

## Lesson 1 · living-things

## STEM Eyes: What Does It Do, and How Could We Find Out?

## Lesson at a glance

Open by having 2nd-class pupils put on their 'STEM eyes' and notice things in the room, then unpack three beats: notice, what does it do, how could we find out. Model the full cycle aloud on a real feature like the drainpipe, then send talk-partners on a short pre-walked loop with clipboards and sticky notes to notice and star a favourite. Back at desks they copy into a three-box Investigation Journal page and turn a wonder into a question, then pin the best to a class wonder wall.

## Learning objectives

- Notice things in our school and grounds and name what they do
- Turn a wonder into a 'how could we find out?' question for the class wall

## Before the bell – prep

Pre-walk a tight loop (just outside the door plus one yard stop) so transitions don't eat the 14 minutes. The day before, set out clipboards and a few sticky notes per pair, and have the three-box Investigation Journal pages on desks before pupils return from the walk. Sort talk-partners in advance. Clear a noticeboard or wall space for the wonder wall.

## Materials

Item	Qty	Per	Source	Low-cost substitute
Investigation Journal page	1	pupil	printed	plain paper with three boxes ruled and labelled 'I noticed', 'it does', 'how we could find out'
clipboards	1	group	classroom	a piece of stiff card or a hardback book to lean on
sticky notes	4	group	classroom	small squares of scrap paper
pencils	1	pupil	classroom	crayons

## Safety watch-point

On the walk, keep pairs within sight and inside agreed yard boundaries; settle to a tidy line before leaving and returning so no one strays near gates or traffic.

### Teaching moves

- **What STEM Eyes Notice:** Reveal one idea at a time. Read each short paragraph and point at a real thing — the swinging door, a tap, the window out to the yard — before moving on. Land the key idea: a wonder becomes a question when it starts with does, which, how or what happens if.
- **The Teacher's STEM Eyes:** Model the whole cycle out loud on one real feature you can point to: 'I notice... what does it do... I wonder... my question is...'. Say the question slowly and flag that it begins with a question word — this is exactly the pattern pupils copy on the walk.
- **Our Wonder Walk:** Pair pupils and name the clipboard-carrier in the room before opening the door. Keep the loop tight; stop the class at two or three spots and ask 'what do you notice? what does it do?'. Remind pairs to star their favourite sticky note. Budget about 4 minutes for lining up and travelling, leaving 10 at the stops.
- **Record What We Noticed:** Run as two beats. First, everyone copies 'I noticed' and 'it does' from the starred sticky note — a quick, low-pressure copy. Only then point them at 'how we could find out'. Put a sentence starter on the board: 'I wonder... does... ?'
- **Share Our Wonders:** Circle-time share: take a question from as many pairs as time allows and pin each sticky note to the wall — the pinned notes are the wonder wall. Praise good question wording over getting an answer; revoice any statements into questions as you go.

### What it should show

Most pupils will notice everyday features — a tap, gate, bin, tree, puddle, drainpipe — and name a sensible job for each. The common stumble is writing a statement ('the puddle dries up') instead of a question; gently reshape it into 'does the puddle dry faster in the sun?'. Some will offer wonders that are hard to phrase — affirm the wonder, then help them find a question word to start it.

### Misconceptions & interventions

- **Pupils write a statement in the last box — 'the bin gets full' — rather than a question.** — Point at the sentence starter on the board and reshape it together: 'the bin gets full' becomes 'how fast does the bin fill up?'. Use the question words does, which, how, what happens if.
- **Pupils think they need to know the answer to their wonder right away.** — Reassure that the job today is to ask a good 'how could we find out?' question, not answer it — that's what the wonder wall is for over the year. Praise the wording, not the answer.

**Differentiation**

Emerging	Developing	Proficient
<ul style="list-style-type: none"> <li>• Pupils who find writing tricky can draw the thing in the box and tell you its job aloud.</li> <li>• Pair a hesitant noticer with the teacher at one stop to model 'what do you notice here?'</li> </ul>	<ul style="list-style-type: none"> <li>• Ask pairs to notice a second thing and name its job before turning one into a question.</li> </ul>	<ul style="list-style-type: none"> <li>• Challenge confident pairs to find something hard to explain, then craft a 'what happens if' question about it.</li> </ul>

**Cross-curricular hook**

Links to Oral Language — pupils share a noticing aloud and reshape a wonder into a question using question words.

