

Information for teachers / parents

Digestion practical



Why do this version rather than others available online?

Most similar hands-on digestive systems are simpler. Mine does go into a lot of detail, but primary-age pupils take it all in really well. Many practicals skip straight to putting crackers into the stomach bag, so missing out on all the biting & chewing details. Most also miss the liver & pancreas.

You will need:

Tablecloth or towel to cover the work area

Broad flattish container – large plastic tub, roasting tin

Scissors – for child to use, rounded ended

Potato **masher**

2 slices of **bread** or 3-4 crackers – stale is fine as it won't be eaten. Classroom – check for pupils w gluten issues

½ **banana** – overripe, optional but does add good bulk & smooth texture

Beans, peas, sweetcorn or similar – this shows how the tough skins persist through the process & adds a nice fun dash of realism!

Water – if you can, have 4 separate cups that are coloured or labelled for clarity. Colouring could be squash/juice.

You need saliva, stomach acid & enzymes, bile, and pancreatic enzymes. Saliva needs a cupful per pupil. The others: just a splash will do.

Bag to be the stomach – plastic freezer bag is ideal, or biodegradable alternative. Smaller ones must be sealable: can get away with not sealing the bag if it's bigger. It needs room to be squeezed vigorously!

Washing up bowl – this contains the mock nutrients that leak out of the tights.

Tights – cut one leg off an old clean pair of tights. Ones which are not opaque work best, but just use what you can.

Kitchen roll or an old towel which will need a good rinse through before washing afterwards

Big scissors – kitchen scissors ideally

Cup, bowl or dish – just to be the receptacle at the end. I've seen a doll's potty used ;-)

Step-by-step points

General point – It's very easy for this practical to get very silly & therefore messy. If you can keep it fairly calm & sensible with a focus on the science, then it stays neater & tidier too. It's still tremendous fun though, I promise!

Allergies – In a classroom group, check for any pupils with gluten allergies. A coeliac patient can be adversely affected by even just a crumb. Gluten-free alternatives **MUST** be used in this case.

Biting – keep little fingers away from the cutting edge of the scissors

Chewing – press hard, but don't bang down the masher. This will avoid splashing.

Pouring into the bag – ideally a 2-person job if possible.

Squeezing – get excess air out of the bag so that there's no risk of popping!

Pouring into the tights – very fiddly bit. Key is to not let the mush run straight down the length of the 'intestine' which is what will happen if it's lifted up. Need to keep the stuff at the start of the tights to be the duodenum while the mock bile & pancreatic enzymes are added.

Squeezing along – Again, avoid lifting it up. This gives the best mimic of how muscles squeeze the food along.

Towel – use LOTS of paper to get it as dry as possible. If using a towel, unroll & reroll with the tights in a different location.

Cutting open the 'anus' – needs decent scissors so this is ideally an adult job. Cutting off a very thin slice about 3cm long gives a good size of hole.