

That Science Gang presents...

YOU ARE A DOUGHNUT



EDUCATION RESOURCES

Pre-Visit and Post-Visit notes

For additional resources, please visit: <https://www.thatsciencegang.com/doughnutschools>

© That Science Gang 2024

   /ThatScienceGang



ABOUT THAT SCIENCE GANG

That Science Gang creates “Science Theatre” for young people and their families. We facilitate collaborations between theatre creators and science communicators to produce science-infused productions that better equip audiences to ask BIG questions about the world around them.

ABOUT YOU ARE A DOUGHNUT

*Take a fantastic voyage through the human digestive system ...
... with sketches, songs and sensational science!*

You Are a Doughnut is a biological-musical-comedy inspired by the traditions of vaudeville and music hall. In this show, two biology teachers take audiences on a fantastic voyage through the human digestive system – pairing each brilliantly intriguing organ with a hilarious (and sometimes gross-tacular) sketch, song or science demonstration.

In short, this is the strangest biology lesson you’re ever likely to take part in...

ABOUT THESE NOTES

These education resources are divided into two halves – PRE-VISIT NOTES and POST-VISIT NOTES. Each collection provides discussion points and activity ideas that encourage an exploration of the *human biology*, as well as the structure of *variety show styles of entertainment*.

We will be adding other resources to our website during 2024/2025. Make sure you check them out (including our curriculum links):

<https://www.thatssciencegang.com/doughnutschools>

CREATIVES

Writer / Director / Designer

David Lampard

Cast

Rod Schultz – Oesoph A. Gus

PJ Oaten – Dewey Dean

Stage Manager

Amanda Rowe

Composer

Mark Simeon Ferguson

Voice Over Artist

Sharon Robertson

Sound Designer

Rodney Hutton

PRE-VISIT NOTES

ABOUT THE SHOW

You Are a Doughnut is a vaudeville inspired biological-musical-comedy that takes audiences on a brilliantly fun voyage through the human digestive system – from table to toilet!

YOU are a doughnut! That is, YOU are a great big fleshy lump with a hole running all the way through your middle – a remarkable pathway that transforms food into itty bitty particles that can be used for energy, growth and repair.

In this show you'll join biology teachers Oesoph A. Gus and Dewey Dean as they embark upon an utterly brilliant exploration of every twisting tube and remarkable organ – through a series of sketches, songs, and sensational science demonstrations. Along the way you'll encounter a frenzy of enzyme-powered ping pong balls, sing along with a rainbow family of poop puppets, and hear all about the "Kid Who Collected Farts".

It's a fast-paced variety hour, with each new digestive destination inspiring a wonderfully unusual performance.

It's a little bit gross – and a 'hole' lotta fun! (You might even learn something...)



ABOUT THE SHOW STRUCTURE

The show **You Are a Doughnut** is made up of a sequence of individual acts – one for each section of the human digestive system. This format was inspired by ‘variety show’ performances such as music hall and vaudeville.

Music hall and vaudeville are old forms of variety entertainment. Music hall emerged in Great Britain during the 1850s, and vaudeville in North America during the 1880s.

In these types of show, a series of unrelated acts were performed on the same bill. These would most often include singers and musicians, as well as comedy performances and a collection of specialty acts – such as jugglers, magicians, ventriloquists, acrobats, contortionists, as well as male and female impersonators.

The emergence of radio, cinema and television ultimately led to the decline in popularity of music hall and vaudeville. However, there are places around the world where these kind of show are still produced. Plus, they have also prompted the evolution of other forms of ‘variety show’ entertainment. One such modern example is the television program *Australia’s Got Talent*, where a broad range of different acts perform in sequence as part of a competition.

In **You Are a Doughnut**, audiences are treated to a sweet suite of variety show inspired performances – including singing, dancing, sketch comedy, parody, slapstick, clowning, puppetry, poetry, science demonstrations and more. However, unlike most other forms of variety show, these acts and routines work together to tell a story – that of human digestion.



ACTIVITY 1: CREATE AN IMAGINARY VARIETY SHOW ACT

Working alone or in small groups, use the worksheet provided (WORKSHEET 1) to create your own imaginary variety show act.

The act you create could be inspired by skills you already have or by skills that you would like to learn. Either way, you don’t actually have to perform this act! Your task is to simply create an imaginary performance that audiences would have fun watching.

