The weblinks below provide some background information. Some of these are videoclips, actual websites, study island support tutorials, study island quizzes. There is also a list of a few possible bell ringer multiple choice questions at the end of this document for body systems.

Carbohydrates
Lipids
Proteins
Digestion
Body systems review
Homeostasis- maintaining stable internal conditions, adjust to environmental changes (human body temperature and perspiration)
Reproduction (meiosis- making sex cells)

Organic Compounds (Carbohydrates, Lipids and Proteins):
http://www.youtube.com/watch?v=3JmnOhgaxBO
YouTube video of how our bodies use compounds for our everyday activities

https://www11.studyisland.com/cfw/content/show-lesson/b710b4fc?CFID=21861753&CFTOKEN=80275421&packID=b32b44
study island link describing lipids, carbohydrates and proteins

study island worksheet on carbohydrates, lipids and proteins

Homeostasis:
Examples of how our bodies maintain homeostasis (body temperature, fluid levels, acid/base levels, calcium levels)

http://www.biology-online.org/dictionary/Homeostasis
Definition of homeostasis
Definition and examples of how our bodies maintain homeostasis (blood glucose, blood pressure, thermoregulation, water, positive feedback loops)

Meiosis:
http://www.biology.arizona.edu/cell_bio/tutorials/meiosis/main.html
Tutorial on division of sex cells (reproduction, chromosome number in sex cells compared to sperm/egg cells)

BODY SYSTEMS

The biology keystone will mention several ideas in a question, but focus one real topic. It is common for the keystone to use a body system as a “backdrop” or “setting” for a question, although the question does not ask about the body system. Sometimes our students immediately psyche themselves out and possibly dismiss the question because they forget information about the body system. Our goal is to have a quick review of the body systems, so when the student reads a question that uses the circulatory system (for example) as the backdrop they keep reading and not fret because they do not know a lot about the circulatory system. This is also true for our current tenth graders who will be taking the bio keystone in May.

digestive system quick summary

http://mrbenton.com/hbs/summarycirculatory.htm
quick review of circulatory system

http://biology.clc.uc.edu/courses/bio105/respirat.htm
quick review of respiratory system
Quiz Questions Digestion

The purpose of the digestive system is to
   a.) aid in the production of ATP
   b.) convert food into sugars, amino acids and fatty acids for transport to cells
   c.) aid in mitosis
   d.) aid in meiosis
   e.) both c and d

The pancreas secretes
   a.) testosterone
   b.) estrogen
   c.) carbohydrates
   d.) insulin

Which one of the following is not one of the functions of the liver?
   a.) breaking down fats
   b.) processing proteins and carbohydrates
   c.) generation of glucose for short term energy needs from lactates, and amino acids
   d.) catalyze respiration

Which one of the following is not part of the digestive system?
   a.) kidney
   b.) liver
   c.) stomach
   d.) intestine

Digestive System:

1. Where are most of the nutrients absorbed throughout the digestive system?
   Answer: The intestine absorbs most nutrients when food passes through the digestive system, particularly the small intestine.

2. What function does the liver have in relation to digestion?
   Answer: The liver produces bile which aids the body in the digestion and absorption of fats and fat-soluble vitamins in the small intestine.

3. How does the pancreas contribute to the body maintaining homeostasis? What condition is linked to problems with the pancreas (and insulin production)?
   Answer: The pancreas produces insulin, a hormone that allows the liver, muscle, and fat tissues to remove glucose (sugar) from the blood in order for the cell to use it in the production of energy. This hormone is essential to help maintain the balance of sugar in our body’s blood and cells. Diabetics have a deficiency of insulin and therefore have a difficult time removing glucose from their blood.
Quick Quiz Respiratory System

1.) The purpose of the diaphragm is to
   a.) foster hiccups
   b.) aid in pulling oxygen into the lungs
   c.) allow for digestion
   d.) promote cell growth

2.) Each cell in the body must receive ___________ and give off ____________.
   a.) nitrogen, carbon dioxide
   b.) oxygen, carbon dioxide
   c.) carbon dioxide, oxygen
   d.) carbon dioxide, oxygen

3.) Which one of the following is not part of the respiratory system?
   a.) lungs
   b.) larynx
   c.) liver
   d.) nostrils

1. What molecule does the respiratory system bring into the body that allows the body’s cells to release the energy stored in organic compounds (food)?
   Answer: The respiratory system takes in oxygen gas (O2) that is needed for our cells to release the energy stored in our food (organic compounds). Oxygen diffuses from the lungs into the blood to be delivered to the cells of our tissues/organs.

Circulatory System:

1. How does the circulatory system allow the body’s cells to make energy?
   Answer: The blood that circulates around the body carries oxygen, which is essential for cells when transforming food into much needed chemical energy to power cell processes.

2. What are the main jobs of the blood for our bodies? What main molecule is delivered by the blood that the cell uses to make energy?
   Answer: The blood has some very important jobs:
   - Delivers oxygen to cells all over the body so we can continue to make energy
   - Attacked foreign substances in order to keep our bodies healthy

3. Name the organs/parts of the circulatory system.
   Answer: Heart, blood, veins, arteries, capillaries (and lungs as a helper organ, as our systems interact in order to maintain function and balance.)