

# Digestion, Waste & Working Together

Vital Core Vault with Pulseling

## Learning target

Explain how several systems support the body during an activity.



## Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

## Vocabulary and concepts to discuss

Food breakdown; nutrient absorption; waste removal; system cooperation

## Open Vital Core Vault - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.



# Digestion, Waste & Working Together - key ideas

## 1. The first clues

Digestion breaks food into smaller substances that can be absorbed and used. Much nutrient absorption occurs in the small intestine.

## 2. How the clues connect

Blood transports absorbed nutrients. Other systems help remove wastes; the kidneys filter blood, while the digestive system removes undigested material.

## 3. Our evidence record

Our model connects eating, breakdown, absorption and transport to working cells. Movement needs coordinated systems, not just a stomach acting alone.

## Keep the science accurate

Detailed organ mechanisms, disease diagnosis and reproductive-health content are not in this six-part outline. Keep models at broad function level.

## Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference: <https://www.nextgenscience.org/dci-arrangement/4-ls1-molecules-organisms-structures-and-processes>

# Talk through the evidence

## 1. What is digestion's broad role?

Expected answer: Break down food for use

Reasoning: Digestion breaks food into smaller substances that can be absorbed and used. Much nutrient absorption occurs in the small intestine.

## 2. Where is much nutrient absorption?

Expected answer: Small intestine

Reasoning: Digestion breaks food into smaller substances that can be absorbed and used. Much nutrient absorption occurs in the small intestine.

## 3. What transports many absorbed nutrients?

Expected answer: Blood

Reasoning: Blood transports absorbed nutrients. Other systems help remove wastes; the kidneys filter blood, while the digestive system removes undigested material.

## 4. Why does the model link several systems?

Expected answer: Food processing, transport and waste removal cooperate

Reasoning: Blood transports absorbed nutrients. Other systems help remove wastes; the kidneys filter blood, while the digestive system removes undigested material.

## Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.