Glasgow Outdoors:
Glasgow Counts

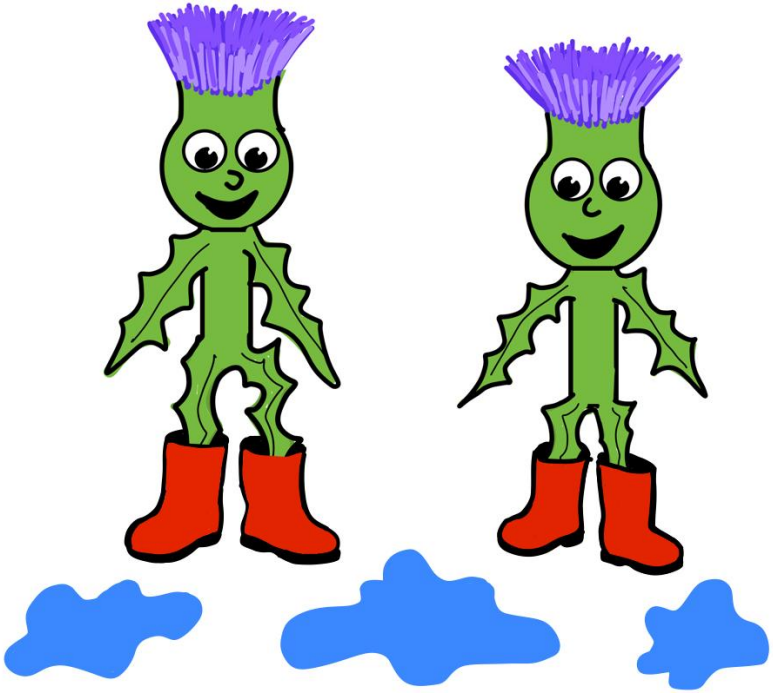
THE SCOTTISH ATTAINMENT CHALLENGE
LITERACY NUMERACY
HEALTH & WELLBEING

Glasgow's Improvement Challenge
Unlocking Learning

Professional Learning gtc SCOTLAND 2018 EXCELLENCE AWARD

GIC Leaders of Early Learning

Glasgow Outdoors: Glasgow Counts



Early Level

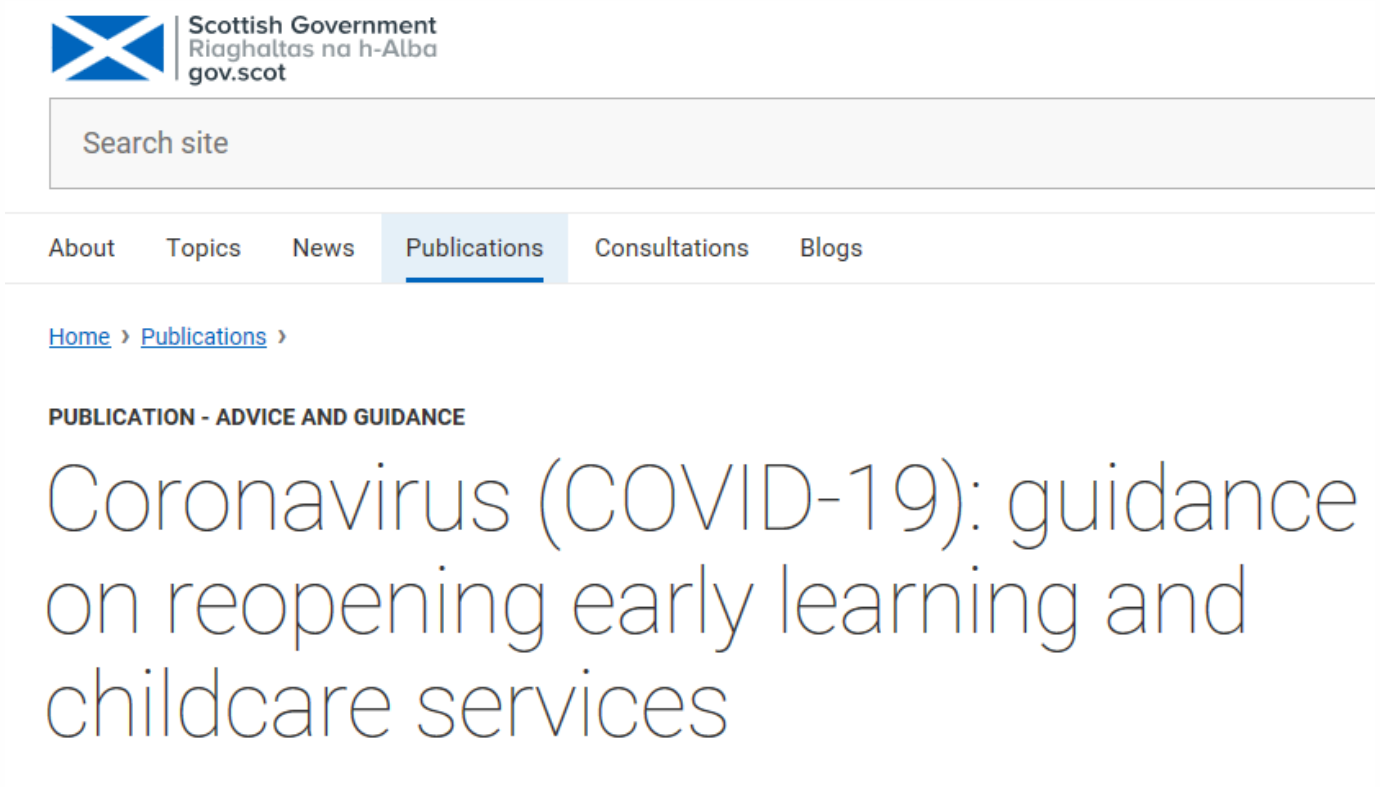
Aims

- To reinforce the benefits of outdoor play.
- To introduce the Glasgow Outdoors resource for Numeracy and how to use it.
