

Digest This!

3-5

S . 1 . 2

Objectives

Students will be able to:

- Explain how the body gets energy from the five food groups.
- Identify the function of the organs in the digestive tract.
- Name at least five organs involved in the digestion process.

Standards Met

- **1e.** Explain the physiological processes in digestion, absorption, and metabolism of nutrients.
- **5-LS1:C.** Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion.

Overview of MyPlate

MyPlate is a great resource for learning and teaching general nutrition. This tool shows the five food groups that make up a healthy diet and the recommended portion sizes for different foods. The MyPlate eating plan encourages food variety and portion control while recommending foods high in nutrients and low in saturated fats, salt and added sugars.

MyPlate also provides up-to-date information on current nutrition recommendations, as well as tips and ideas to encourage a healthy lifestyle.

Use MyPlate in the classroom:

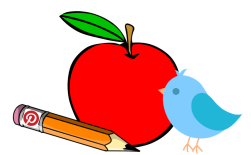
- To show the components of a healthy diet, including the five food groups.
- To help students visualize how much of each food group should be eaten in order to have a balanced diet.
- As a tool to help students become interested in nutrition.

MyPlate healthy eating guidelines:

- Include foods from the five groups: fruits, veggies, grains, dairy and protein.
- Make half your plate fruits and veggies. Buy them fresh, frozen or canned.
- Make at least half your grains whole grains. Choose brown rice, whole grain pasta and cereals.
- Switch whole fat dairy for 1% or fat-free dairy products.
- Vary your protein sources. Choose proteins like eggs, skinless chicken, lean beef, seafood, beans, nuts, etc.

For more information on MyPlate and the five food groups, go to:

www.mentorprojectfiu.com



United States Department of Agriculture
National Institute of Food and Agriculture
FIU

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-68001-22041

Make The Connection

Materials

- Worksheet: “Digest This!” for Grades 3-5
- Supplemental Material: “Digest This!”
- Video: “Digestive System” → <https://youtube/JnzwbipJuAA>

Using the worksheet titled “**Digest This!**” for **Grades 3-5**, help your students understand the digestive process and the organs involved in digestion.

Begin the class discussion by asking the students to mention different organs they think might be involved in the digestion process. Define digestion as the process by which the body breaks down food and absorbs the nutrients for energy. Explain the importance of digestion, emphasizing that this is the only way the body is able to get energy from food. All the organs work together to feed and nurture the body. A balanced diet from the five food groups helps the digestive tract stay healthy and helps the body absorb as much energy as possible.

1

Display a picture of the digestive tract on a board. Go through the diagram, step by step, explaining the function of the mouth, esophagus, stomach, liver, gallbladder, pancreas, small intestine, large intestine, and rectum. Refer to the supplemental material “Digest This!” for details on the organs involved in digestion and their function.

2

Mention that saliva in the mouth is the first step of the digestion process as it begins to break down carbohydrates, like grains, fruits, veggies and dairy. The esophagus acts as a passageway for the food to reach the stomach and the stomach churns and grinds the food into smaller pieces. The stomach also releases acid and enzymes to kill bacteria and begin the breakdown of protein, like eggs, poultry and beef. The liver makes bile, a green liquid stored in the gallbladder that is used to breakdown fat, like butter, nuts, and oils. When the food pieces enter the small intestine, bile from the gallbladder is released to break down fat, and digestive juices from the pancreas help to break down the remaining food in order to be easily taken up by the body. After being mostly absorbed, the food continues onto the large intestine where water is taken out and solid waste is formed. The rectum is the last section of the large intestine and its job is to store and release the waste.

At this point you may want to show the students the “Digestive System” video.

After you present the information above, do an overview of the “**Digest This!**” worksheet for **Grades 3-5**. Explain the activity and clarify any questions the students may have.

