A SPARKATLAS PACK FOR LITTLE EXPLORERS

Leaf, Stick, Leaf

Find what repeats outside, guess what comes next and make your own pattern with real finds.



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YOU'LL NEED

- fallen leaves, sticks and pebbles
- a crayon or pencil
- a bag or box for finds

TIME

About 10 to 15 minutes a page

Our pattern walk

Date _____ Where we went _____

Today's weather · Circle one ◯ sunny ◯ cloudy ◯ rainy ◯ windy

AGES Sprout 2–3 Seedling 3–5 Sapling 5–7 Each activity page shows its band.

WHY THIS MATTERS

Small children love spotting what comes again and again: a fence, a pinecone, leaf then stick then leaf. Noticing a repeat is the start of maths, music and making sense of the world.

Before You Start

A one-minute read for grown-ups.

How to use it (about 10 to 15 minutes a page)

1. **Go outside first.**
   Look for repeats: slats, petals, stump rings, pinecone scales. Say what you see out loud.
2. **Collect a little.**
   Gather fallen leaves, sticks and pebbles — or use buttons and scraps at home.
3. **Say it as you go.**
   Leaf, stick, leaf, stick. Hearing the beat helps children feel when something fits.
4. **Stop while it's fun.**
   One page is plenty. Come back another day.

Three ways to play

Sprout 2–3

Point and name: leaf, stick, pebble. Lay a short repeating line together.

Seedling 3–5

Guess what comes next, then check by laying the real thing down.

Sapling 5–7

Name the rule (leaf then stick) and invent a new one with different finds.

Little safety notes

Look at webs, snails and stumps; do not touch them. Collect only fallen leaves, sticks and pebbles. Leave plants, mushrooms and animals where they are. Small finds can choke, so stay close with under-3s. Wash hands after.

Printing tips

Page 1 is the cover. To save ink, print pages 2 to 7 only. Every page works in black and white, on Letter or A4.

Wonder out loud together

- What do you think comes next? How do you know?
- Is a pile of mixed leaves a pattern? Why, or why not?
- Can the same pattern be made with different things?
- Where else do you see something that repeats?

FOR GROWN-UPS

Ask "what do you think comes next?" and "how do you know?" more than "is that right?". A child who can say the beat out loud is doing real mathematical thinking.

Nature's Patterns

Things outside that repeat. Can you find them?

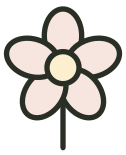
Look for each one on a walk. Tick the box when you spot it.



pinecone ☐



snail shell ☐



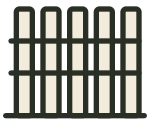
flower ☐



spider web ☐



tree rings ☐



fence ☐

Your own find
A pattern you noticed. Draw it here.

FOR GROWN-UPS

A pattern is something that repeats. On many stumps, a light ring and a dark ring together make one year of growth. Count the pairs, not every stripe.

PLAY IT YOUR WAY

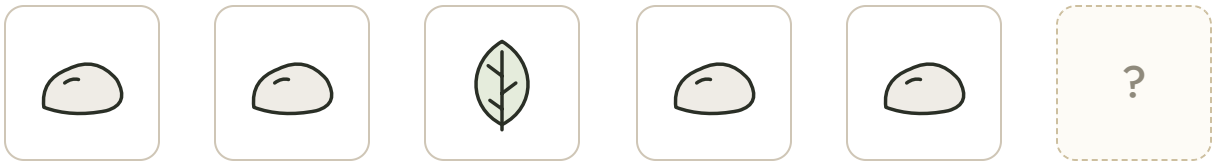
Easier: Point and name each picture at home before you go. Tick together when you spot one.
Stretch: For each find, say what repeats: scales, petals, slats or rings.

What Comes Next?

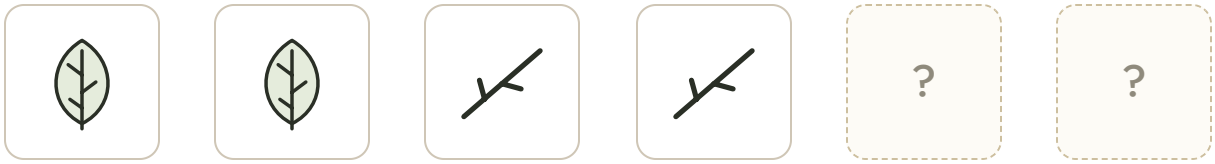
Look at the line. What fits in the empty boxes?

Say the pictures out loud, then draw or place what comes next in each box with a question mark.

1 

2 

3 

4 

5

Your own pattern. Draw or lay finds in the empty boxes.

✦ Spirals that grow

Pinecone scales grow in spirals. A snail adds onto its shell at the open edge as it grows, and the shell keeps a spiral shape.

FOR GROWN-UPS

Guessing the next piece means holding the beat in your head. Saying it out loud (leaf, stick, leaf, stick) makes the repeat easier to hear.

PLAY IT YOUR WAY

Easier: Do the first row together with real leaves and sticks. Point to each one as you say its name.
Stretch: Invent a rule and ask a grown-up to finish your row.

Build the Pattern

Copy each line with real leaves, sticks and pebbles.

Gather your finds, look at each model, then build the same repeating line beside it.

Gather these ☐ **fallen leaves** ☐ **small sticks** ☐ **pebbles**

1



Build it here

☐ **I built it**

2



Build it here

☐ **I built it**

3



Build it here

☐ **I built it**

Talk as you build

- Can you say the line out loud?
- What would come next if the line kept going?
- Could you make this pattern with different things?

FOR GROWN-UPS

Building a pattern with real objects turns a picture into something children can touch and fix if a piece feels wrong.

PLAY IT YOUR WAY

Easier: Build only the first line together, one find at a time.

Stretch: Change one piece on purpose, then put the pattern back.

Pattern or Mixed Up?

Does it repeat, or is it a jumble?

Look at each line. Tick whether it repeats or looks mixed up.

1



☐ It repeats ☐ Mixed up

2



☐ It repeats ☐ Mixed up

3



☐ It repeats ☐ Mixed up

4



☐ It repeats ☐ Mixed up

5



☐ It repeats ☐ Mixed up

6

Draw your own line here

☐ It repeats ☐ Mixed up

FOR GROWN-UPS

A pattern is a repeat you can keep going. Four leaves in a row is a pattern too: leaf, leaf, leaf, leaf. A jumble has no beat you can follow.

PLAY IT YOUR WAY

Easier: A grown-up says the names; the child listens for a beat that comes back.
Stretch: For each repeating line, say the rule in words, then keep it going.

My Own Pattern

Invent a repeating line and give it a name.

Draw or stamp your pattern in the big box. Then tick what you used and write what you would call it.

Draw or stamp your pattern

Press a leaf or the end of a stick, or draw with a crayon.

My pattern uses

- ☐ leaves
- ☐ sticks
- ☐ pebbles
- ☐ other

I would call it _____

Say your pattern out loud. A grown-up can write it here.

_____

_____

_____

Wonder together

- What comes next if it keeps going?
- Could someone else copy your pattern?
- Where might you build this outside?

FOR GROWN-UPS

Inventing a pattern and naming it helps children own the idea: they are not only finding a repeat, they are making one.

PLAY IT YOUR WAY

Easier: Make a simple pattern together: leaf, stick, leaf, stick.

Stretch: Write the rule, then ask someone to continue it without looking at the picture.