# Thermal review: transfer and temperature

Teacher / technician

YEAR 11 / LESSON 72 / PHYSICS + SCIENCE (DOUBLE AWARD)

Staff preparation and answer guidance. Keep separate from student sheets. Record actual measurements separately from labelled practice examples.

## Coverage and delivery

Shared Physics / Double Award: Shared energy-transfer review; particle-state and specific-heat tasks are Physics-only extensions.

Allow about 60 minutes. Follow the student sequence and use the answers to check reasoning.

## Requisition • class of 30, working in 15 pairs

| Item | Per pair / setup | Class total |
|---|---|---|
| Booklets | 1 each | 30 |
| Diagram cards and calculators | 1 set per pair | 15 sets |

## Immediate safety

Desk-based review. No hot drinks, heaters, ice or hot-water baths are needed.

# Preparation and delivery

Read alongside the student method

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**1.** Label the two Physics-only extensions and prepare both Double Award alternatives.

**2.** Use original diagrams and either labelled practice curves or retained genuine class data, with their origin stated.

## Close of lesson

• Return cards and retain corrections.

## Check before teaching

Check the cards, reference data and quantities against this requisition. Keep the staff answer guide separate until the checking stage. Supplied numerical practice datasets are labelled examples; they are not class measurements.

# Answers and teaching notes

Expected explanations • do not give as experimental observations

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- From the drink to its surroundings.
- It reduces transfer rates through relevant pathways.
- No; transfer to or from skin also depends on material properties.
- It reduces convection and evaporation from the surface, among other changes.
- No; energy transfers to the surroundings.
- The temperature difference becomes smaller.

## References and provenance

Pearson Physics specification

Prepared 22 November 2026. Original wording, tables and questions. Sources inform the concepts and technique; the lesson scope and classroom quantities are explicitly described here. No laboratory trial or final school risk approval is claimed.