



Bright  
Little Stars  
Nursery

SUPERNOVA

MATHEMATICS,  
PROBLEM SOLVING  
& CHALLENGE





## Early Adding & Subtracting

Use everyday objects such as fruit to add one and take one away.

## Duplo Dots & Numbers

Along with numbers on Duplo - add dots. If children don't recognise the number, ask them to count the dots to find out what it is.



## Grouping

Ask children to build pens/fields for animals and then sort them into their pens. Count the number of animals in each field.

## Car Park Numbers

Label cars with numbers and create a car park in a cardboard box.





### Grouping by 2s and 3s

Support your child in instant recognition of groups of 2 and 3 items. Use food and clothing during daily tasks.

### Tidy-up Counting

Use everyday contexts to count. How many toys can your child hold in one hand? How many toys will fit in the bag/box? How many cars are on the floor?



### Counting Stairs & Steps

Support your child with counting like behaviour and count everything! Including stairs and steps.

### Maths & Nature

Collect natural objects such as petals from a flower, stones, daisies, twigs and seeds. Sort them into separate dishes or containers. Count how many of each item you have and make a number label for each one.



## Number Shells

Write number on the inside of shells and turn them over. Let your child turn shells over and tell you the number inside. Can they match numbers together? Can they put them in order?



## Using Fingers

Encourage your child to use their fingers to support counting and representing numbers. Especially when singing number rhymes and songs.





## Duplo Shapes

Place Duplo onto paper and draw around the shapes. Ask your little one to fill the shapes with the appropriate Duplo pieces. Can they fill it with only 2 pieces or 3 or both?

## Everyday Objects & Shape

Draw round objects on a large piece of paper. Hide the objects around the room/garden. Give your child the outlines and let them hunt for the objects. Giving clues if necessary.



## Cups & Lolly Sticks

Provide lolly sticks, plastic cups, pieces of Jenga and/or other suitable resources and leave your budding engineers to create. Ask them to talk about what they are building/have created.

## Lolly Stick Shape Puzzles

Create shape puzzles using lolly sticks.





## Duplo Symmetry

Use Lego or Duplo to learn about symmetry. Ask children to make it symmetrical by adding the correct coloured shapes to the other side of the line.

## Building with Shapes

Tip out your recycling and allow your child to build and balance with the items. What have you built? What shapes have you used? What can it do? Use words such as: sharp corner, pointy and curvy. Can you add an arch to that?



## Position

Use small world toys to understand positional language. Use the words in, on, under, up, down, besides, between, in front of and behind.





## Food Shapes

Talk about the shapes of items in the environment and in particular food, as it is cut up.



## Grouping by Size

Create a size chart and ask children to sort objects into big/large, medium and small.



## Floor Shapes

Create shapes on the floor using tape or paper. Provide a pile of items for children to sort or ask them to search for items around the house. Use words such as: sides, corners, straight, flat and round.

## Lolly Stick Shapes

Use lolly sticks/craft sticks to create shapes.

Use the shapes to create pictures.



## Changing of the Seasons

Point out and talk about how the trees and leaves are changing as the seasons change. What happens to leaves? What season is it? What colours can you see? Will the leaves come back? When do they come back? Do all trees lose their leaves?



## Baking

Bake with your child and talk about the instructions and the order that things are done. What comes first, next, last?



## Lifecycle of a Butterfly

Look for caterpillars and notice butterflies. Use this to talk about the stages they go through. Consider purchasing a 'caterpillar to butterfly' set:

<https://www.insectlore.co.uk/butterflies.html>

## Sequencing Events

Encourage your child to use words such as first, then, next, then, after, before, morning, afternoon, evening, night-time, earlier, later, too late, too soon, every day and every evening when sequencing daily routines.





## Animal Lifecycles

These are an ideal opportunity to talk about the sequence of events and also the key features of an animal's lifecycle. Take a trip to the local pond and talk about what you see.



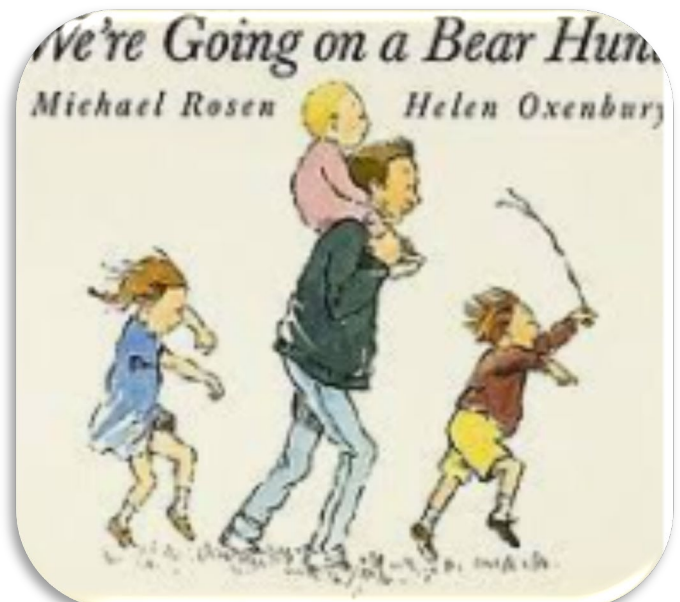
## Events

Countdown to forthcoming events on the calendar in terms of numbers of days or sleeps. Use vocabulary such as: days of the week, the day before, the day after, yesterday, today and tomorrow.



## Story Sequencing

Use familiar stories to talk about the sequence of events in them.