- To explore suggested experiences and interactions for taking numeracy learning outdoors using the Glasgow Counts Framework.

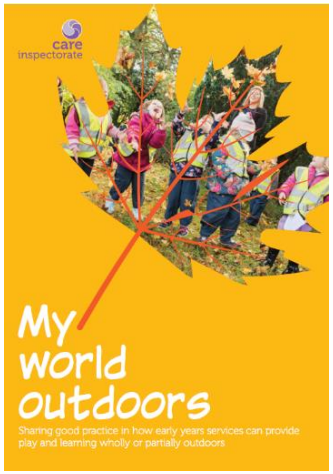
Benefits of taking learning outdoors:

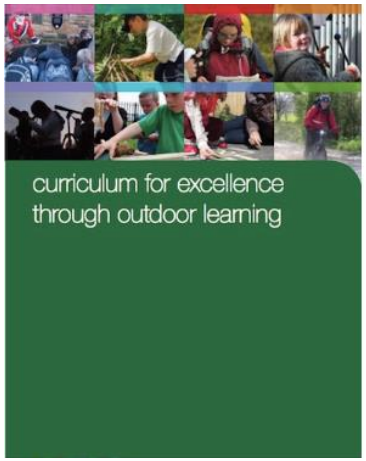
- Rich stimulus for creativity, enquiry and problem solving
- Improved mental, emotional and physical health
- Development of language and communication skills
- Application of literacy and numeracy in meaningful contexts
- Instils a connectedness with, and appreciation of nature

Coronavirus (COVID-19): guidance on reopening early learning and childcare services

