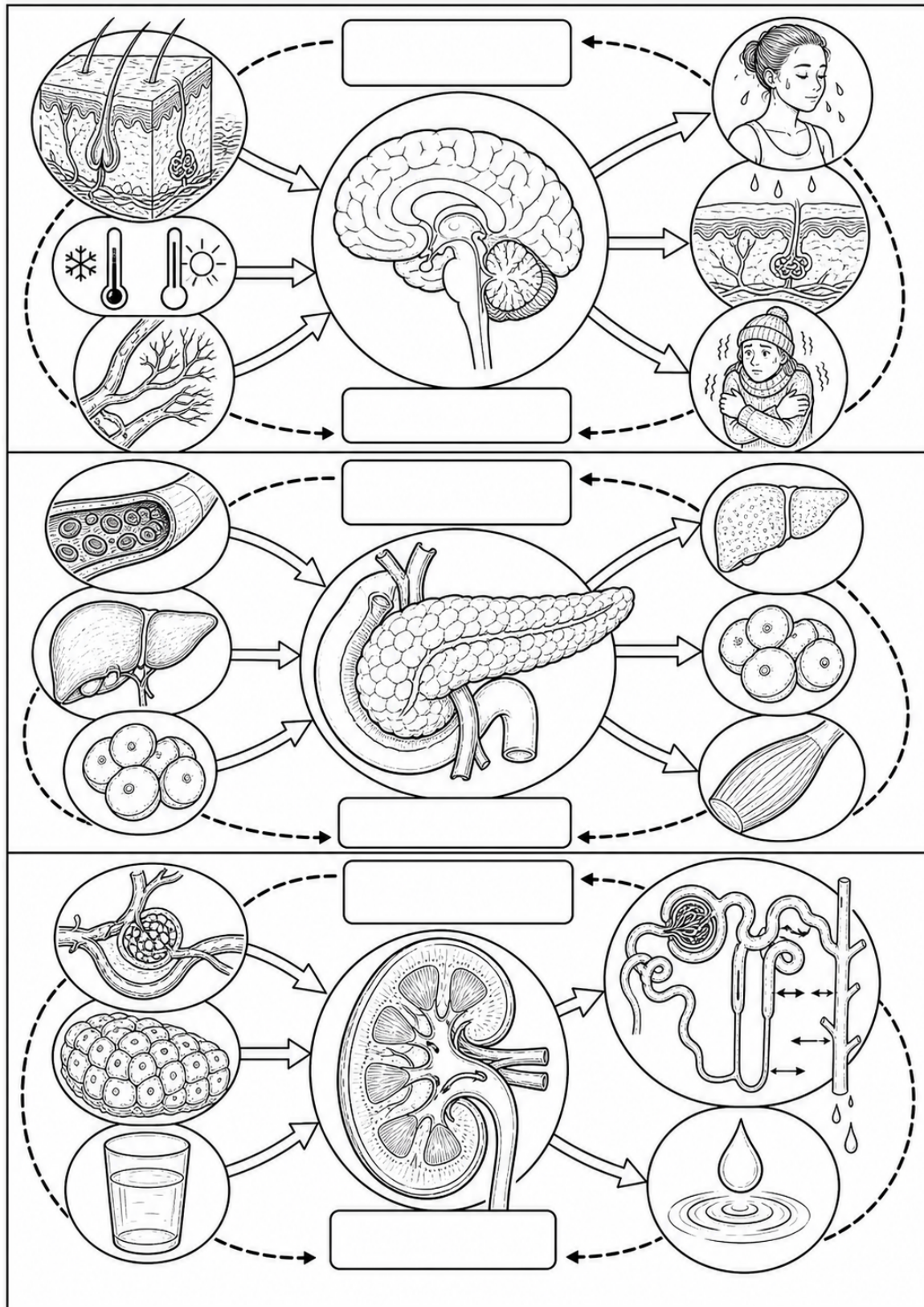


Homeostasis: Three Negative Feedback Systems

KS4 / GCSE / Year 11 - Biology

For temperature, blood glucose and water balance, trace stimulus, receptor, coordination, effector and response. Explain how negative feedback returns a variable to



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Parent & Teacher Guidance

Curriculum focus

Topic: Homeostasis. Develop accurate observation, subject vocabulary and evidence-based explanation. Mapped scope: the mapped programme of study.

Before you begin

Review the picture together and ask the learner what they already notice about Homeostasis. Read the activity aloud, explain unfamiliar vocabulary, and agree which details need special attention.

Solo activity

The learner can complete the colouring independently, then use the finished page to explain three details linked to Homeostasis. Encourage accurate colour choices where they carry meaning, but allow creative choices elsewhere.

Group activity

Give pairs or small groups different areas to inspect. Ask them to agree on evidence before colouring, compare their findings, and present one curriculum fact to the class. Finish with a whole-group check against the guidance below.

Questions to guide discussion

What evidence can you see? Which feature is most important and why? How does one part connect to another? What new fact about Homeostasis can you explain using the picture?

Answers and checking

Thermoregulation uses receptors and brain coordination with effectors such as sweating, skin blood-flow change and muscles. Blood glucose control involves pancreatic hormones affecting liver/body-cell uptake or release. Water balance involves brain/pituitary signalling and kidney tubule water reabsorption. Negative feedback opposes deviation; diagrams are simplified.

Learning record and next steps

☐ Completed the colouring

☐ Explained key vocabulary

☐ Completed the activity

☐ Used visible evidence

Evidence noticed / vocabulary used

Next step:
