

Lesson 1 · nature-of-stem

STEM Eyes: What Do You Notice?

Lesson at a glance

Open by inviting Junior/Senior Infants to put on their 'STEM eyes' and call out what they see, hear or feel in the room. Model the noticing cycle aloud on one real object — pencil sharpener, stapler or tap — answering 'what do I notice?' and 'what does it do?'. Then lead a slow noticing walk inside and out to the yard, stopping at five or six things. Share in a circle, then each child draws one wonder for the year-long 'I wonder' wall.

Learning objectives

- Notice and name things in their immediate environment using their 'STEM eyes'
- Ask 'what do you notice?' and 'what does it do?' about everyday things

Before the bell – prep

Scout your walk route beforehand and pick five or six safe stops — a window catch, drainpipe, bench, a plant in a crack, a tap, the play equipment. Pick one classroom object to model with (sharpener, stapler). Have paper or the Investigation Journal drawing page ready, plus a free patch of noticeboard to pin drawings on — that pinned collection IS the wall, so no big sheet needed.

Materials

Item	Qty	Per	Source	Low-cost substitute
clipboards	1	pupil	classroom	a sheet of stiff card or the back of a hardback book to lean on
drawing paper	1	pupil	classroom	the Investigation Journal drawing page
crayons or colouring pencils	1	pupil	classroom	ordinary pencils
one everyday classroom object for the teacher demonstration (e.g. a pencil sharpener or stapler)	1	class	classroom	any small everyday object already on the teacher's desk

Safety watch-point

On the outdoor walk keep the whole class together within the yard boundary, walking not running. No picking, touching or tasting plants or play equipment — looking and pointing only.

Teaching moves

- **Watch Me Use My STEM Eyes:** Hold up your chosen object and think aloud through all three questions slowly: 'What do I notice... what does it do... how could I find out more?' Don't skip a beat — if the children only hear you name the object, they will point on the walk but not wonder. End with 'Now it's your turn outside.'
- **Our Noticing Walk:** Walk slowly and stop the whole group at each chosen thing — keep them together, no running ahead or picking things up. At each stop ask 'What do you notice? What does it do?' and take two or three answers. Watch for children who say what a thing IS but not what it DOES — re-ask 'and what does it do?'
- **Share What We Noticed:** Sit in a circle and do a quick think-pair-share first so every child speaks. Then take six or seven offerings and revoice each as a STEM-eyes moment: 'So you noticed the drainpipe and you think it carries the rain away — lovely wondering!' Stress the words notice, wonder, does. Nothing is written here.
- **Start Our 'I Wonder' Wall:** Give each child paper or the Journal drawing page and ask for one big, clear drawing of a thing they noticed and want to find out more about. As they finish, pin each drawing up — the pinned drawings together are the wall. Keep it up all year and add to it.

What it should show

Most infants will name everyday things and, with prompting, say what they DO — a tap 'makes water come', a bench 'is for sitting'. Many will still describe what a thing IS rather than what it does; affirm the notice, then gently re-ask 'and what does it do?' to nudge them on. A few will offer spontaneous 'I wonder...' questions — celebrate these loudly as the goal of the lesson.

Misconceptions & interventions

- **Pupils think 'STEM eyes' means real glasses they need to wear.** — Point to your own eyes and say STEM eyes are just a way of looking very closely and wondering — no glasses needed. Demonstrate by 'switching them on' as you peer at the pencil sharpener.
- **Pupils say only what a thing IS ('it's a tap') and stop there, not what it does.** — Accept the naming, then re-ask 'and what does it DO?' at the tap stop on the walk. Re-voice their answer: 'Yes — it lets the water out when you turn it.'

Differentiation

Emerging	Developing	Proficient
<ul style="list-style-type: none"> • Give the sentence stem 'I notice... It does...' aloud and let the child fill the gaps. • Pair a quieter child with a confident noticer for the walk and the think-pair-share. 	<ul style="list-style-type: none"> • Prompt 'and how could you find out more?' after they say what something does. 	<ul style="list-style-type: none"> • Ask them to find a second thing on the walk and say what it does, or to spot two things that do the same job.

Cross-curricular hook

Links to Oral Language — using 'I notice...' and 'I wonder...' stems and listening to a friend in think-pair-share.