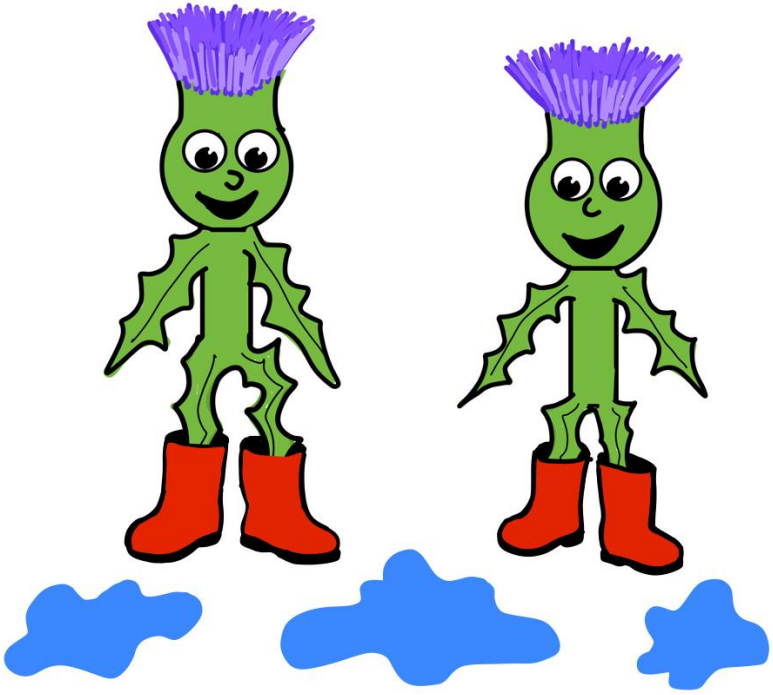


Other outdoor policy and guidance





Glasgow Outdoors: Glasgow Counts



Early Level

Locating the resource…

- **Twitter**: @GlasgowLEL
- **Blog**: Google - Leaders of Early Learning
  https://blogs.glowscotland.org.uk/gc/gccleadersofearlylearning/

Leaders of Early Learning

WELCOME

Welcome to the Leaders of Early Learning Blog

On our blog you will find all the latest professional learning for Glasgow Counts in our Playrooms and Literacy for All in our Playrooms. You will also find the professional learning we have devised to support Learning for Sustainability and Promoting Alternative Thinking Strategies (PATHS). This is also a place to access current Early Learning and Childcare, including Realising the Ambition: Being Me.

Click here for a summary of Education Scotland – key information, policy, resources, and exemplification relating to early learning and childcare (ELC).

Thank you for visiting

FIND US

We are located within Royston Primary School, please use the side entrance on Gadshill Street.

c/o Royston Primary School
102 Royston Road
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0141 287 9751

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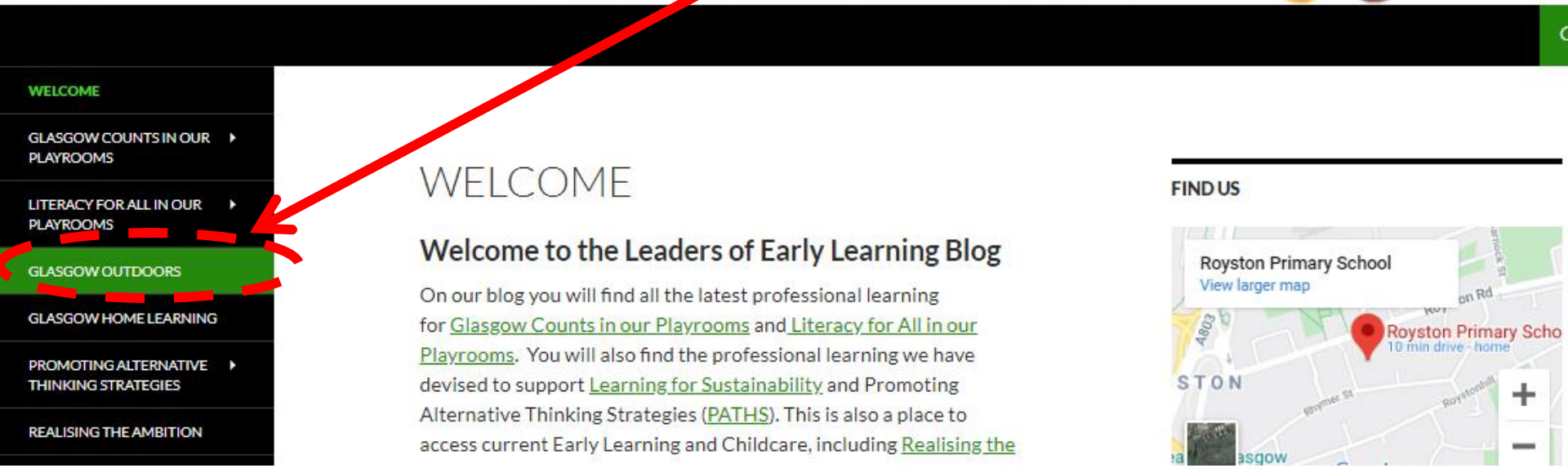

