



Digest Quest as a Unit

Assessment opportunities are provided for each activity below. Curriculum Fits and Rubrics are available for downloading or printing on the **Digest Quest** page of teachnutrition.org.

Part One: Introductory Activity – The Hungry Body

Outcome

This lesson will lay the thematic foundation of the unit. Students will reflect on hunger and its relationship with the digestive system.

Facilitate a class discussion by asking students the following questions:

- *How do our bodies tell us they're hungry? (Answer: growling stomach sounds; feeling weak, tired or easily irritated; difficulty concentrating.)*
- *Does anybody feel this way right now?*
- *Why do our bodies tell us they're hungry? (Answer: more nutrients are needed for energy, growth and repair. Explain that every one of the millions of cells in our bodies requires certain nutrients in various amounts, 24 hours a day.)*
- *Does a car get hungry? Does a cell phone get hungry? How do we know? (Answer: it runs out of gas or runs out of battery power. Make the link between the need for fuel to provide energy in humans and in machines. However, contrast the ideas of "growth" and "repair" between the two – that is, humans can grow and repair themselves; machines cannot.)*
- *Imagine you are a (professional athlete/doctor/firefighter/etc.). Can being hungry affect how you do your job? If so, how? How can hunger affect you and your learning?*
- *Does watching television ever make you feel hungry? (Teacher to make Media Literacy connection.)*
- *How do our bodies tell us they're NOT hungry anymore? (Answer: we feel full.)*
- *What is the best way to ensure that we get all the nutrients we need in the amounts our bodies need? (Answer: by following Canada's Food Guide and choosing from the Grain Products, Vegetables and Fruit, Milk and Alternatives, and Meat and Alternatives food groups each day.)*

Assessment for Learning

- Assess students' prior knowledge of the digestive system using prompting questions and class discussion.
- Assess students' oral communication during class discussions using **Rubric 1: Active Listening** and **Rubric 2: Speaking Skills**.



Part Two: Get Students Online and Learning

Outcome

Using scientific inquiry/experimentation skills, students will demonstrate an understanding of the structure and function of the major organs of the digestive system.

Option A. If you have computer lab access...

NOTE: Each briefing screen and *Digest This* folder activity (mini-lab) is an individual lesson. Prepare lab materials for each of the *Digest This* folder activities prior to the class in which you are teaching it.

1. Introduce **Digest Quest** to the class before beginning. Explain to students that **Digest Quest** is an online game with fun sound effects and eye-catching graphics that will guide them through the functions and components of the digestive system.
2. Students complete each *Digest This* folder activity independently or in groups, or they can conduct the mini-lab in front of the whole class. Each student will complete a Science Experiment form for each folder activity (mini-lab). Make copies of the experiment form for your students. The form is found at the end of this unit and on the **Digest Quest** page of teachnutrition.org.

The game reinforces material learned in the briefing screens and the *Digest This* folders, so try to ensure that all students get at least one opportunity to play!

Option B. If you have limited computer access...

1. Introduce **Digest Quest** to the class before beginning. Explain to students that **Digest Quest** is an online game with silly sound effects and eye-catching graphics that will guide them through the functions and components of the digestive system.
2. Prepare a computer schedule for students to follow.
3. During their scheduled computer time, students move through the game at their own pace (it takes about one hour in total computer time for a student to complete the game, including all briefing screens and the multiple choice questions between game levels). Note that the *Digest This* folder activities are not done at this time.
4. Students print out the *Digest This* folder activities (mini-labs) to complete at home and compile as a digestion portfolio that they will hand in at the end of the unit. Each student will complete a Science Experiment form for each folder activity (mini-lab). Download or print copies of the experiment form for your students. The form is found at the end of this unit and on the **Digest Quest** page of teachnutrition.org.

NOTE: Since the game reinforces material learned in the *Digest This* folder activities, students may find it helpful to play the game again once they have completed the folder activities.

Assessment for Learning

- Provide students with descriptive and timely feedback using **Rubric 3: Scientific Inquiry/Experimentation and Research Skills** as they participate in the *Digest This* folder activities.
- Assess students' **reading** using **Rubric 4: Reading for Meaning** as they participate in the *Digest This* folder activities.

Assessment of Learning

- Use students' *Digest This* portfolio and **Rubric 3: Scientific Inquiry/Experimentation and Research Skills** and **Rubric 5: Understanding Basic Concepts** to assess students' scientific inquiry, experimentation and research skills and their understanding of the structure and function of the major organs of the digestive system.



Part Three: Culminating Writing Activity

Outcome

Students will demonstrate an understanding of the basic structure and function of major organs in the digestive system and use appropriate science and technology vocabulary in written communication. Students will identify a point of view and establish an appropriate voice in their writing.

Background

Stories are a great way to introduce perspective and point-of-view writing. Using a method of choice (reading aloud, guided reading, instructional reading level, shared reading or independent reading), read a story that emphasizes a point of view. Stories provide an opportunity for students to realize that each one of us may have a different voice or a different perspective on events or situations.

Pose purposeful reading questions and display them in written format for students to see.

Before reading: Predict the perspective/point of view of the character.

During reading: Identify the character's voice. What does the character think? How does the character feel? Why? What is his or her point of view?

After reading: Students connect to the character and the character's point of view. "This reminds me of..."

Activity

Based on the exploration of the digestive system encountered in **Digest Quest**, students will be writing in role. Students will identify a point of view or perspective and establish a voice for their writing. Students may choose from the following options:

1. From the perspective of food or drink (e.g., apple, fruit smoothie), recount the journey through the digestive system. Students tell their story as if they were food or drink and explain the adventure they have as they pass through the mouth, esophagus, stomach, and small and large intestines. Students can also describe the contributions of the liver and pancreas to the food's journey.
2. Write from the perspective of one of the major organs or structures in the digestive system (i.e., esophagus, stomach, liver, pancreas or intestines). Develop a writing piece from that body part's perspective, thoughts and feelings as food invades its space and territory.

This culminating writing activity allows students to identify point of view and establish the voice of the character they choose. Through the narrative, students embed their understanding of the digestive system while establishing the voice of the character, including its thoughts, feelings and opinions.

Students can orally present their perspective/point of view writing to the class.

Assessment for Learning

- Provide students with descriptive and timely feedback throughout the **writing** process using **Rubrics 6–8**.
- Assess students' **reading** using **Rubric 4: Reading for Meaning**.

Assessment of Learning

- Assess students' **writing** (perspective/point of view) and knowledge of basic concepts (structure and function of the digestive system) using **Rubric 9: Writing Piece**.
- Assess students' **oral communication** using **Rubric 2: Speaking Skills** as students present their writing to the class.





Digest Quest Science Experiment Form

Section A

Name: _____

Date: _____

Section B

Type of Experiment: _____

Purpose: (Why are we conducting the experiment?) _____

Hypothesis: (What do we think we will find out? Why?) _____

Section C

Materials: (What will we use?) _____

Procedure: (What will we do? List the steps.) _____

Data: (A record of calculations, graphs, tables, etc.)

Section D

Observations: (What happened? What did we see?) _____

Synthesis: (How do we think this relates to digestion in the human body?) _____

Section E

Conclusions: (What did we learn? How does it relate to our Purpose and Hypothesis?) _____

