

Math Activity Cards for Curious Learners, Ages 3–4

Ten short, playful activities for three- and four-year-olds, each with materials, a play script, an extension, and a research note. Print on cardstock, cut along the dashed lines, and follow your child's interest — five to ten minutes at a time is plenty.

CARD	ACTIVITY	SKILL FOCUS
2:1	Snack Plate Counting	<i>One-to-one correspondence</i>
2:2	How Many? Peek Game	<i>Subitizing · instant number recognition</i>
2:3	Shape Hunt	<i>Shape recognition · math vocabulary</i>
2:4	Sorting Baskets	<i>Classification · one attribute</i>
2:5	More, Less, or Same	<i>Comparing quantities</i>
2:6	Pattern Necklace	<i>Repeating patterns</i>
2:7	Under, Over, Behind	<i>Spatial language · position words</i>
2:8	Block Tower Measuring	<i>Measurement · comparing length</i>
2:9	Share the Snack	<i>Fair sharing · early division</i>
2:10	Counting Jumps	<i>Counting with movement</i>

PROGRESS TRACKER

Write the date you played each card, and a note on what your child noticed.

2:1	_____	2:6	_____
2:2	_____	2:7	_____
2:3	_____	2:8	_____
2:4	_____	2:9	_____
2:5	_____	2:10	_____



NUMBER SENSE 2:1

FOR AGES 3–4

Snack Plate Counting

*One-to-one correspondence***YOU WILL NEED**

A plate, 5 crackers, 5 napkins or cups

HOW TO PLAY

Put out three napkins and ask your child to give each one exactly one cracker. Count together as each cracker lands. Then add a napkin and ask what is needed now.

STRETCH IT

Deliberately hand over too few, then too many, and let your child tell you what is wrong and fix it.

THE SCIENCE

Matching one object to one object is the foundation of counting: children learn that the last number said tells how many.

Source: DREME Network, Research and Interventions in Early Childhood Mathematics



NUMBER SENSE 2:2

FOR AGES 3–4

How Many? Peek Game

*Subitizing · instant number recognition***YOU WILL NEED**

A small cloth or your hands, buttons or blocks

HOW TO PLAY

Hide two blocks under a cloth, lift it for one second, and cover them again. Ask: “How many did you see?” Work up to three, then four.

STRETCH IT

Arrange the same number in different ways — a line, a triangle, a pile — and ask whether the amount changed.

THE SCIENCE

Recognizing small quantities at a glance, without counting, is an early number skill that predicts later math learning.

Source: DREME Network, Early Childhood Mathematics Research



NUMBER SENSE 2:3

FOR AGES 3-4

Shape Hunt

*Shape recognition · math vocabulary***YOU WILL NEED**

A basket, household objects

HOW TO PLAY

Walk through one room hunting for circles, then squares, then triangles. Put each find in the basket and name it out loud: "The clock is a circle."

STRETCH IT

Ask what makes a shape a triangle. Show a long skinny triangle and a fat one so your child sees that shapes are defined by parts, not by looks.

THE SCIENCE

Naming and comparing shapes builds the geometric vocabulary and attention to attributes that support later spatial reasoning.

Source: NAEYC, Discovering Shapes and Space in Preschool



NUMBER SENSE 2:4

FOR AGES 3-4

Sorting Baskets

*Classification · one attribute***YOU WILL NEED**

Two baskets or bowls, mixed socks, blocks, or toys

HOW TO PLAY

Sort everything into two baskets by one rule: big and small, or red and not red. Say the rule out loud each time an object goes in.

STRETCH IT

Once sorted, change the rule and re-sort the same pile. Ask your child to invent the next rule.

THE SCIENCE

Sorting by a rule and then switching rules exercises cognitive flexibility, one of the core executive function skills.

Source: Center on the Developing Child, Enhancing and Practicing Executive Function Skills



NUMBER SENSE 2:5

FOR AGES 3-4

More, Less, or Same

*Comparing quantities***YOU WILL NEED**

Two plates, small crackers or blocks

HOW TO PLAY

Put 3 blocks on one plate and 5 on the other. Ask: "Which has more? How do you know?"

Count together to check the guess.

STRETCH IT

Make the amounts equal, then spread one row out so it looks longer. Ask whether it still has the same number.

THE SCIENCE

Comparing sets and judging more or less builds the magnitude sense that underlies all later number work.

Source: DREME Network, Early Childhood Mathematics Research



NUMBER SENSE 2:6

FOR AGES 3-4

Pattern Necklace

*Repeating patterns***YOU WILL NEED**

Pasta tubes or large beads, string, two colors

HOW TO PLAY

Start a red-blue-red-blue string and ask what comes next. Say the pattern aloud together as you thread each bead.

STRETCH IT

Break the pattern on purpose and let your child find the mistake, then invent a three-color pattern of their own.

THE SCIENCE

Early patterning ability is a distinct predictor of later mathematics achievement, separate from counting skill.

Source: Rittle-Johnson et al., Early Childhood Research Quarterly



NUMBER SENSE 2:7

FOR AGES 3-4

Under, Over, Behind

*Spatial language · position words***YOU WILL NEED**

A chair, a box, a favorite stuffed animal

HOW TO PLAY

Give playful directions: put the bear under the chair, behind the box, on top of the pillow. Then swap roles and follow your child's directions.

STRETCH IT

Describe a hiding place in words only, with no pointing, and let your child find the bear from the description alone.

THE SCIENCE

Spatial words like under, behind, and between are strongly linked to children's developing spatial and mathematical thinking.

Source: NAEYC, Developing Your Preschooler's Spatial Skills



NUMBER SENSE 2:8

FOR AGES 3-4

Block Tower Measuring

*Measurement · comparing length***YOU WILL NEED**

Blocks of the same size, a few toys

HOW TO PLAY

Build a tower as tall as a toy, then count the blocks. Compare two toys: which needs more blocks, and how many more?

STRETCH IT

Measure the same toy lying down using a line of blocks, and ask whether the number changed when it was not standing up.

THE SCIENCE

Measuring by repeating one same-size unit connects counting to length and supports growing number knowledge.

Source: Number knowledge and young children's ability to measure, research summary



NUMBER SENSE 2:9

FOR AGES 3-4

Share the Snack

*Fair sharing · early division***YOU WILL NEED**

6 crackers or grapes, two small plates

HOW TO PLAY

Share six crackers between two plates so both get the same. Deal them one at a time, then count each plate to check.

STRETCH IT

Try five crackers between two plates and let your child decide what to do with the extra one.

THE SCIENCE

Fair-sharing routines give very young children an intuitive path into division long before formal notation.

Source: Fair sharing and division in preschool, research paper



NUMBER SENSE 2:10

FOR AGES 3-4

Counting Jumps

*Counting with movement***YOU WILL NEED**

Open floor, masking tape or chalk

HOW TO PLAY

Jump together and count each landing out loud: one, two, three. Then say a number first and jump exactly that many times.

STRETCH IT

Count backward as you jump: three, two, one, blast off. Then try clapping a number while standing still.

THE SCIENCE

Linking counting to whole-body movement gives children an embodied sense of number that supports later calculation.

Source: Support of mathematical thinking through embodied cognition