3

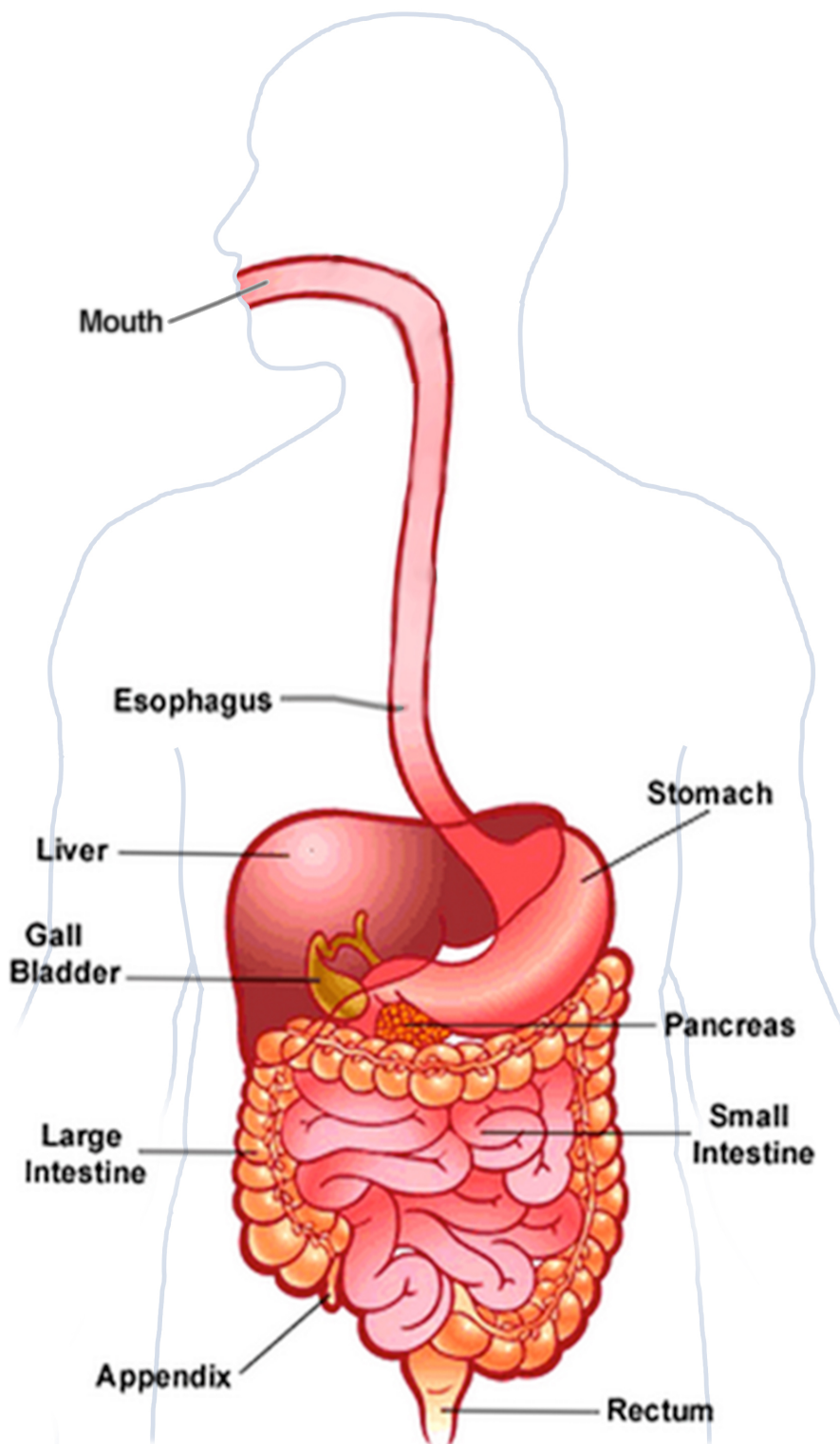
Supplemental Material

For the Teacher: Digest This!

Listed below are the **organs of the digestive tract and their functions.**

Mouth	Inside the mouth the teeth chop food into smaller pieces, which are moistened by saliva and then pushed back into the esophagus by the tongue. This is the first step of the digestion process as it begins to break down carbohydrates, such as, grains, fruits, vegetables, dairy, and starchy foods like, bread, rice, potatoes, and pasta.
Esophagus	The esophagus is a muscular tube that acts as a passageway and moves food from the throat to the stomach.
Stomach	The stomach churns and grinds the food into smaller pieces and blends food with acid and enzymes to kill bacteria and break down protein. Examples of protein packed foods that are broken down in the stomach are meats, eggs, poultry and beans.
Liver	The liver makes bile, a green liquid that helps digest fats like oils, nuts, butter, and shortening.
Gallbladder	The gallbladder stores and releases bile.
Pancreas	The pancreas releases digestive juices.
Small Intestine	When the broken down food enters the small intestine, bile from the gallbladder is released to break down fat, and digestive juices from the pancreas help break down the remaining carbohydrates and proteins so that they are easily absorbed by the body. The most absorption of nutrients takes place in the walls of the small intestine.
Large Intestine	The large intestine finishes the absorption process by absorbing water and vitamins B and K, forming solid waste.
Rectum	The last section of the large intestine which stores and gets rid of solid waste.

Digestive Tract

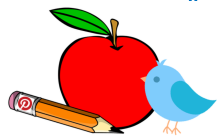
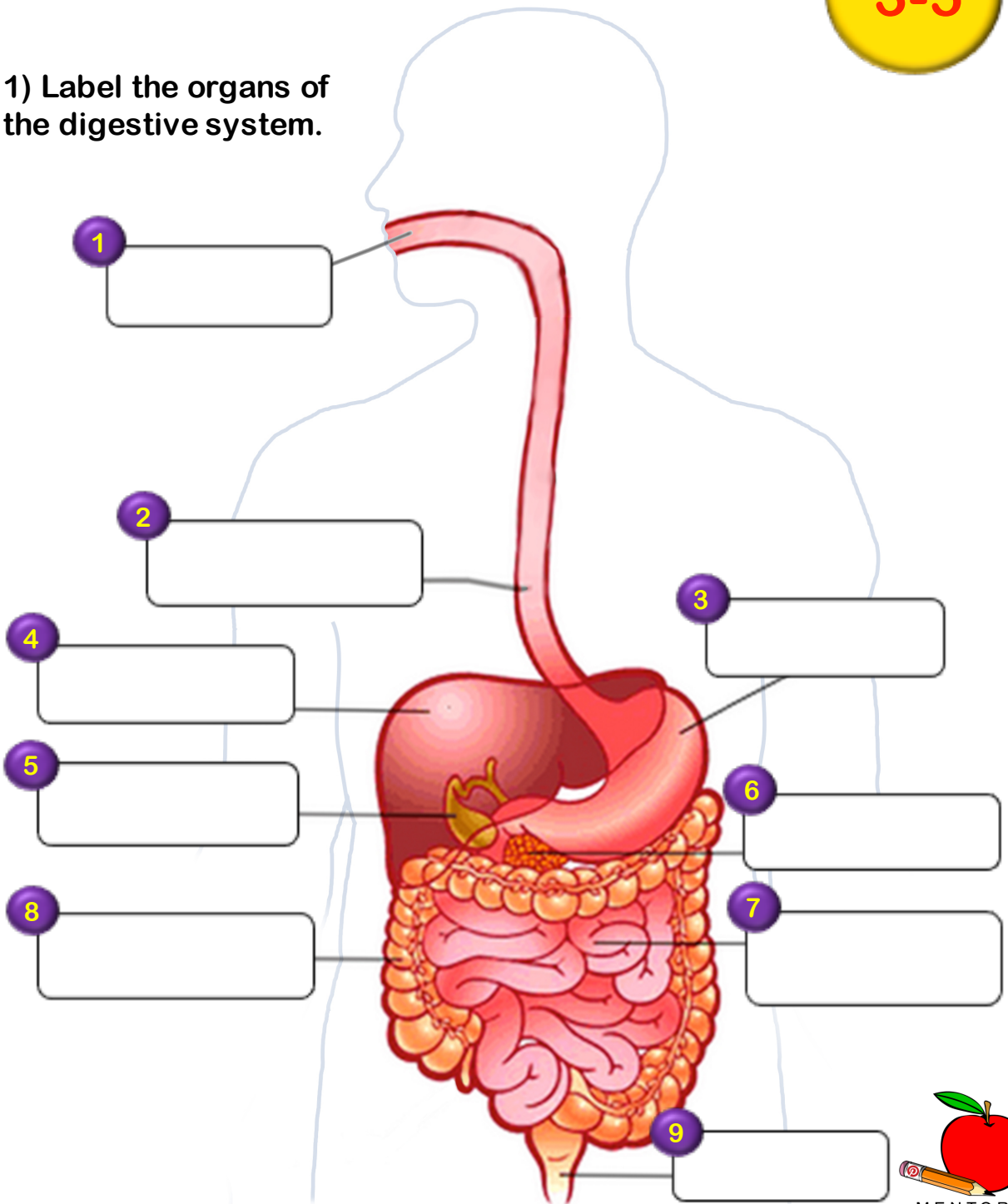


Name: _____ Date: _____

Digest This!

3-5

1) Label the organs of the digestive system.



M.E.N.T.O.R. Project

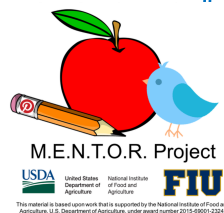
Name: _____ Date: _____

2) Write the function of each organ in the digestive system.

ORGAN	FUNCTION
1	
2	
3	
4	
5	
6	
7	
8	
9	

BONUS QUESTION!

What is made in the liver, stored in the gallbladder, and released in the small intestine to breakdown fat?



