 2c + 2c + 1c + 1c + 1c + 1c + 1c + 1c which s/he can exchange for a 10c coin. The game continues until a player has five 10c coins.

Your child is learning about numbers that go before, after and between other numbers. This is done by means of games and activities using concrete materials. Your child needs to know the mathematical language associated with before, after and between – What number/numeral?, in between, in the middle, in front of, just after, just before, next to, beside, etc.

First, second, third and last

Begin by revising some things you or your child do every day. This is a continuation of work done on **ordinal number** (first, second, third and last):

First, I get up.

Second, I get dressed.

Third, I eat my breakfast.

Last, I go off to school.

First, I come home from school.

Second, I eat my dinner/lunch.

Third, I play some games.

Last, I go to bed.

What I do before and after

Talk to your child about things s/he does before significant events in his/her day and ask some of these questions:

- *What do you do before you get dressed in the morning? (I wake up/jump out of bed, etc.)*
- *What do you do after you get dressed in the morning? (I walk to the bathroom/wash my teeth/go down the stairs/tie my shoelaces, etc.)*
- *What do you do after you reach school? (I play with my friends/I talk to my friends/I get into my line/I walk slowly into my class/I sit in my chair/I play with some toys, etc.)*
- *What do you do before you go to bed at night? (I brush my teeth, I get into my pyjamas, I read my book, etc.)*

Numbers – Before, after and between

Place some numeral cards 0–10 on the table in random order. Write the numerals on pieces of cardboard/paper/Post-it notes. Ask your child to arrange the numerals in order from 0–10. Now ask him/her questions, such as:

- *Which numeral comes just after 7?*
- *Which numeral comes just after 6?*
- *Which numeral comes before 8?*
- *Which numeral comes before 9?*
- *Which numeral comes after 0?*
- *Which numeral comes between 6 and 8?*
- *Which numeral comes between 4 and 6?*
- *Which numeral comes between 7 and 9?*
- *Which numeral comes two places before 6?*
- *Which numeral comes three places before 9?*
- *Which numeral comes two places after 7?*
- *Which numeral comes three places after 6?*

Which numeral?

Place a number of household items on the kitchen table in a row, e.g. a cup, spoon, saucer, marker, pot, jug (any items of your choice can be used). Place the numerals 0–10 under the relevant items, e.g. the cup will have number 4/the spoon will have number 10, etc. Now ask him/her questions, such as:

- *Which numeral is under the mug?*
- *Which numeral comes just before the one under the scissors?*
- *Which numeral comes between the ones under the marker and the jug?*
- *Which numeral comes between the ones under the saucer and the marker?*
- *Which numeral comes between the ones under the pot and the fork?*
- *Which numeral comes two items after the scissors?*
- *Which numeral comes three items after the pot?*
- *Which numeral comes two items before the marker?*

Your child is learning about what usually happens in summer. S/he is discussing capacity (the measure of the amount of water, etc. different containers can hold).

Summer

Talk to your child about things that usually happen during the summer, for example:

- Children play in the park and go for walks with their parents.
- Children play outdoor games such as football, hurling, soccer, rugby, hopscotch, etc.
- Families go to the beach and swim in the sea (never forget the sunblock!).
- Flowers are in full bloom and leaves are on the trees.

Poetry

Read/recite the poem 'Summer'.

Summer

Hot or cold, what could it be?
 Summer is here, just look and see.
 It's not winter or autumn here.
 Summer is something we shouldn't fear.
 Summer is out and it's time to play.
 Have fun because summer is not here to stay.
 Jump in the pool and play all day.
 Let's come on out and head for the bay.
 Summer time is once a year.
 Come on out without any fear.
 Plant some flowers for a summer day,
 As long as summer is here to stay.

Geneen Meyers

Capacity

When children learn about **capacity** through hands-on experience with containers and water, they gradually develop a feeling for how much containers of different shapes and sizes hold. Consequently, the best and most effective way to teach capacity is to allow your child fill and empty a range of containers that are to hand in the home. This can be done while working/cooking in the kitchen or at bath time.

Your child needs to know the mathematical language associated with capacity – How much?, How much more water is needed?, full, empty, holds more,

holds less, not as much, nearly as much, nearly full, nearly empty, glasses, bowls, cups, mugs, jars, scoops, container, up to the top/brim, etc.