Once you have created something extraordinary, you might like to work as a class to program a night of zany (imaginary) entertainment...

ACTIVITY 1: WORKSHEET 1

CREATE AN IMAGINARY VARIETY SHOW ACT

Use this worksheet to create an imaginary act for a variety show. You don't have to perform this act, so be as creative as you'd like!

YOUR NAME:	
SKILLS YOU ALREADY HAVE...	<i>Can you sing, play a musical instrument, tell jokes, ride a skateboard – or maybe something else? Write a list of all your skills...</i>
SKILLS YOU'D LIKE TO LEARN...	<i>What skills would you like to learn? How about magic, ventriloquism, acrobatics, juggling – or something else? Write a list of things that you would like to learn how to do...</i>
CREATE YOUR ACT...	<i>Combine two or more of the skills above to create your act. For example, you might like to be a skateboarding comedian, or an acrobatic-comedy-violinist! Briefly describe what you would do as part of your act...</i>
WRITE AN INTRODUCTION...	<i>How would you like your act to be introduced? Your introduction should include your name as well as tell audiences a little bit about what they are about to see. For example: "Our next performer will thrill your eyes with her juggling skills and chill your ears with her vocal skills! She's simply brill! Please put your hands together for Jenny the jazz singing juggler!"</i>

THE SCIENCE

YOU are a doughnut.

Seriously! You really are...

It's not just the name of our show, it's an absolutely true fact. You are basically just a big lump of flesh (of tissues and organs) with a remarkable hole running all the way through the middle – from mouth to anus.

As soon as food enters your mouth, digestion begins. This food is chewed, swallowed, pushed, churned and squeezed through your digestive system – undergoing a series of remarkable transformations as it takes that journey.

But, what do you *already know* about the human digestive system and the process of digestion?



As a class, or in small groups, consider the following questions:

- What is digestion?
- What happens to food as it travels through the digestive system?
- What are some of the parts of the digestive system?
- What is faeces? Why is it (usually) brown?
- What questions do you have about the human digestive system?

PLEASE NOTE:

You don't need to get the answers to these questions correct! It is simply good exercise to discover what you already know (or think you know) about a topic before you learn more. The actual answers to many of these questions can be found in our show and/or on our website.