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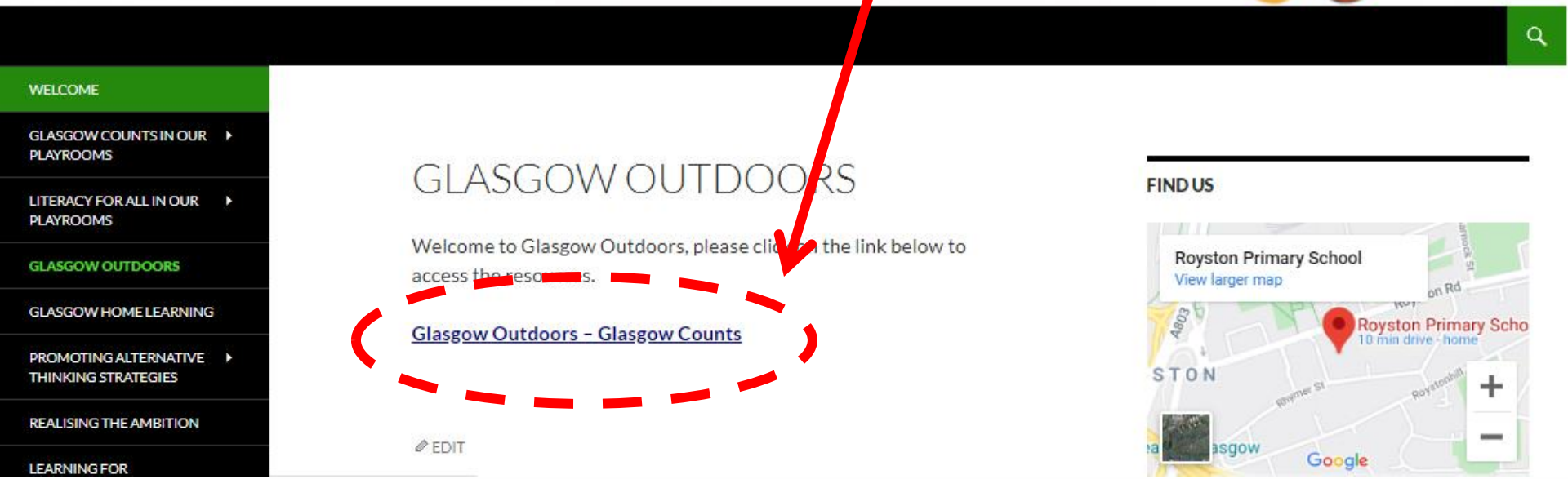
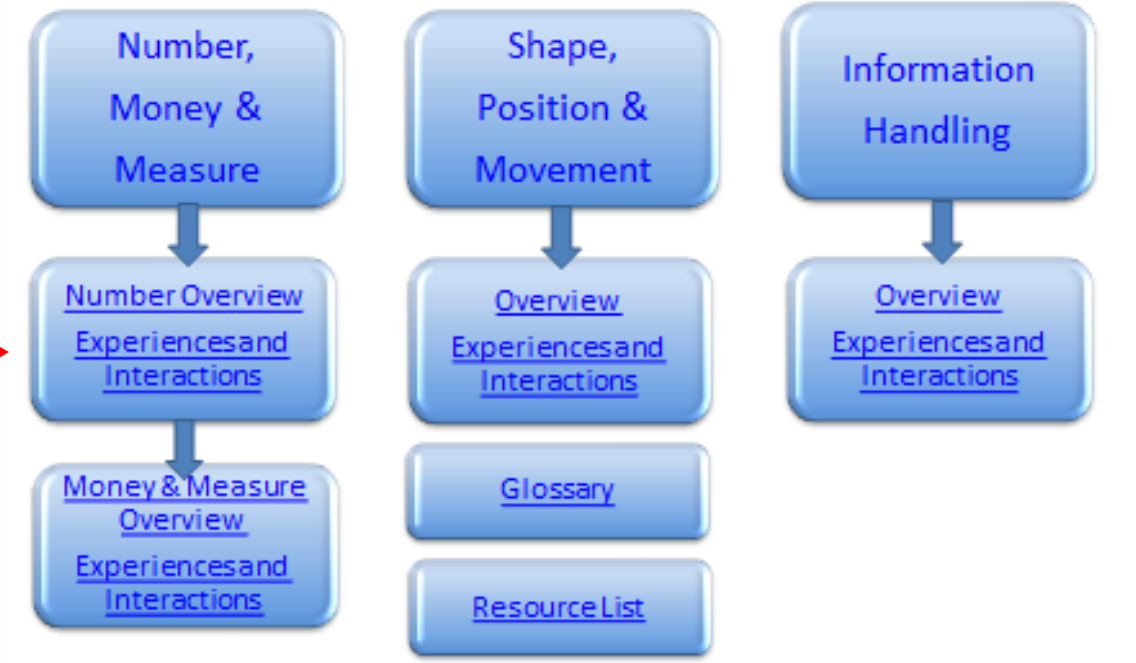


