

Digestion Race

Activity Description:

This activity involves minimal supplies. All it requires is paper, tape, paint, and colors. The goal is to emphasize the working, order, and flow of food in a human body through the second half of the digestive tract - the intestines.

Background Information:

After nutritional digestion in the stomach, the food ingested goes through the small intestine, large intestine, then out the rectum. The stomach only digests 10% of the food, it is the intestines that digest 90% of our food. The small intestines digest mainly the nutrients and minerals in our food, while the large intestine absorbs water, electrolytes, and vitamins. Therefore it is the role of the intestines to truly absorb the majority of the food. The small intestine is divided into 3 parts: the duodenum, jejunum, and ileum. This intestine is 20 feet long, while the large intestine is only 5 feet long.

How it all plays out:

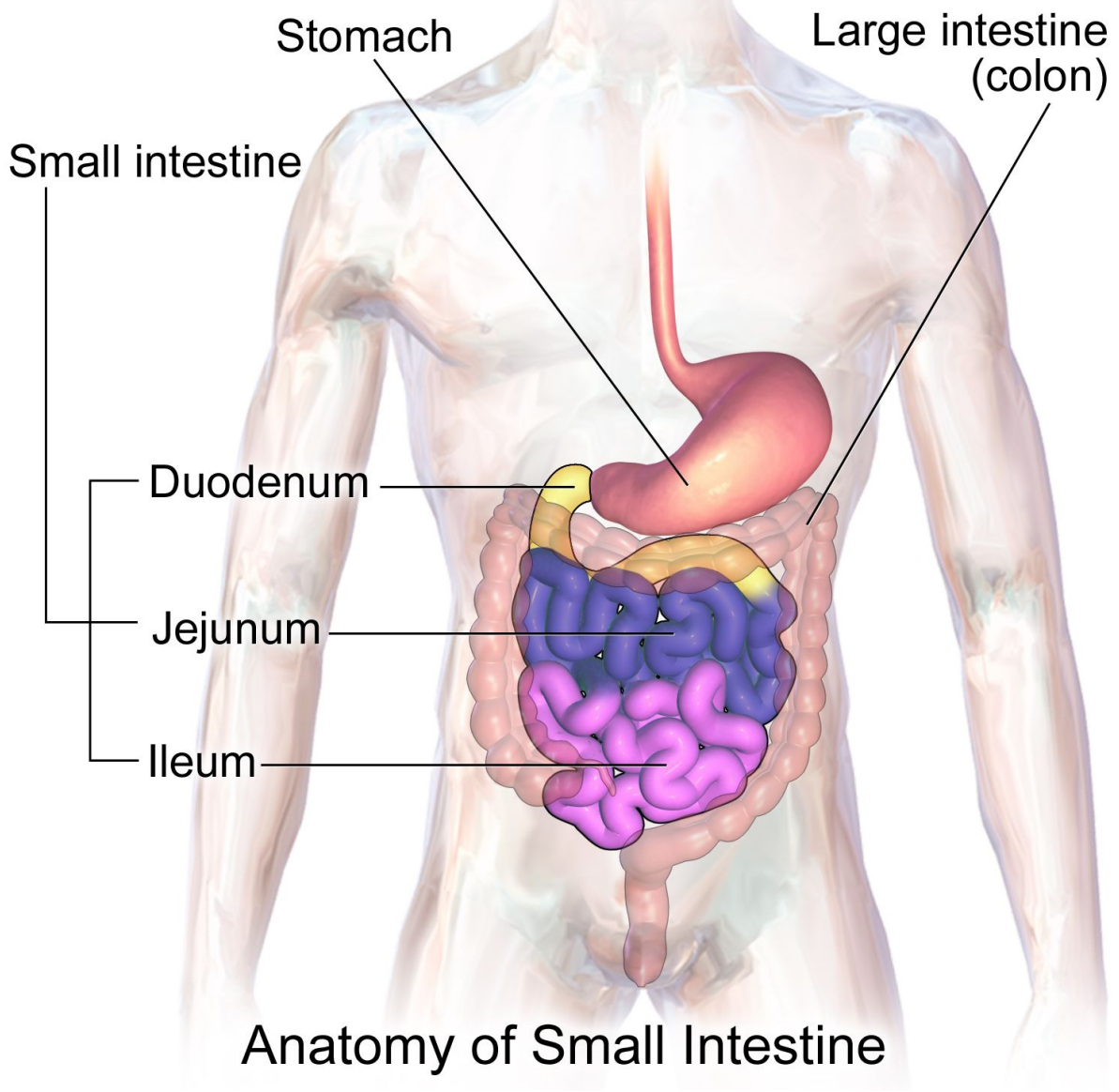
The goal of this activity is to make the students understand the parts, size, and function of these intestines and work together to build their own intestinal system.

Students will be divided into groups of 4 and given paper to make their intestines. The small intestine will consist of 6 pieces of paper while the large intestine will be 3. Each group will divide these 6 papers designated to the small intestine to 3 parts and color code them. 2 papers will be colored yellow for the duodenum, 2 will be blue for the jejunum, and finally the last 2 will be pink for the ileum. They will then make cylinders with each 6 pieces of paper designated for the small intestine with a diameter of 1. They will use tape to make the cylinder of paper, then use tape again to attach all the cylinders together to make the entire small intestine.

Next, they will use the 3 pieces of paper designated for the large intestine and make them into cylinders and tape them together, as they did for the small intestine. The difference is, however, the diameter of the large intestine will be 2.

Now, they will tape the end of the paper small intestine to the beginning of the paper large intestine. This makes the elongated intestinal tract. When each group has completed this task, they will make 3 small pieces of paper balls and put different color wet paint on them. When that is done one student will hold the intestinal structure up and one student will drop the balls through. This will be a race, as whoever's paper balls go through the fastest get the highest points. A side note the teacher should emphasize is the paint rubbed off in the paper intestines to show the nutrients and minerals absorbed by the intestines in our very body.

The final task now, is for each group to fit their paper small intestine in their large intestine, as shown in the picture below. The teacher will grade this in terms of result, fitting, and teamwork.



Anatomy of Small Intestine