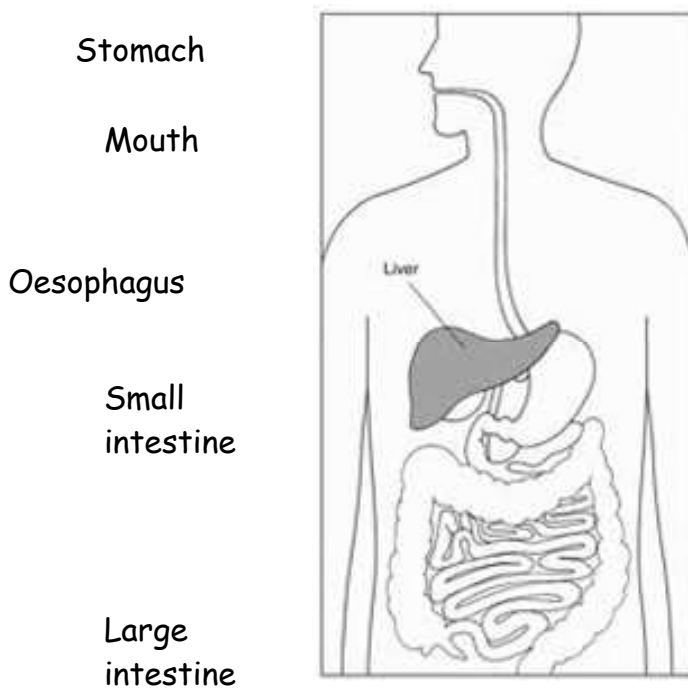


## The Path to Poo: Try this at home....

By C Ridley, R Crompton, J Pennock and S Cruickshank

### Label the organs



### Experiments to try at home.....

#### 1. Why is poo brown?

The mix of bilirubin which is red (from blood) and the green pigment biliverdin (from bile).

- **What to do:** Mix red and green food colouring or paint until you create a nice shade of brown!

#### 2. The Disappearing Penny!

This experiment demonstrates the action of stomach acid. In this experiment, you

can either clean another dirty penny... or make it disappear entirely! And we mean REALLY disappear! (<http://www.letticebell.com/experiments/PENNIES.PDF>)

#### What you need:

- recent Penny (1982 or later)
- Cup

#### What to do:

- Drop a dirty penny into a cup and pour some Coca Cola or other fizzy drink into the cup. Look at it again a day later: the penny is clean! Want to make penny disappear completely?

Put the penny in a cup of Coke and leave it there for approximately 10 days. Then pour off the coke (DON'T drink it), and look: the penny has completely dissolved away!

**Now think about your teeth and your stomach when you drink fizzy drinks. Hmmmm.... How did it do that?**

- The zinc which makes up the body of the penny beneath the copper jacket is ionized into a zinc 'salt' by the chemicals in the carbonated soda.

#### 3. White bread and the wonder of enzymes!

Use the enzymes in your mouth to break down bread in front of your very taste buds. (<http://www.thenakedscientists.com/HTML/content/kitchenscience/exp/white-bread-and-the-wonder-of-enzymes/>)

### What you need

- A slice of cheap white bread.
- A mouth to put it in.

### What to Do

- Take half a slice of bread and chew it and chew it and chew it! Even if the bread becomes disgusting, you should still keep chewing and remember - don't swallow or you'll spoil the experiment!
- How does the flavour of the bread change?
- Once you think you have the answer, you can swallow the breadly mush or (this is probably best!) spit it out.

### What may happen

- As you chew the bread, you may have noticed that it slowly tastes sweeter. Particularly the juice that is coming out.
- Foods like bread, rice and potatoes are foods that are mostly made of starch which consists of long chains of the sugar glucose.
- In your saliva you have an enzyme called amylase, which cuts up the starch into sugars. So as you chew the bread it will slowly become slightly sickly sweet.

### What you need:

- old tights
- instant cook oatmeal
- newspaper or plastic sheet

### What to do

- Take the old tights and cut off one leg, leaving an opening at each end.
- Cook 3 - 4 cups of instant oatmeal.
- Lay newspaper and/or plastic on a table or floor.
- Pack the oatmeal into one end of the tights.
- Whilst watching carefully, squeeze the oatmeal from one end to the other end.

### What may happen

The porous tights will allow food nutrients and water to escape demonstrating absorption and by the time you've worked the oatmeal out the other end....it's just a small amount, just like poop!

**To find out more about the gut and our research please visit our website:**

<http://www.mig.ls.manchester.ac.uk>

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## 4. The intestines and absorption of food and water

