

7th Grade			
The Human Body			
Ch 7 Lesson 1			
Page	Question	Answer(s)	Links/Sources
261	What fuel have you given your digestive system today?	Sample answer: For breakfast I had scrambled eggs, pancakes, and milk.	
261	Eating food gives us energy, but how do our bodies turn that food into energy?	By breaking it down into sugar that is used in cell respiration to provide energy.	
261	What are the steps of the digestive process?	Sample answer: Ingest food, stomach digests food, intestines absorb nutrients, nutrients pass into the blood vessels.	
262	How is the energy we use like the energy needed to operate an electronic device?	*Sample answer: The device uses electrical energy that needs to be constantly available by using a battery or by being plugged in. Our bodies need a constant source of energy that comes from the food we eat or by processing stored energy in our bodies.	
262	How do you know when your supply of energy is getting low?	*Sample answer: I start to feel hungry or tired.	
262	How do you add more energy to your system?	*I add more energy by eating food.	
262	How does eating healthful foods provide energy to fuel your body and honor God's creation?	*Eating healthful foods ensures that my body will get the best energy available as well as nutrients to build my body. This honors God by caring for the body He gave me.	
262	Where does a mobile device get the energy it needs to function?	Battery	
262	What functions is the device able to do with the energy?	Make phone calls, browse the internet, social media, e-mail.	
262	What do you do if there is not enough energy to power the device?	Charge it.	
262	How do you know when your energy supply is getting to low levels?	You feel tired, sleepy, not wanting to move, hungry.	
262	How do you add more energy to your system?	Eat healthy food, sleep and rest.	
262	Is it possible to add too much?	Yes, you can gain weight.	
262	Does it make a difference what source you get your energy from?	Yes, good healthy food, not junk.	
262	What can you do to keep your body working properly to process the food you eat?	Keep healthy by exercise, eating the right kinds of food, rest, etc.	
263	What other organs systems have you studied?	*Sample answer: Skeletal, muscular, integumentary, nervous, respiratory, circulatory, reproductive, and endocrine	

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263	How does I Corinthians relate to this issue?	*I Corinthians tell us that no matter what we eat or drink, it should be to the glory of God. By maintaining a healthy diet we are showing respect for God's creation.	
263	How does healthful foods provide energy to fuel your body and honor God's creation?	When you eat healthy, you will be having a sound body and a sound mind. Having a sound mind helps you communicate with your creator better. Also, your body is the temple of God. Anything that we put in our bodies may either defile God's temple or honor it.	
263	What length of a hose would make an accurate model of the digestive tract?	The digestive system can be up to 30 feet in an adult.	https://www.asge.org/home/about-asge/newsroom/media-backgrounders-detail/human-digestive-system#:~:text=The%20digestive%20system%20%2D%2D%20which,gallbladder%20adding%20secretions%20to%20help
263	How does the liver, pancreas, and gallbladder help with digestion?	The pancreas releases an acid neutralizer and digestive enzymes that help break protein in the small intestine, the liver produces bile which helps break down fats in food; and the gallbladder stores the bile and releases it into the small intestine.	Page 264.
264	Why might the digestive tract be called a "food canal"?	*Food passes through a long tube as it is digested.	
264	What is the job of the mouth in the digestive system?	*The mouth chews the food and breaks it down into smaller pieces for digestion. Saliva in the mouth moistens it, and makes it ready for swallowing. Saliva also contains an enzyme that starts digesting starch in your mouth.	Page 264.
265	What do the salivary glands produce?	*Saliva	
265	What do the salivary glands do?	*It begins breaking down food for absorption by the body.	
265	Are the contractions that occur in the esophagus mechanical or chemical digestion?	*Mechanical	
265	Why is this process necessary?	*If the epiglottis did not close off the larynx, food would enter the lungs and cause choking.	
265	What happens to the amount of saliva in your mouth?	The amount of saliva increases when you think about food you like.	