Navigating the resource…

Glasgow Counts
Taking Learning Outdoors
Early Level



Glasgow's Improvement Challenge - Leaders of Early Learning

Glasgow Counts. Taking Learning Outdoors – Numeracy Early Tracker 1

Navigate to home slide

Early Level Tracker 1

Organiser

Click the link to take you to the experience for that box within the organiser

Estimation & Rounding		Knows they can check estimates by counting within 0-10 E1.1-3 E1.2-3 E1.3-3		Can apply subitising skills to estimate the number of items in a set E2.1-1		Uses the language of estimation, including more than, less than, fewer than and the same E3.1-3 E3.2-3 E3.3-3		
Awareness of Number – Counting, Quantities & Number Structure	No. word seq.	Say short forward and backward number word sequences within 0-10 No1.1-1		Uses ordinal numbers in real life contexts e.g. I am first/second/third in the line' No2.1-2 No2.2-2		Recalls the number sequence forwards and backwards within 0-10 No3.1-2 No3.2-2		
	Numerals	Recognise numerals e.g. points to the number from 0-10 N1.1-2 N1.2-2	Identify (name) numerals e.g. can respond to question 'what is that number?' from 0-10 N2.1-5 N2.2-5 N2.3-5 N2.4-5 N2.5-5	Explains zero is represented as 0 N3.1-2 N3.2-2	Orders numerals forwards and backwards within 0-10 N4.1-2 N4.2-2	Identifies number before, after and missing numbers in a sequence within 0-10; beginning to use the language before, after and in-between N5.1-2 N5.2-2		
	Subitising	Identifies 'how many?' in regular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6 S1.1-3 S1.2-3 S1.3-3		Identifies 'how many?' in irregular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6 S2.1-2 S2.2-2		Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6 S3.1-4 S3.2-4 S3.3-4 S3.4-4		
	Counting	When counting objects understands the order in which we say the numbers is always the same (stable order) C1.1-3 C1.2-3 C1.3-3	Touch counts one item when each number word is said (1-to-1 correspondence) C2.1-3 C2.2-3 C2.3-3	When counting objects understands that the number name of the last object counted is the name given to the total number of objects in a set (cardinal principle) C3.1-3 C3.2-3 C3.3-3	When counting objects understands that the number of objects is not affected by position (order irrelevance) C4.1-2 C4.2-2	Counts objects in a set recognising that the appearance of the objects has no effect on the overall total within 0-10 (conservation) C5.1-2 C5.2-2	Counts anything e.g. objects at a distance/in a book/sounds/claps within 0-10 (abstract principle) C6.1-3 C6.2-3 C6.3-3	
	Place Value	Explains that zero means there is none of a particular quantity PV1.1-3 PV1.2-3 PV1.3-3			Partitions quantities to 10 into 2 or more parts and recognises that this does not affect the total e.g. 6 as 3 and 3/2 and 2 and 2 PV2.1-3 PV2.2-3 PV2.3-3			
Addition and Subtraction		Sorts & classifies objects using quantity as an attribute e.g. sets of 1, 2 within 0-10 AS1.1-3 AS1.2-3 AS1.3-3	Compares 2 sets to decide which has the fewest/most within 0-10 AS2.1-2 AS2.2-2	Finds the total when 1,2 or 3 is added to an existing amount e.g. a number line or height chart (augmentation) AS3.1-3 AS3.2-3 AS3.3-3	Finds the total when 2 sets are added together within 0-10 (aggregation) AS4.1-2 AS4.2-2	Finds out how many are left when 1 or 2 are taken away within 0-10 AS5.1-3 AS5.2-3 AS5.3-3	Compares to find the difference between sets as a quantity within 0-10 AS6.1-1	Beginning to count on and back in ones to add and subtract with objects or number line within 0-10 AS7.1-3 AS7.2-3 AS7.3-3
Multiplication and Division		Shares out a group of items into 2 equal sets within 0-10. Groups objects into matching or natural sets of 2 e.g. shoes within 0-10 M&D1.1-3 M&D1.2-3 M&D1.3-3			Begin to identify halves and doubles using concrete materials within 0-10 M&D2.1-3 M&D2.2-3 M&D2.3-3			
Fractions, Decimals and %		Identifies wholes and halves in a social context and uses appropriate language e.g. 'I have eaten half of my banana' FD%1.1-3 FD%1.2-3 FD%1.3-3		Splits a whole into smaller parts and explains that equal parts are the same' FD%2.1-2 FD%2.2-2		Understands that a whole can be shared equally and unequally FD%3.1-2 FD%3.2-2		