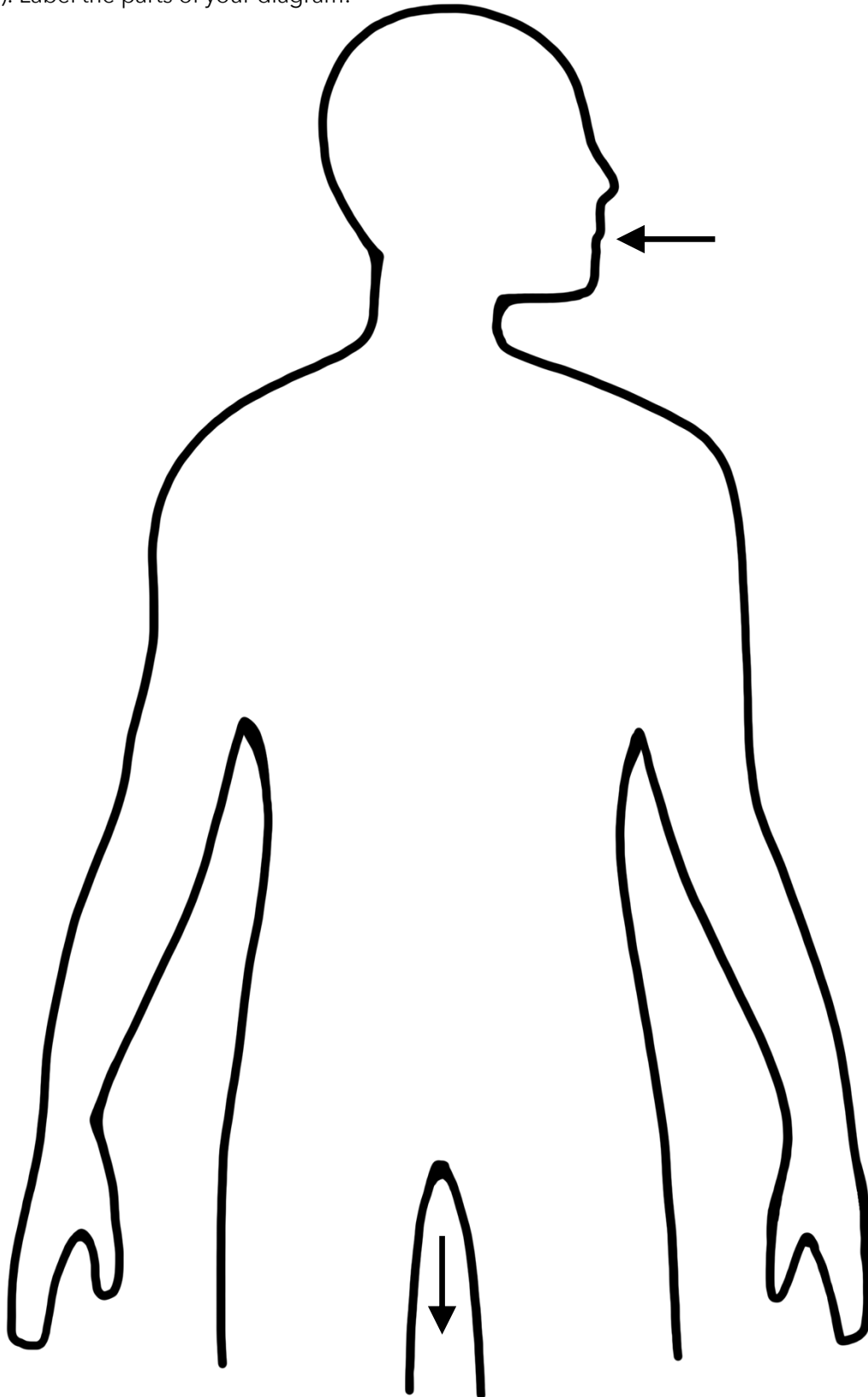
ACTIVITY 2: DRAW THE HUMAN DIGESTIVE SYSTEM

Use the worksheet provided (WORKSHEET 2) to draw what you think the digestive system might look like – remembering that it forms a hole that runs all the way through your body (from mouth to anus).

ACTIVITY 2: WORKSHEET 2

DRAW THE HUMAN DIGESTIVE SYSTEM

Using the outline of the human torso below, draw what you think the human digestive system looks like. Remember, YOU are a doughnut. That is, the digestive system forms a hole that runs all the way through your body. We have helped you out by using arrows to indicate where food enters (mouth) and waste exits (anus). Label the parts of your diagram!



POST-VISIT NOTES

THE CHARACTERS

Oesoph A. Gus and Dewey Dean are what's known as a 'double act'. That is, a comedy performance involving two people.

Double acts were originally created for musical hall and vaudeville performances. They have evolved over the years and can now be found in many types of theatre performance, as well as on television and in film.

Famous double acts include:

- Abbot & Costello
- Laurel & Hardy
- Matt Lucas & David Walliams (Little Britain)
- Adam Savage & James Hyneman (MythBusters)
- Lano & Woodley
- Kath & Kim
- Hamish & Andy
- The Umbilical Brothers
- Tom & Jerry
- Bert & Ernie

Double acts often rely on an 'imbalance' between two characters to create comedic situations. This creates 'tension', as well as an opportunity for misunderstandings and misinterpretation.



As a class, or in small groups, consider the following questions:

- Describe Oesoph A. Gus. What are his personality traits? What do you think he likes? What do you think he dislikes?
- Describe Dewey Dean. What are his personality traits? What do you think he likes? What do you think he dislikes?
- How are Oesoph and Dewey similar?
- How are Oesoph and Dewey different?
- Oesoph and Dewey meet at the beginning of the show...
 - How do you think they feel about each other when they meet?
 - How do you think they feel about each other by the end of the show?

THE SCIENCE

As you discovered during **You Are a Doughnut**, you really are a doughnut! That is, your body is a great big lump of flesh (of tissues and organs) with a remarkable hole running all the way through your middle. That hole – along with some accessory organs – is your digestive system.

The function of the digestive system is to break food down into smaller and smaller pieces (through both physical and chemical digestion), to filter out and absorb nutrients and finally, to eliminate wastes.