Which bottle holds more? (different shapes)

Give your child some clean, empty containers that are to hand in the house. The bottles should obviously be of different shapes but relatively similar in capacity. This is quite an important experiment as many children wrongly think that the shape of a container determines the actual capacity, i.e. that a tall bottle holds more than a short one. Ask him/her to arrange them in order of which holds most/least. Ask them to tell you why they think the containers were arranged in that order. After the discussion, have your child test whether his/her estimations of the capacity of the different containers was correct by filling each one with water. Measure the amount of water that was in each container using a household measuring jug. If there is no measuring jug to hand, pour the water from the individual bottles into a larger bottle and use a marker to show the amounts that were in each container.

Which bottle holds more? (similar shapes)

Give your child some bottles of similar shape and ask him/her to arrange them in order of which holds most/least. Ask them to tell you why they think the containers were arranged in that order. Ask some open-ended (requiring more than a yes or no answer) questions, such as:

- *Why did you put that bottle first?*
- *Why do you think it holds more than that bottle?*
- *Why do you think that bottle holds less than this one here?*

After the discussion, have your child test whether his/her estimations of the capacity of the containers was correct by filling each one with water. Measure the amount of water that was in each container using a household measuring jug.

Which box holds more?

Give your child some clean, empty boxes that are to hand in the house.

Ask him/her to arrange them in order of which holds most/least. Ask them to tell you why they arranged them in that order.

As said in Junior Infants, the categorising of the first day of the week differs from country to country. Some have Sunday as the first day with Saturday as the last day. Other countries have Monday as the first day with Sunday as the last day. In Ireland, we classify Monday through to Friday as weekdays with Saturday and Sunday as the weekend. You don't need to explain this to your child but for the purposes of our activities we are taking Monday as the first day.

Activity: Order the days of the week

Write the names of the days of the week on pieces of paper. You may prefer to write the words on Post-it notes. Place the names of the week randomly on the kitchen table. Now ask your child to place the names in order starting with Monday. Then ask a number of questions, such as:

- *Can you pass me Monday?*
- *Which day comes after Wednesday?*
- *Which day comes after Thursday?*
- *Can you hand me the day that comes just before Sunday?*
- *Can you give me the day that comes between Thursday and Saturday?*
- *Can you hand me the last day of the week?*
- *Can you show me the days you have to go to school?*
- *Can you show me the days when you don't have to go to school?*
- *Which is your favourite day? Why?*

Describe your day

Talk to your child about the different things s/he or the family does during the day. Get him/her to come up with the activities where possible, e.g. get up, wash, get dressed, brush teeth, get ready for school, go to school, spend time in class, have small lunch, go to the yard/playground, have big lunch, collected from school, do homework, listen to a story read by mammy/daddy/family member, have dinner, read a book, play a game, etc.

Writing the days of the week

Ask your child to write the days of the week into a copy or onto a sheet using only the script from their schoolbook.

Poetry/Music

Read the titles of the three poems/songs before reading/singing. Ask your child what s/he thinks each poem/song is about.

Read/say/sing the poem/song 'The Days of the Week' with your child. It can be sung to the tune of 'Twinkle, Twinkle, Little Star'. This is revision of work done in Junior Infants.

The Days of the Week

Monday, Tuesday, Wednesday too,
Thursday, Friday, all for you.
Saturday, Sunday, that's them all.
All those days we will recall.

(Sing two or three times.)

Read/say/sing the poem/song 'Let's All Sing' with your child. It can be sung to the tune of 'Frere Jacques'.

Let's All Sing

Here we ha-ve
The days of the week.
Let's all sing,
Let's all sing.
Monday, Tuesday, Wednesday,
Thursday, Friday, Saturday,
Su-n-day.
My favourite day!

Read/say/sing the poem/song 'The Morning Song' with your child. It can be sung to the tune of 'You Are My Sunshine'.

The Morning Song

In the morning,
Only the morning,
I wake up happy,
The sun is bright.
I eat my breakfast
And put my clothes on.
Then I go to school on a bus.
(*'On a bus' can be replaced by 'in a car'/'on my bike'/'o-n foot'.*)

When you are finished reading/singing, ask him/her if their predictions about the content of the poems/songs were correct. Explain any word that causes difficulty for your child.