Shadows

Ages 6–8 • Science • 30-minute adaptable lesson

Learning objective

Use observation to support a claim about shadows.

Opening question

Does a shadow always have the same length?

Discover new knowledge

Elicit predictions. Explore with a torch before or after the optional claim. Ask pupils to compare observations and explain the result in their own words.

Review prior learning

Ask pupils to recall what happened in the torch experiment. Evaluate a volunteered explanation, revisit the observation if needed, and pose a new shadow question.

Optional prepared claim

A shadow can change length when the light moves. (Teacher-created practice statement; not an actual pupil or AI quote.)

Independent evidence and teacher key

Use a torch and an upright pencil. Keep the pencil fixed and move the torch higher or lower. Observe and compare shadow length. Shadow length can change as the light position changes.

Transfer and assessment

How could you make a longer shadow with the same pencil? Observe whether pupils explain, question and revise based on evidence. Do not grade card colour alone.

Evaluate the Claim

Shadows • Use words, drawings or oral explanation.

My first idea

Does a shadow always have the same length?

_____

_____

A claim to evaluate

A shadow can change length when the light moves.

My judgement

[ ] I agree [ ] I'm not sure [ ] I disagree

What makes me think so?

_____

_____

What could I check?

_____

_____

My own conclusion

_____

_____

Try a new question

How could you make a longer shadow with the same pencil?