What to print

- **Once, for yourself:** run.pdf, 1 page. Hold it while you run the session.
- **One copy per girl:** sheets.pdf, 3 pages. Sheet A and Sheet B. That is 2 pages per girl. Sheet C is optional.
- **You do not need:** pages 6 to 8 of this guide, the key. The session runs without it.

Guide, Shapes Around Us

Group 4 to 30 · Materials: paper, pencil, found objects · SDG 4, 5 · EN edition · Released · Nameet Potnis, author and English editor

Before you enter the room

- **Bodies before pencils, and corners are counted by touching each one.**
- You choose the objects, not the girls, and put them out before anybody arrives. Nothing that fits inside a ring made by your thumb and first finger, nothing sharp, nothing from a bin.
- Draw the four shapes big where everyone can see them.
- Sheet C is for the 60 minute session only. For 30 or 45 minutes, print Sheets A and B.
- Thirty minutes is the right length for four and five-year-olds, not a cut-down one.

Read this once at home. In the room you only need the run sheet. Where this says "you", it means whoever is running the session: a teacher, a volunteer, an older sister.

Who it is for

- **For ages 4 to 7.** Girls who can point, walk, talk and hold a pencil. Reading is not needed at any point.
- **Numbers.**
- **Group size.** 4 to 30 girls, working in pairs for the sorting step.
- **Different levels in one room.** A four year old and a seven year old do the same activity. The four year old sorts her objects into two piles, round things and things with corners, and draws one shape big. The seven year old counts the corners and the sides, finds a shape nobody has claimed yet, and writes or traces the name under her drawing. Same objects, same sheets, different depth.

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What you need

- Four sheets of paper with one large shape drawn on each: circle, square, rectangle, triangle. You draw them, freehand is fine
- Found objects, a handful per pair: large bottle caps, pebbles that fill a palm, leaves, folded paper squares, twigs snapped to a similar length, a crumpled paper ball
- One learner sheet per girl, or plain paper
- One pencil per girl, or one shared between two
- **Free and optional:** the room itself, which is the real material. Doors, windows, floor tiles, the rim of a cup, a wheel, a page, a folded corner
- **Nothing here costs money.**

The room supplies every shape this session needs, so there is nothing to buy and nothing to print beyond the sheets. If you have no wall to pin the four drawn shapes on, lay them on the floor in the middle of the circle.

Why the session is shaped this way

The shapes you draw are not flashcards, they are a reminder. Four sheets of paper, drawn by you in front of the girls, do the same work as a bought set and cost nothing. Draw them while the girls watch, and say the name as you draw. A girl who watched a square being made understands it better than a girl handed a finished one.

Bodies before pencils. Ages four to seven learn a shape with their arms before they learn it with a pencil. Making a circle with two arms, a triangle with two hands and a square with four fingers takes two minutes and gives every girl, including the youngest, something she can do correctly straight away.

Walking to the shape is the main activity, not a warm up. The goal is shapes found in the room, so the girls have to move to the room. "Walk to something round and put your hand on it" gets every girl to commit in public with no talking required, and it shows you at a glance who is following and who is copying her neighbour.

Two piles before four names. Round things in one pile, things with corners in the other. Sorting into two is inside reach of a four year old, and it is the same idea that later separates a circle from a square. Names arrive on top of the sorting, not before it.

Count corners by touching them. Put her finger on a corner, say "one", move to the next, say "two". Counting corners is counting real things, which is why this is a numbers pack and not an art pack. A girl who says "four" without touching anything has guessed, and guessing here is worth one more round of touching.

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Drawing is the record, writing is a bonus. A drawn shape is a complete answer at this age. If a girl wants to write or trace the name, good. If she does not, her sheet is finished anyway, and you say so out loud.

A shape does not change when you turn it. A square resting on its point gets called a diamond by almost every room. Turn the object slowly in front of them and count the corners at each position. Four corners before the turn, four corners after it.

Including everyone

A girl who cannot yet read. This is the normal case in this session and nothing in it needs reading. Every instruction is spoken, every shape is shown, and every space on the sheets takes a drawing rather than a word. The small words printed at the corner of each drawing box are for you, not for her. Say them aloud instead. If she wants her name on her sheet and cannot write it yet, write it lightly for her to trace, or let her put her own mark there and say that the mark is her name today.

A girl who joins late. Take her hand, walk her to the four drawn shapes and name them once. Then put her straight into whatever step the room has reached, with a partner and a handful of objects: "Round things here, corner things here." Every step stands on its own, so she has missed nothing she needs. Do not rewind the group and do not ask her why she is late.

Boys in the room. They do the same activity and the same sheets. Watch two things so the session stays centred on the girls: who is first to touch the object on the shape walk, and who answers when you ask how many corners. If the same few children arrive first every time, name the shape and then name a girl who has not touched one yet, and wait with her until she does. Nobody is sent out and nobody gets a different sheet.

If it goes wrong

You ask what shape the door is and she says "a door". She is naming the thing, not the shape, which is what a four or five year old hears in the question. Do not correct the word. Take her hand, run her finger down one edge of the door and say "one side", then along the next and say "two sides", and count all four. Then point at your drawn rectangle and ask which one the door matches. Naming follows matching. Ask the same question about two more objects before you move on, because the second and third time is when it lands.

The room decides a square turned on its point is a diamond. This is an ordinary and sensible mistake and a whole group will agree on it at once. Do not tell them they are wrong. Hold up a square object, count its corners together, then turn it slowly to rest on its point and count the corners again. Same four. Then turn it back. Say it plainly: "Turning it did not change the shape." Do this with a second object so it

is not a trick of the first one. If a girl still wants to call it a diamond, let her, and note that the word for a turned square is a word she will meet later.

Adapting it

- Use whatever the room gives you. Doors, tiles, windows, cups, wheels, tins, leaves and folded paper all work. Mixing them is fine.
- If your room has no obvious triangles, fold a paper square along its corner and you have two. Folding one in front of the girls is a good moment in itself.
- Four shapes is the full version. With four year olds, run circles and squares only, and let rectangles and triangles arrive next session.
- Outdoors works as well as a room. A wheel, a gate, a swept patch of ground and a stack of bricks give you all four shapes.
- Run the naming in the girls' home language first, then say the English word once alongside it.

Running it shorter or longer

30 minutes. 0 to 4 name the four shapes, 4 to 10 shape walk, 10 to 17 two piles and count corners, 17 to 26 draw what you found, 26 to 30 point, name, close. This is the version to run with four and five year olds, and it is not a reduced session for them, it is the right length. What it gives up is your walk round the room during the drawing step, so in a group over about twelve you will not reach every girl individually, and the corner counting happens once rather than twice.

45 minutes. The clock on the run sheet. The extra minutes go into a second round of corner counting and into reaching every girl while she draws.

60 minutes. 0 to 6 name the four shapes, 6 to 16 shape walk, 16 to 30 two piles and count corners, 30 to 48 draw and build, 48 to 60 point, name, close. In the drawing step each pair also builds shapes from twigs or folded paper strips on Sheet C: three twigs make a triangle, four make a square, and they count the sides and the corners of what they built. Only run 60 with a group that is settled and asking for more. A longer session at this age is more of the same activity, never more content.

Closing, in every version. Go round the circle. Each girl points at one thing in the room and says its shape. Repeating what another girl said is allowed and happens often. Collect the objects into one bag or tin for the next numbers session.

Keeping it safe

The objects come from the room, so you choose them, not the girls. Nothing goes in the mouth. Before you hand anything out, check it cannot fit inside a child's mouth: if it fits inside a ring made by

your thumb and first finger it is too small for this room. Seeds, beads, coins and small bottle caps are out. Count what you handed out back in at the end. Nothing sharp, nothing hot, nothing from a bin. Put the ones you will use on the table before the girls arrive.

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Key and facilitation cues

Answers and what to say, Shapes Around Us

Answers

Most of this session is spoken, pointed at or drawn, so this file gives cues rather than answers. What a girl draws is correct if it matches the thing she touched. Two numbers on the sheets do have answers, and they are worth knowing before you look at a page.

Shape	Sides	Corners
Circle	One edge, and it curves all the way round	None
Triangle	3	3
Square	4, all the same length	4
Rectangle	4, two long and two short	4

These answers also count, so do not mark them wrong:

- **Zero corners on a circle, written as 0, or as a dash, or said out loud as "it has none".** All three are the same answer.
- **A square called a rectangle.** A square is a rectangle whose sides happen to be equal, so this is true rather than wrong. Say "yes, and it has a special name because all four sides are the same".
- **A drawing that is lopsided.** A hand-drawn square with wobbly sides and four corners is a square. Count the corners, not the neatness.
- **A shape named in her home language.** That is the shape named correctly. Say the English word once beside it and leave hers on the page.
- **An object nobody expected.** A folded corner of paper, a slice of something, the gap in a gate. If she can show you the sides and the corners, she has found a shape.

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What you might see

What is on the page	What to offer next
One drawing, no numbers, and the round box and the corner box hold similar drawings	Stand beside her with two objects, one round and one with corners. Ask her to put the round one on the round box. Then count the corners of the other one together, touching each corner once
Both boxes drawn and clearly different, corner count guessed rather than counted	Ask her to touch the corners of her own drawing with a pencil tip while she counts aloud. Then hand her the real object and ask for the same count
Both boxes drawn, corners and sides counted correctly, name written or traced	Send her to find a shape nobody in the room has claimed yet, then Sheet C, building shapes from twigs and counting the sides of what she built

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Sticky points

What happens	What to say or do
She names the object instead of the shape: "a door", "a cup"	Run her finger along one edge, count the corners together, then point at your drawn shapes and ask which one it matches
Everything round and everything square goes in one pile	Give her only two objects, one clearly round and one clearly cornered, and ask for two piles of one
She calls a turned square a diamond	Count the corners, turn the object slowly, count them again, then say "turning it did not change the shape"
She says a big square and a small square are different shapes	Put them side by side and count the corners of each. Say "both have four corners and four equal sides, so both are squares. One is just bigger"
She cannot draw a straight line yet and gives up	Draw one side for her and let her finish the rest. Four corners matter here, straight sides do not
She cannot write her name on the sheet	Write it lightly for her to trace, or let her make her own mark and say that the mark is her name today
She wants to keep the object she found	Let her hold it until the closing circle, then it goes in the bag for next time
A partner does all the sorting for her	Hand the objects back to her and give the quick one the counting job, checking the corners of each pile

Say what you saw, never what she lacks: "You found four corners on that door", not "you still cannot name shapes".

After the session

Keep the four drawn shape sheets and the bag of objects. The next numbers session can open with one minute of "walk to something round", which gives every girl a win before anything else starts. Sheet A tells you at a glance who is ready for sides and corners next time, and who wants one more session of two piles.

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