Click arrow for more information on the next slide

Next slide

Organiser

Main focus of experience is highlighted in yellow

Secondary focus of experience is highlighted in green

Navigate to tracker page 1 with experience codes

Experience code referenced on tracker page

Information explaining why this concept/skill is important in early mathematical development

Suggested vocabulary from Glasgow Counts Framework backpages

Concepts explored from other Numeracy organisers

Numerals	Recognise numerals e.g. points to the number from 0-10	Identify (name) numerals e.g. can respond to question 'what is that number?' from 0-10	Explains zero is represented as 0	Orders numerals forwards and backwards within 0-10	Identifies number before, after and missing numbers in a sequence within 0-10; beginning to use the language before, after and in-between

N2.3-5 N4.2-4

Ten-ness of Ten

A numeral is a symbol or name that stands for a number, e.g. 3, 49 and 352 are all numerals. A digit is a single symbol used to make numerals. 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 are the ten digits we use in everyday numerals.

Aim: *To respond correctly when asked to identify (name) a numeral.*

Suggested Experiences and Interactions:

- Number buckets or tubs with 0 – 10.
- Children select a bucket. Encourage them to recognise and identify the numeral on it. The children should then find items to fill up the bucket with the identified numeral e.g. 3 leaves in the tub numbered 3, 8 stones in the tub numbered 8.
  "Can you read me the number on this bucket?"
  "I wonder if you can point to the bucket that has 5 leaves in it?"
- Children should then 'check' that the number of objects matches with the numeral on their bucket using 1-1 correspondence.
  "I wonder how many you have…"
  "Do you have 8 stones in your bucket?"
  "Can you point to the bucket with number 3 and count on to 8?
- Challenge children by asking,
  "what number comes after…."
  "What number comes before…"
  "I wonder what number is one more than 5?"
- Finally children could order the buckets 0-10.
- A digital camera / iPad can be used to capture photos that depict the X-ness of a number e.g. a house with 3 chimneys, 4 wheelie bins. Children then match the numeral cards to the pictures. (Adult should take the photos to prevent multiple people touching the equipment).

Language: - number, numeral, count (forwards/backwards, up/down, on/back, to/from), zero, one, two, three, …ten, order, increasing, decreasing.

Resources:

- Numbered buckets (or tubs)
- A variety of stones, sticks, shells etc. to fill the buckets
- iPad/ camera
- Numeral cards 0-10

Other concepts explored:

- Principles of counting - stable order, 1-1 correspondence, cardinality
- Number word sequence

Next slide

Let’s have a closer look…

Numerals	Recognise numerals e.g. points to the number from 0-10	Identify (name) numerals e.g. can respond to question 'what is that number?' from 0-10	Explains zero is represented as 0	Orders numerals forwards and backwards within 0-10	Identifies number before, after and missing numbers in a sequence within 0-10; beginning to use the language before, after and in-between

N2.3-5

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Language: - number, numeral, count (forwards/backwards, up/down, on/back, to/from), zero, one, two, three, …ten, order, increasing, decreasing.

Resources:

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- A variety of stones, sticks, shells etc. to fill the buckets
- iPad/ camera
- Numeral cards 0-10

Other concepts explored:

- Principles of counting - stable order, 1-1 correspondence, cardinality
- Number word sequence

Multiplication and Division	Shares out a group of items into 2 equal sets within 0-10. Groups objects into matching or natural sets of 2 e.g. shoes within 0-10	Begin to identify halves and doubles using concrete materials within 0-10

M&D 2.2-3

Doubling Mirror

Once children have mastered the cardinal principle, and know that the last item counted gives the number in any set, then they can begin to engage in division as a concrete activity by exploring sharing and grouping. Children can observe halves and doubles naturally as part of the sharing and grouping process.