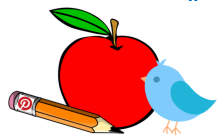
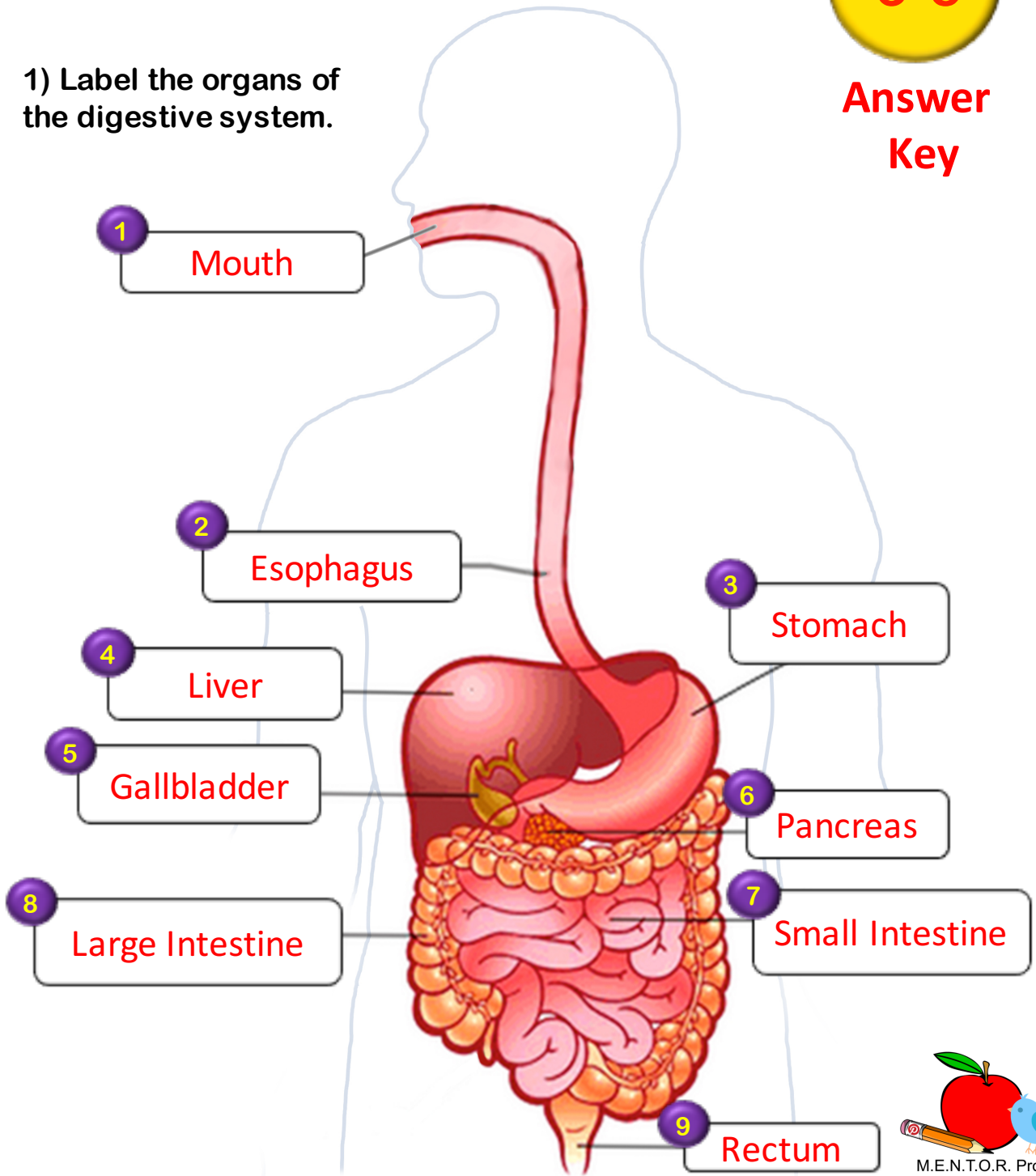
Name: _____ Date: _____

Digest This!

3-5

**Answer
Key**

1) Label the organs of the digestive system.



M.E.N.T.O.R. Project

Answer Key

2) Write the function of each organ in the digestive system.

ORGAN	FUNCTION
1 Mouth	Chews food and combines it with saliva to start digesting carbohydrates
2 Esophagus	Muscular tube that moves food from the throat to the stomach
3 Stomach	Blends food with acid and enzymes to kill bacteria and break down protein
4 Liver	Makes bile, a green liquid that helps digest fat
5 Gallbladder	Stores and releases bile
6 Pancreas	Releases digestive juices
7 Small Intestine	Breaks down food and takes up nutrients
8 Large Intestine	Takes away water and forms solid waste
9 Rectum	Gets rid of solid waste

BONUS QUESTION!

What is made in the liver, stored in the gallbladder, and released in the small intestine to breakdown fat?

Answer: BILE.