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265	What responsibility comes with refueling choices?	You are responsible for what you put into your mouths, since it affects your health and how you communicate with your creator.	
266	How does food move through the esophagus?	*The muscles that ring the esophagus contract one after another, pushing the food down towards the stomach.	
266	What other illustrations of the digestive process can you think of?	*Sample answer: Washing dishes, teeth cleaning at the dentist.	
266	What might happen if the food stays for less time than normal in the stomach?	*There might not be enough time for both chemical and mechanical process to fully digest the food.	
266	What happens if the lower sphincter fails?	*Food might push back into the esophagus from the stomach.	
266	What might happen if food stays for less time in the stomach?	Indigestion can occur	
266	What happens if the lower sphincter fails?	Food gets pushed back into the esophagus and causes GERD, or acid reflux	
267	What is the benefit of increased surface area?	*More absorption can occur.	
267	Why do you think that there are more villi in the beginning of the small intestine and fewer toward the end?	Sample answer: The majority of absorption happens at the beginning of the small intestine to ensure that more nutrients are absorbed quickly into the blood stream," so fewer are needed.	
267	What would be the effect on the body if the small intestine did not have villi?	Without villi the small intestine cannot get nutrients from your food to other parts of the body.	https://www.hopkinsmedicine.org/health/conditions-and-diseases/celiac-disease
267	What are the benefits of increased surface area?	To ensure complete digestion and absorption of nutrients.	https://socratic.org/questions/why-does-the-wall-of-the-small-intestine-need-a-large-surface-area
268	How do villi improve nutrient absorption?	They increase surface area for absorption.	
268	Will an altered sponge absorb more water than an unaltered sponge?	*I think the altered sponge will absorb much more water?	
268	How does the number of villi affect absorption?	It increases absorption.	
269	What might happen to your liver if the ducts that carry bile from the liver to the gall bladder were blocked. Explain.	*The body would have difficulty breaking down fats, and the liver would be damaged by the buildup of bile.	
269	What system do these organs belong to?	*These organs belong to the endocrine system.	
270	Have heard the large intestine referred to by another name?	*Some students may have heard the large intestine referred to as the colon.	
270	What is the advantage of a longer small intestine?	*A longer small intestine provides more area for the breakdown and absorption of food?	

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270	Is chewing important to digestion?	*Because the crushed sugar cube dissolved faster, it shows that chewed food dissolves faster than whole food, which means chewing is important to digestion. Chewed food is digested more quickly because when it is chewed, it has a larger surface area, which make it easier for digestive enzymes to reach it.	
270	What is the advantage of a longer small intestine?	To allow a large surface area for digestion and absorption.	
271	What food other than fruits and vegetables should you eat daily?	*Sample answer: I should eat foods rich in protein such as legumes and whole grain carbohydrates as well as nuts and seeds, eggs, milk, cheese, and meat.	
271	Where does starch digestion begin?	*Starch digestion begins in the mouth.	
272	Which disease involves the formation of sores in the lining of the stomach or the small intestine?	*Peptic ulcers.	
272	How are ulcerative colitis and Crohn's disease similar?	*They are both inflammatory bowel diseases. They are both associated with an inflammation of part of the digestive tract.	
272	Gastroesophageal reflux disease is often referred to as "acid reflux." What are some ways people might control symptoms of acid reflux?	*Sample answer: Eating smaller meals; avoiding certain foods and beverages; drinking lots of water; avoiding eating before bedtime; using antacids or similar medications."	
273	How are treatments for these various disorders and diseases similar?	*These treatments involve avoiding certain foods, medications and sometimes surgery.	
273	What resources exist today to help people with celiac disease?	Better food labeling so people can avoid gluten, better treatment and medicines.	
273	How does smoking cause GERD?	Smoking causes less saliva to be produced and more gastric juices being produced.	https://www.everydayhealth.com/gerd/gerd-and-smoking.aspx#:~:text=Smokers%20produce%20less%20saliva%2C%20and,being%20refluxed%20into%20the%20esophagus.