Aim: *To investigate what happens to the number of objects when placed in front of a mirror.*

Suggested Experience and Interactions:

- Place items in baskets/bowls and mirrors in front of the children.
- Explain to the children that you are going investigate what happens to the number of objects when you put them in front of the mirror.
- Allow the children to explore and discover what happens to the number of items if they put it in front of a mirror.
- Explain that the number is doubling (there are twice as many).
- Ask children,
  - ***"How many objects do you have?"***
  - ***"How many object can you see?***
  - ***"Double _ is _?"***
  - ***"I wonder how many double _ is?"***

- Encourage children to investigate and predict what will happen when more than one item is placed in front of the mirror.
  - ***"I wonder how many items we will see if we use a mirror"***
  - ***"How many things do you have altogether?"***
  - ***"I wonder what will happen if we put 3 pegs in front of the mirror"***

Language: share(s), group(s), pairs, twos, threes, fours etc. odd, even, array

Resources:

- One Mirror per child
- Loose parts e.g. leaves, pinecones, shells, stones, pegs etc

Other concepts explored:

- Principles of counting – stable order, 1-1 correspondence, cardinality abstract
- Symmetry

Subitising	Identifies 'how many?' in regular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6	Identifies 'how many?' in irregular dot patterns e.g. dot arrangement/on fingers/five frames/10 frames/dice without counting up to 6	Represents amounts in different arrangements e.g.dot arrangement/on fingers/five frames/ 10 frames/dice without counting up to 6

S1.1-3

Subitising Fun

Subitising is an essential part of developing number sense. By looking at a group of items, children can start to develop an understanding of how a number is made up. There are two types of subitising, perceptual subitising, where you can instantly recognise the number of objects or items in front of you without counting, and conceptual subitising, which allows you to use recognisable patterns to help you get that same instant recognition without having to count.

Aim: *To identify how many dots there are by looking at regular dot patterns on dice using perceptual subitising.*

Suggested Experiences and Interactions:

- Subitise Race - The aim of the game is to be the first to reach the target. Create a start and finish line using chalk, sticks, stones etc. Alternatively, invite the children to draw one. Using a large dice, encourage each child to take a turn to roll the die. The group of children use their subitising skills to identify the amount shown.

  "***How many dots can you see?"*** ***"Let's count together and check."***

  Each child then jumps the quantity they rolled towards the finish line. The first to the finish line is the winner.
- What's the time Mr Wolf? - This game is based on the traditional version of 'What's the time Mr Wolf?' with the difference being the 'wolf' shows a dice instead of shouting out a number. The group of children identify the steps to be taken by using their subitising skills, reading the amount from the dot arrangement on the dice.

  "Tell me what you see" ***"Could you show me that number using your fingers?"***

  The children proceed to take the amount of steps until the wolf announces, 'dinner time'**.**
- Subitising Scavenger Hunt Race - Using a selection of outdoor materials e.g. stones, sticks, leaves etc. demonstrate rolling the die and gathering objects as an example. Children take turns to pick an object e.g. a leaf, and rolls the dice:

  "What did you roll?" ***"How many have we to find?"***

  Once the child identifies the number all the children race to find the required amount of the item. On return children can lay out their items or even place them on the dots of the dice to check they have the correct amount. The winner is the first to return with the correct total.

Language: How many, dots, patterns, objects, dice, domino, five frame, ten frame, array, tell me what you see

Resources:

- A large dice
- A range of natural materials e.g. stones, sticks, leaves etc.
- Chalk

Other concepts explored:

- Principles of counting – stable order, 1-1 correspondences, cardinal, abstract

Menti

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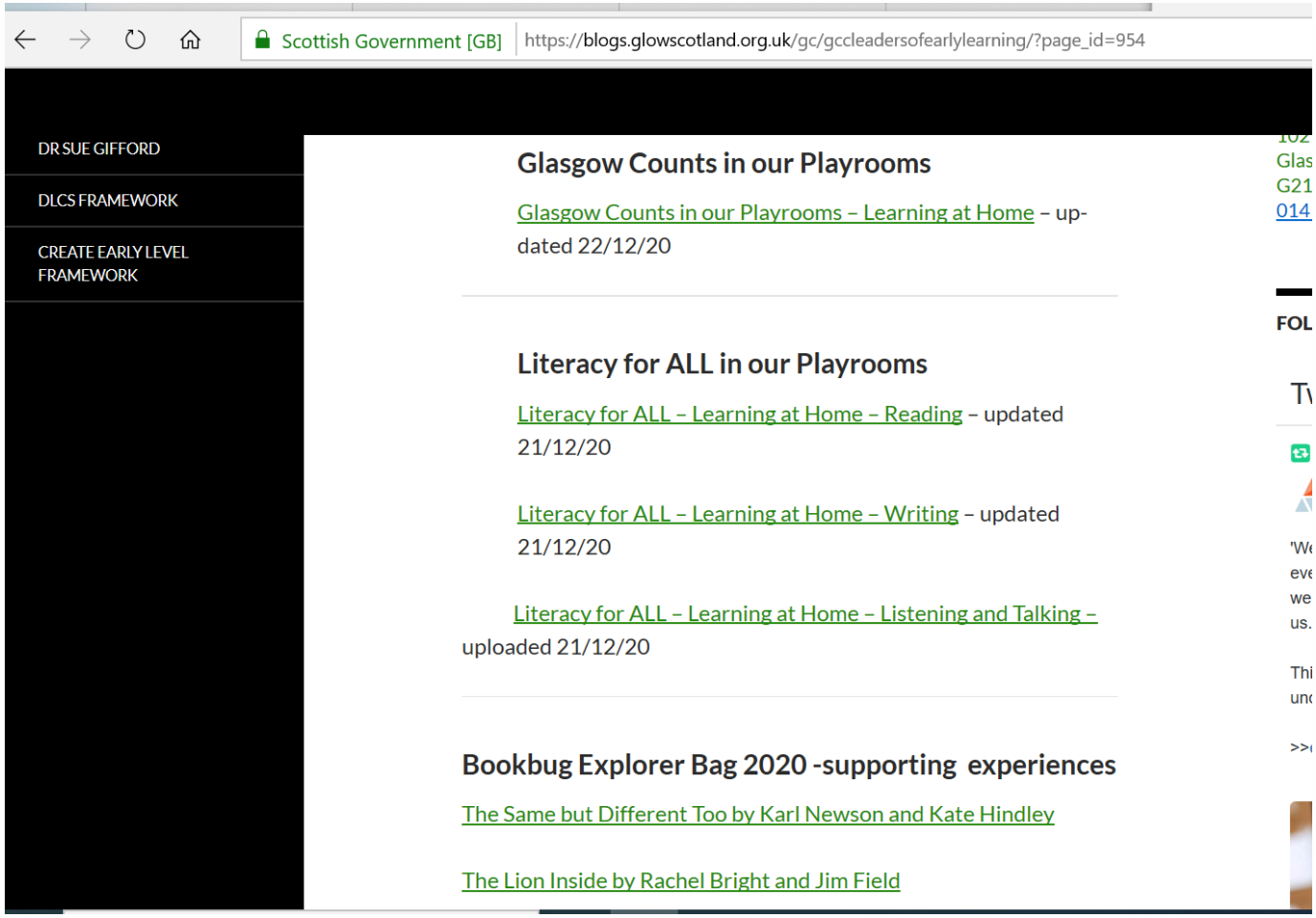
- Questions


Scottish Government [GB]
https://blogs.glowscotland.org.uk/gc/gccleadersofearlylearning/?page_id=954
DR SUE GIFFORD
DLCS FRAMEWORK
CREATE EARLY LEVEL FRAMEWORK
Glasgow Counts in our Playrooms
Glasgow Counts in our Playrooms – Learning at Home – up-dated 22/12/20
Literacy for ALL in our Playrooms
Literacy for ALL – Learning at Home – Reading – updated 21/12/20
Literacy for ALL – Learning at Home – Writing – updated 21/12/20
Literacy for ALL – Learning at Home – Listening and Talking – uploaded 21/12/20
Bookbug Explorer Bag 2020 -supporting experiences
The Same but Different Too by Karl Newson and Kate Hindley
The Lion Inside by Rachel Bright and Jim Field

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GIC Leaders of Early Learning

Playful Pedagogy
LOL
Glasgow Counts A Framework for Mathematics
Literacy for ALL Glasgow
CREATE
Leaders of Early Learning
PEPASS together inspiring success
Glasgow CITY COUNCIL

Thank you for tuning in

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