As a class, or in small groups, consider the following questions:

- How many parts of the human digestive system can you name?
 - Can you remember the sketch, song or science demonstration that accompanied each part?
- Can you remember what bile does to lipids (fats and oils)?
- Can you remember what enzymes do?
- Oesoph explained that: *"You are what you eat?"*. How is this true?
- Dewey was a contestant on "Millionaire Got the Trots Seat" and had to answer three questions about human faeces (poop). During one of those questions we discovered that human poop is approximately 75% water. What do you think the remaining 25% might be?
- What questions do you still have about the human digestive system?



ACTIVITY 1: WORKSHEET 1 LABEL THE HUMAN DIGESTIVE SYSTEM

During **You Are a Doughnut** Oesoph and Dewey introduced you to 10 parts of the human digestive system. Can you remember the order of these parts? Use the worksheet provided (WORKSHEET 1) to label the different parts of the human digestive system.

ACTIVITY 2: WORKSHEET 2 RAINBOW POOP

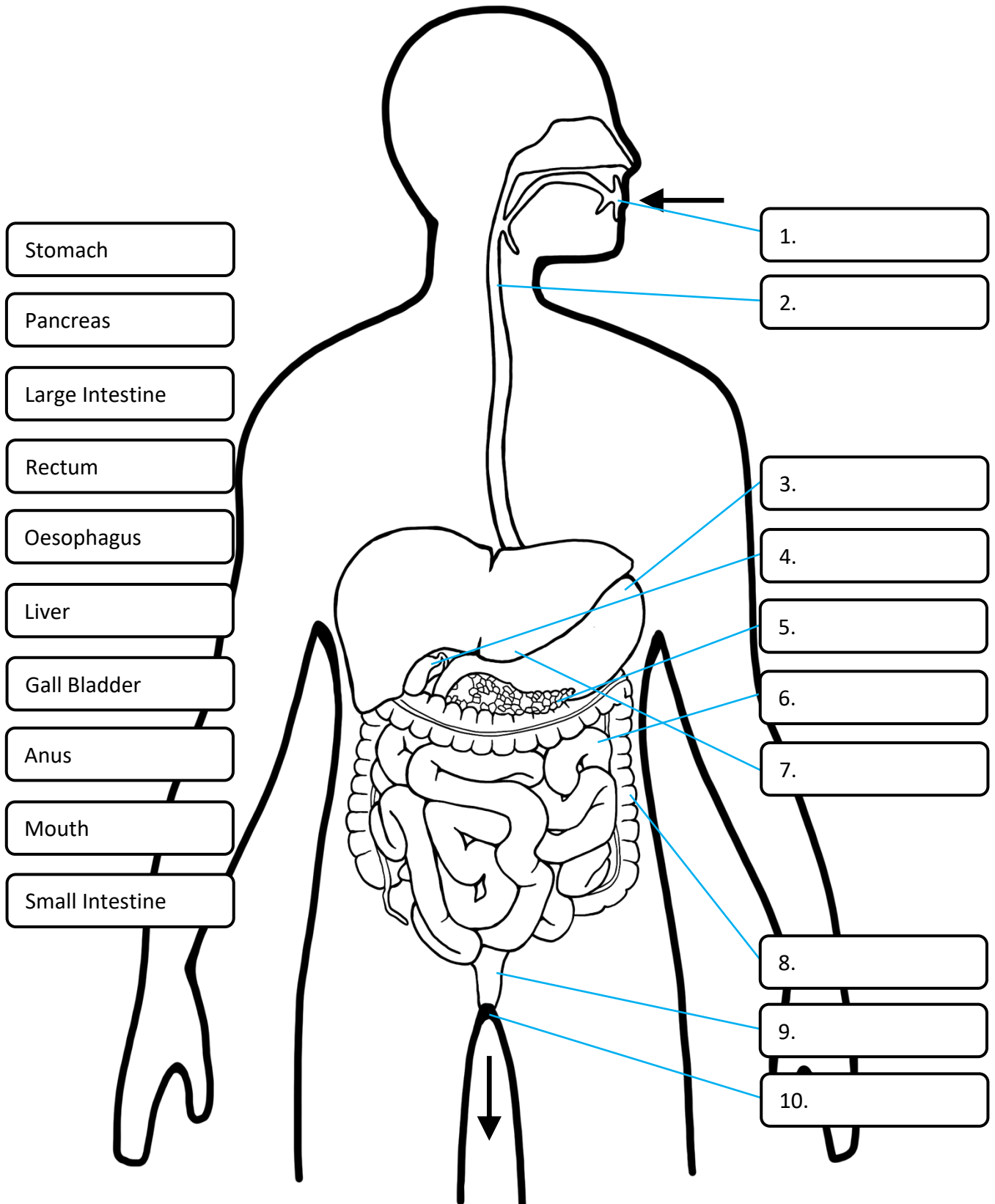
During **You Are a Doughnut** Dewey and Oesoph explained that food can change the colour of your poop. They then introduced everyone to six different coloured poops. Use the worksheet provided (WORKSHEET 2) to guess which foods can change the colour of your poop.



