

living-things

The eye and reacting to a stimulus

Lesson at a glance

Open with everyday moments when eyes take a moment to settle in bright light or blink without meaning to. Pairs predict pupil size in bright light versus shade, then watch a partner's pupil under a hand-roof shade and jot bigger/smaller on the Investigation Journal. Next they hold a clear plastic sheet between them and clap gently beside it once per role, recording blink or no blink. Share-out names light and clap as stimuli and the blink as an automatic response, then closes on the safety rules used.

Learning objectives

- Observe and describe how the pupil changes between bright light and shade
- Describe the blink response as something the body does without us deciding
- Follow safety rules for looking at eyes and testing a gentle blink stimulus

Before the bell – prep

Gather one clear plastic sheet per pair and wipe them clean. Mark two or three bright zones by windows or under the strongest ceiling lights before the lesson. Check the room has enough contrast for a hand-roof shade to work; turn on one brighter bank of lights if the room is evenly dull.

Materials

Item	Qty	Per	Source	Low-cost substitute
clear plastic sheet or face visor	1	pair	school kit	a clear plastic document wallet held upright between partners
Investigation Journal page	1	pupil	classroom	plain A4 paper with two labelled spaces: pupil watch and blink test

Safety watch-point

Hands off eyes; no torches or phones shone at faces; only the person being watched shades their own eye; one gentle clap beside the sheet, never toward the face.



Teaching moves

- **How the eye reacts:** Project the eye image and name only the pupil — point to the dark circle on the board, then briefly to your own eye without touching it. Leave 'what does it do in bright light?' open. If a child already knows, thank them, park it as a prediction, and say the class will check it by watching.
- **What do you think will happen?:** Run two short think-pair-share rounds. First: pupil only — note two or three single-word predictions on the board. Second: hold up one clear sheet, then take blink/no-blink predictions. Restate safety before anyone looks closely: hands off eyes, no shining light in, shade with own hand only, clap beside never at the face.
- **Watching the pupil:** Model one full cycle at the front in about two minutes: bright look, then cupped hand-roof shade for ~10 seconds with a small front gap so the dark circle stays visible. Prefer every pair at the brightest spot they can reach. If window space is short, rotate short turns and give waiting pairs a second-watcher role a step back. Swap after one clear bright-versus-shade look each; have them jot on the journal straight away.
- **Testing the blink:** Demonstrate once with the sheet between you and a volunteer: one gentle clap beside the sheet, watch the eyes. Signal one table group at a time so two or three pairs clap together on the same calm cue; they jot, swap roles, take one more group signal, then you move on. Stop any clap toward the face or tap on the sheet and remodel beside-not-at. Children who find sudden sounds hard may watch only and keep the notes.
- **Record what you saw:** Keep the page to short evidence only: pupil bigger or smaller; blink or no blink. Offer the oral stems 'In bright light the pupil looked... / In shade... / When we clapped, my partner...' Do not require stimulus or automatic response on the page yet.
- **Automatic responses all around us:** Draw out the two findings first, then revoice: bright light and the sudden clap are each a stimulus; the blink (and pupil change) can be an automatic response. Optional oral stretch: one more everyday automatic response and what set it off — no extra writing. Close the 'body is broken' idea: automatic means a fast helpful path, not loss of control.

What it should show

Expect the dark circle to look clearly smaller in bright light and larger under a steady hand-roof shade within a few seconds. Almost every child will blink at least once at the gentle clap beside the sheet. A muddy pupil result usually means the hand fully blocked the view or the room lacked contrast — coach the front gap or move closer to a window. No blink is valid data; do not raise volume or move closer to the face.



Misconceptions & interventions

- **The pupil is a black spot drawn on the eye, so it cannot really change size.** — Have them watch the partner's dark circle under the hand-roof shade and say bigger or smaller out loud. If needed, say quietly that the coloured part opens and closes the opening like a tiny curtain — do not add iris to class vocabulary unless a child asks.
- **We decide every blink; blinking only happens when we choose it.** — Point back to their own clap-test journal note. Ask whether the blink came before they chose it, then name it as an automatic response that helps protect the eye.
- **Automatic means the body is broken or out of control.** — Reframe in the share-out: automatic means a fast helpful path for some jobs, like blinking when something comes near the face. Their evidence today was the clap beside the sheet.

Differentiation

Emerging	Developing	Proficient
• Pair with a confident watcher first and use the oral stems on the journal: 'In bright light the pupil looked... / When we clapped, my partner...' • Children who find sudden sounds difficult watch only and act as note-taker or timekeeper for their pair.	• After one clear bright-versus-shade look, ask 'Is it bigger or smaller now? Can you still see the dark circle under the shade roof?' • Invite a short oral name of one more everyday automatic response and what set it off after the terms are on the board.	• Ask what would have made the blink test unfair or unsafe, using only the sheet-and-clap setup already on the bench. • Have them explain which response felt more like a choice and which felt automatic, tying each back to their journal evidence.

Cross-curricular hook

Links to SPHE personal care and safety talk — kind observing of a partner and clear rules for faces and sudden sounds.