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273	What medications can help relieve symptoms of Chron's disease and what do they do?	Prescription medications such as steroids and immunosuppressants are used; nonprescription treatments such as chamomile, chicken broth, probiotics (yogurt); and fish oil.	https://www.everydayhealth.com/hs/crohns-disease-treatment-management/complementary-alternative-therapies-for-crohns/?utm_source=google_search&utm_medium=cpc&utm_campaign=eh_cs_ag_138277085457&utm_content=eh_cs_cid_{adid}&gclid=EAlaQobChMIw8vCu86K-glVUG1vBB3wWAVmEAAYAAAEgJUVvD_BwE
273	What steps can a peptic ulcer sufferer take to avoid flare-up?	Avoid foods that can irritate ulcers, do not smoke or drink alcohol, reduce stress, get plenty of exercise, drink plenty of water, and get plenty of rest.	
273	How can people determine whether they have lactose intolerance?	Checking with a doctor or dietician; using an at-home test; conducting a self-test	
274	What lifestyle changes can people with cirrhosis make to avoid further damage to their liver?	Sample answer: Abstain from alcohol and eat a healthy, low-sodium diet.	
274	How do scars interfere with the liver's functioning?	Scar tissue blocks the flow of blood through the liver and slows the liver's ability to process nutrients, drugs, hormones, and nutrients. It also reduces the production of proteins and other substances. It prevents the liver from working properly. Scars can also be life-threatening.	https://my.clevelandclinic.org/health/diseases/15572-cirrhosis-of-the-liver
	How does the situation correspond to that of a person with diabetes?	Glucose stays in your bloodstream and cannot get to the cells that need glucose for energy. It is like a freeway where all exits are blocked and cars cannot get to where they have to go.	p.274
274	What steps can you take to control your portions?	Sample answer: Use smaller dishes for your food, be selective with seconds, don't pick at leftovers, check food labels for recommended portion sizes, ask for small servings.	https://www.bhf.org.uk/information-support/heart-matters-magazine/nutrition/weight/perfect-portions/top-tips-for-portion-control
274	What are your favorite foods that contain fiber?	Sample answer: Homemade bread, granola, raw carrots.	
274	How can you work them into your diet more often?	Answers will vary.	
274	What other systems of the body are benefitted by exercise and drinking plenty of water?	Sample answer: muscular system, circulatory system, integumentary system, nervous system, endocrine system	
274	What are other reasons to abstain from alcohol.	Impaired judgement, possible addiction.	

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275	Why might MyPlate be easier to use than MyPyramid?	Sample answer: MyPlate shows only five good groups and uses a model that is more closely related to eating?	
275	How might you use MyPlate to evaluate the healthfulness of your last meal?	Sample answer: It can help me track if I am eating enough of the different kinds of food.	
275	If you are a fan of spicy foods, how can you cut down on the potential that they will negatively affect your digestive system?	Sample answer: Cut down on the amount you use, drink milk when eating spicy foods, using olive oil along with the spices, eat bread or rice when eating spicy foods	https://food.ndtv.com/food-drinks/what-should-you-do-to-get-relief-from-eating-spicy-foods-1795367
275	How can you substitute lean foods for fatty foods in your diet? How would a vegetarian diet help eliminate this problem?	Sample answer: Use more "low" or "nonfat" foods, eat more poultry and fish, use more saturated fats, avoid fried foods. A vegetarian diet eliminates high fat meats from your diet.	
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275	What are some other reasons to avoid smoking?	Not smoking reduces the risk of cancer and emphysema and heart disease, and it makes the area other people nearby breathe smoke free.	
275	What causes stress in your life? How can you reduce that stress?	Sample answer: My school work at time, conflicts with friends and family. I can reduce my stress by better time management, avoiding conflicts as much as possible, getting plenty of exercise and sleep, drinking plenty of water and eating a healthy diet.	
275	Do you drink most frequently water or other types of liquids during the day? How can you remind yourself to cut down on carbonized beverages and drink more water?	Sample answer: I drink less water than I do other beverages. I can cut down on the amount of other beverages by deciding to limit how many I drink each day and carrying a water bottle with me, so water is always available to me.	
275	How can you avoid feeling hungry around bedtime?	Sample answer: Drink water in the evening. Go to bed earlier.	
275	What actions can you take to maintain a healthful weight?	Sample answer: Get plenty of exercise, eat a healthful diet that avoids fatty foods, during plenty of water, get plenty of rest.	