ACTIVITY 1: WORKSHEET 1

LABEL THE HUMAN DIGESTIVE SYSTEM

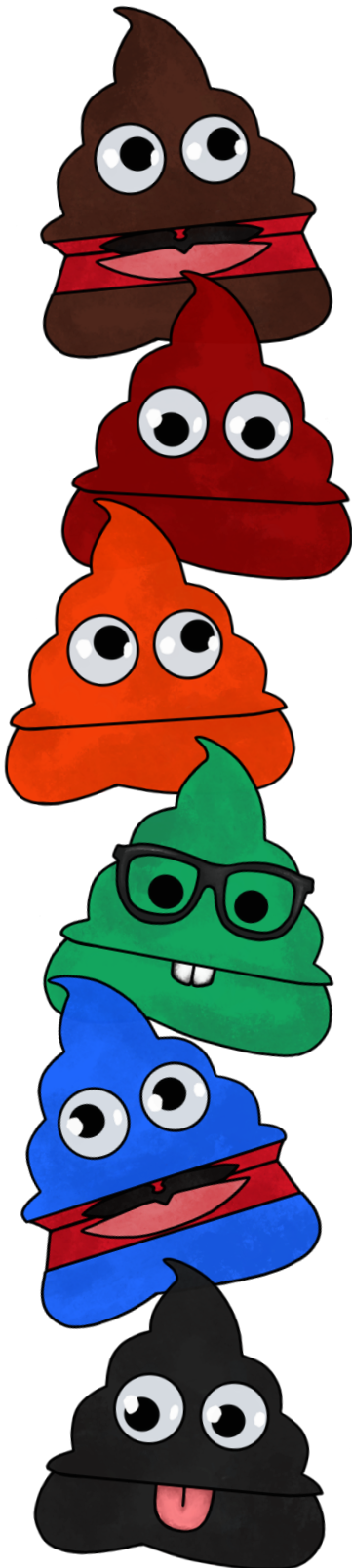
Can you remember the order of all the parts in the human digestive system? The list of organs and tubes on the left of the diagram below are NOT in the correct order. Use the boxes to the right of the diagram to put them in the correct order. Once you are done, colour in the picture!



ACTIVITY 2: WORKSHEET 2

RAINBOW POOPING UNICORN

During **You Are a Doughnut** you discovered that not only are you a doughnut, you are also a *rainbow pooping unicorn*! Your poop can sometimes change colour – depending upon the food you eat. What foods do you think a person might have eaten to create the different coloured poops below?



What foods might turn your poop BROWN?

What foods might turn your poop DARK RED?

What foods might turn your poop ORANGE?

What foods might turn your poop GREEN?

What foods might turn your poop BLUE?

What foods might turn your poop BLACK?



SONG LYRICS

YOU ARE A UNICORN

During **You Are a Doughnut**, Dewey and Oesoph sang a song called *You Are a Unicorn*. You can find the lyrics for this song below – which reveal *some* of the foods that can turn your faeces different colours...

HELLO AND HI, GOOD DAY TO YOU
WHO AM I? / I AM YOUR POO!
IN SHADES OF **BROWN** I'M USUALLY FOUND
BUT THIS ISN'T ALWAYS TRUE

ALL THE FOODS YOU CHEW AND EAT
EVERY SNACK / EVERY TREAT
CAN CHANGE MY COLOUR INSIDE OUT
DON'T YOU THINK THAT'S KIND OF NEAT?

