



# Breakfast Time!

A human digestion demonstration



# You will need:

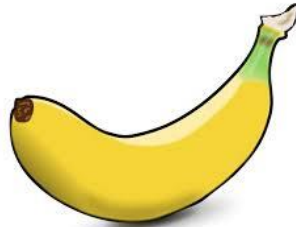
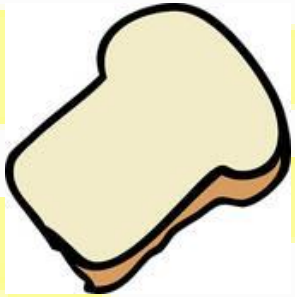
- 1 banana
- 1 bowl of oatmeal
- 1 cup of coffee
- 1 slice of bread
- 1 choc. Bar
- 1 clear container
- 1 large tray
- 1 kitchen utensil
- 2 scissors
- 1 zip-loc bag
- 1 stocking
- 1 rag
- 1 trash bag
- 1 paper plate/boat
- 1 clear tube
- 1 funnel

## Fluids:

- Saliva (Clear)
- Stomach Acid (Yellow)
- Pancreatic enzymes (red)
- Bile (Green)

# What's for breakfast?

- Today, you will model how the digestive system converts a typical breakfast into useful micro-molecules and discards the waste.
- Here's the menu:





# Step 1: Ingestion

- Put saliva into the mouth (What does this represent?)
- Break large items (toast, banana, chocolate) into small pieces using the scissors and drop them into the bucket (What does this represent?)
- Dump in oatmeal and coffee too
- Use your utensil (spoon, potato masher, spatula, etc.) to smush all the food together (What does this represent?) [take turns]

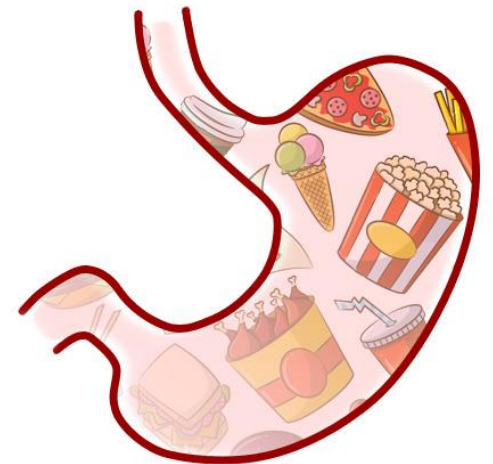
## Step 2: Swallow

- Using your funnel, get all of the food from the bucket through the tube and into the zip-top bag (What does this represent?)
- Person A should hold the tube and funnel, Person B should hold the bag, and Person C should insert the food into the funnel.

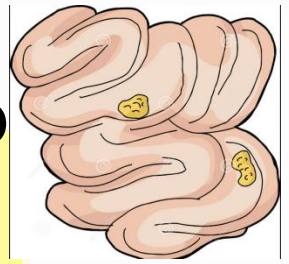


## Step 3: Get in my belly!

- Carefully **pour the stomach acid into the bag** and **seal it tightly** (What does this represent?)
- **Carefully shake the bag to churn the food inside** (What does this represent?)



# Step 4: Through the stocking?



- Put a stocking into the tray
- **Pour the food from the bag into the stocking** (What does this represent?) Be very careful as lots of fluids will begin to leak out of the stocking. **KEEP IT IN THE TRAY.**
- **Pour the Pancreatic fluid into the stocking** (What does this represent?)
- **Pour the bile into the stocking** (What does this represent?)
- Squeeze or squish it a bit to get more fluid out. **KEEP IT IN THE TRAY!** (What does this represent?)

# Step 5: The Colon Squeeze

- Cut the stocking open and pour the contents onto the rag (What does this represent?)
- Roll the rag up and wring it out over the tray (What does this represent?)
- Unroll the rag to reveal the contents



## Step 6: Dump it Out

- Carefully place the contents of the rag into the bottom of a trash bag (What does this represent?)
- Carefully cut a small hole in the corner of the bag (What does this represent?)
- Squeeze the contents out of the bag, onto the plate, through the hole. It should come out like toothpaste from a tube. (What does this represent?)