

Transport · supported focus

Supported focus · SL

## Supported scope

- Supported SL focus. First assessment 2025; current subject brief acquired; full Biology guide not acquired. Remaining guide, assessment and practical requirements retain their recorded holds.
- State model conditions and distinguish fictional data from measurements.

# Nutrition · 1.1

## Reasoning

Two foods can have the same mass but provide different nutrients. A health claim must distinguish the nutrient measured from the health outcome inferred. Start with a prediction. State the quantities or features you would compare, then decide what evidence could distinguish two explanations.

## Nutrition · 2.1

### Reasoning

Large insoluble food molecules are digested into smaller soluble molecules.

Carbohydrases form sugars, proteases form amino acids, and lipases form fatty acids and glycerol. Bile emulsifies lipids and helps neutralize acidic stomach contents.

digestion : Breakdown of large food molecules; absorption : Movement of soluble products into the body.

## Nutrition · 3.1

### Reasoning

Absorption moves soluble products into blood or lymph. Thin exchange surfaces and a large surface area shorten diffusion paths and increase transfer. Enzyme activity and transport are different processes. Use Benedict reagent with controlled heating for reducing sugars, iodine for starch, Biuret reagent for protein, and the ethanol emulsion test for lipids. Keep ethanol away from flames. Use positive and negative controls.

## Nutrition · 4.1

### Reasoning

State the known values and their units. Choose the relation because its assumptions fit this case, then rearrange before substitution. Known: 6 of 24 study participants report a condition. Proportion = cases / total. Percentage =  $6/24 \times 100 = 25\%$ . The percentage describes this sample. It does not establish that one food caused the condition; confounders and how the sample was chosen matter.

## Nutrition · 4.2

### Reasoning

9 of 36 participants report an outcome. Calculate the percentage. Use the same sequence: known quantities → model → relation → substitution → unit and interpretation.

## Nutrition · 5.1

### Reasoning

Bile is not an enzyme. A positive food test identifies a component under the test conditions; it does not show that a food is healthy or unhealthy in every diet. Return to the original observation. Explain what the result supports, which conditions it assumes, and one way to test a competing explanation.

## Nutrition · 5.2

### Reasoning

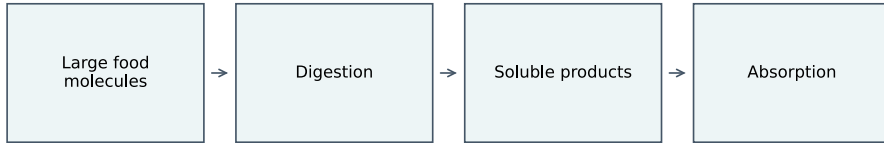
A correlation between diet and illness proves causation. This claim is false: Bile is not an enzyme. A positive food test identifies a component under the test conditions; it does not show that a food is healthy or unhealthy in every diet.

## Nutrition · 5.3

### Reasoning

Digestion, transport and health evidence: Absorption moves soluble products into blood or lymph. Thin exchange surfaces and a large surface area shorten diffusion paths and increase transfer. Enzyme activity and transport are different processes.

# Nutrition · diagram



- Original teaching diagram: Digestion , transport and health evidence
- Use the labels and the stated model together.

## Nutrition · original transfer

### Your turn

Fictional surveys record an outcome in  $9/36$  and  $12/60$  participants. Compare percentages. Give two reasons why this cannot establish that a food caused the outcome.

## Nutrition · transfer reasoning

### Method and interpretation

25% and 20%. Confounding and selection/reporting bias can explain differences; temporal ordering and comparable measurement also matter. This is evidence evaluation, not dietary advice.

## Check yourself

- Explain digestion using the stated model.
- Explain absorption using the stated model.
- Change one value in the original transfer; explain which assumption still matters.