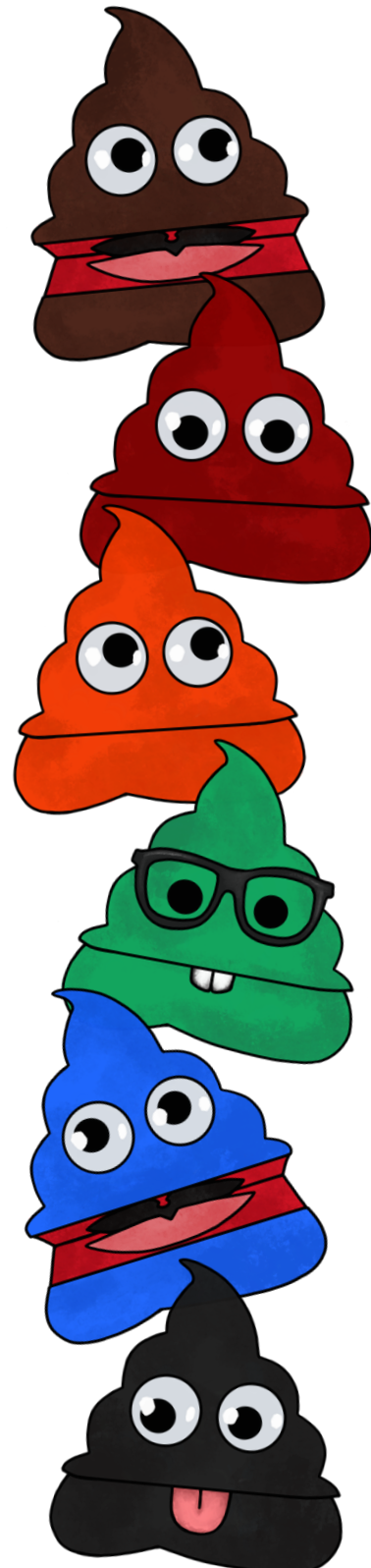
LOOK AT ME I'VE TURNED **DEEP RED!**
WHAT'S THE FOOD / YOU'VE BEEN FED?
BEETROOT! ROASTED, BOILED OR RAW
OR MAYBE IN A DIP OR SPREAD

THEN THERE'S MOI, I'M NEW IN TOWN
ORANGE IS / THE NEW BROWN!
I'M COLOURED BY THE FOOD THAT YOU
CRUNCH AND CHEW AND GOBBLE DOWN
CARROTS! APRICOTS! PUMPKIN STEW
SWEET POTATO / MANGO TOO
FILL UP ON THESE – EAT LOTS AND LOTS
AND I WILL BE YOUR NUMBER TWO!

TO TURN ME **GREEN** YOU NEED AN EXCESS
OF CERTAIN FOODS / CAN YOU GUESS?
VEGETABLES LIKE BROCCOLI
BOK CHOY AND SPINACH AND WATERCRESS!

NOW IT'S TIME FOR MY DEBUT
LOOK AT ME! I'M TRUE **BLUE!**
FOR FIERCENESS I CANNOT BE MATCHED
BUT WHAT'S THE CAUSE, WHAT DID YOU CHEW?
FOOD COLOURING HAS CAUSED MY HUE
ANY THING / THAT'S DYED BLUE
CAKES AND SPORTS DRINKS, LOLLIPOPS
ICE-CREAM, ICING, JELLYBEANS TOO

FOR YOUR FINALE – BOSH BASH BISH!
LOOK I'M **BLACK** / FROM FOODS DELISH!
A STACK OF SNACKS ALL HAVE THE KNACK
LIKE BLUEBERRIES, GRAPES AND LICORICE



DEEPER INTO DIGESTION

You'll find lots more information about the human digestive system (including answers to some of the questions posed above) on our website. Check out the following links:

EXPLORE: <https://www.thatssciencegang.com/doughnutexplore>

SCHOOLS: <https://www.thatssciencegang.com/doughnutschools>

MORE FROM THAT SCIENCE GANG

If you'd like to spend a little more time with some science in the classroom, then check out these web series:

This Show is NOT Rubbish!

<https://www.thatssciencegang.com/thisshowisnotrubbish>

Let's Explore

<https://www.thatssciencegang.com/letsexplore>