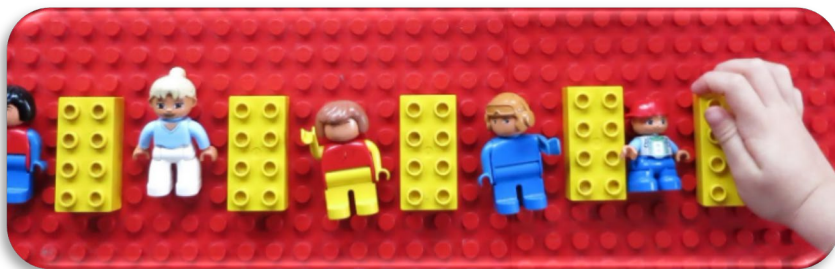


## Apple Graphs

Using different coloured apples and a large piece of paper, create an apple chart. Ask your child to count the apples in each row. Which row has more, less, the same?

## Pinecones & Leaves

Use pinecones and leaves to create a repeating pattern for your child to continue. Start with a simple ABAB pattern & then increase the difficulty.



## Duplo Patterns

Use shapes, colours and Duplo people to create simple patterns to be copied and extended by your child.

## Conker Patterns

Use conkers, acorns and nuts to create random, symmetrical and repeating patterns. Create pictures and shapes.







## Ice Maker Patterns

Using an empty ice maker. Let children make a pattern with coloured items or make a pattern for children to copy in the row beneath.

## Paper Plate Symmetry

Use art to create symmetry.  
Paint dots with cotton buds.  
Make them simple or complicated, but they must be symmetrical.



## Pebble Patterns

Decorate your own pebbles with patterns. Create a repeating pattern on the pebble, and with the pebbles.

## Patterns in Nature

Use the joys of nature to create abstract patterns. Talk about colour, texture, shape and where the objects come from.





# Healthy Risk Taking & Challenging Play

## Water Play

Under careful supervision risky play is an important part in a child's learning. Streams on a hot day provide a plethora of learning opportunities.



## Playground Fun

Use playgrounds as an opportunity for your child to challenge themselves, make new friends, take turns and share.

## Kitchen Skills

Show and allow your child how to use knives and other kitchen implements safely.



## Tools

Find opportunities for your little one to use **real tools** for **real jobs**. Hammers, screw drivers and pliers etc. Disassembling old ICT equipment can be a real hit!



# Healthy Risk Taking & Challenging Play

## Tree Climbing

Learning how to climb a tree should be a milestone for all children. Start low and work to higher trees with appropriate branches.



## Stair Climbing

Encourage your child to walk up and down stairs holding the handrails, rather than your hand. Eventually extend this to them carrying something in their other hand too!



## Bikes, Trikes & Scooters

Use your garden or the local park to support their balancing and riding skills.





## Length & Width

Collect sticks and order them by length and by width. Use words such as: longer, shorter, thinner, wider and exactly the same.



## Measuring & Ordering Utensils

Empty the utensil drawer - match order and compare sizes. Which is bigger/little/smaller?

What do we use a ladle for? Why is it that shape?

## Numbered Duplo

Use numbered Duplo blocks and measure different items around the house.

Which is longer, shorter, the same?



## Comparing Weights

Gather various items together and talk about their weight. Which is lighter/heavier? Where has the feather come from?



## Hand Measuring

Cut hand shapes out of paper.

How many hands long is the table?

How long is the rug? Which is longer?

Who has the biggest hands in the room?

How many steps from the wall to the door?



## Build & Measure

Ask your child to build a tower as tall as they can against a wall. Find a tape measure and measure how tall it is.

## Baking

Measure and count the ingredients when you bake.



## Measuring & Ordering Shoes

Empty the shoe cupboard - match order and compare sizes. Use vocabulary such as: bigger, smaller, shorter, longer, the same, heavier, lighter etc.

## Capacity

Gather container and jugs of various sizes and shapes. Use vocabulary such as: What holds more/less? How many cups does it take to fill the jug? What if we pour the jugful into the teapot?



## Toy Matching

Place a number in each section of a baking tray. Ask your child to place the correct number of toys into each section.



## Playing Card Numbers

Use a pack of playing cards and a pot of buttons/Lego etc. Ask children to match the cards with the items.

## Playdough, Spaghetti & Cheerios

Gently push un-cooked spaghetti into playdough and place a number next to it. Your child then threads the correct number of Cheerios onto the spaghetti. This also supports fine motor skills, as they must be very gentle. It will also aid in supporting how to deal with emotions such as frustration!



## Number Stones

Get creative and paint numbers on stones. Then have another set of stones with dots or pictures on. Your child then matches the number stone to the stone with the correct number of dots/pictures on it.



# Bright Little Stars Nursery

Create a bag of small samples of different materials: wood, types of paper, foil, a range of plastics, stone, brick, wax, glass (marble), metals (paper clip, copper pipe, coin etc.), a leaf, fabrics, china etc. What is this? What's it made of? How do you know? Can you tell me about this item? Can you sort the materials into groups? What could you put together? Why have you put these things together? What shape is the coin? What shape is the marble? How many hard things have you got?



Start by drawing a river on paper or card, then ask your child to create a bridge over the river. Give them time to try independently before jumping in to show them how it can be achieved!

Make collections of natural or man-made objects, like leaves, pebbles or buttons, which can be arranged in patterns or put into containers. Tell me about your collection . . . Have you seen shapes like these before? Why do you think they are like . . . ? Is there something else you can think of that could belong here?





## Table Talk

How many knives do we need?  
Where do we place the forks?  
How many more plates are required?  
There 4 of us, but only 2 plates.  
How many more do we need?



## Wheeled Vehicles

Tell me about your vehicle  
How many wheels has it got?  
How do you know?  
Which vehicle has the most wheels?  
Which way are you going next?  
Is there another way of getting there?