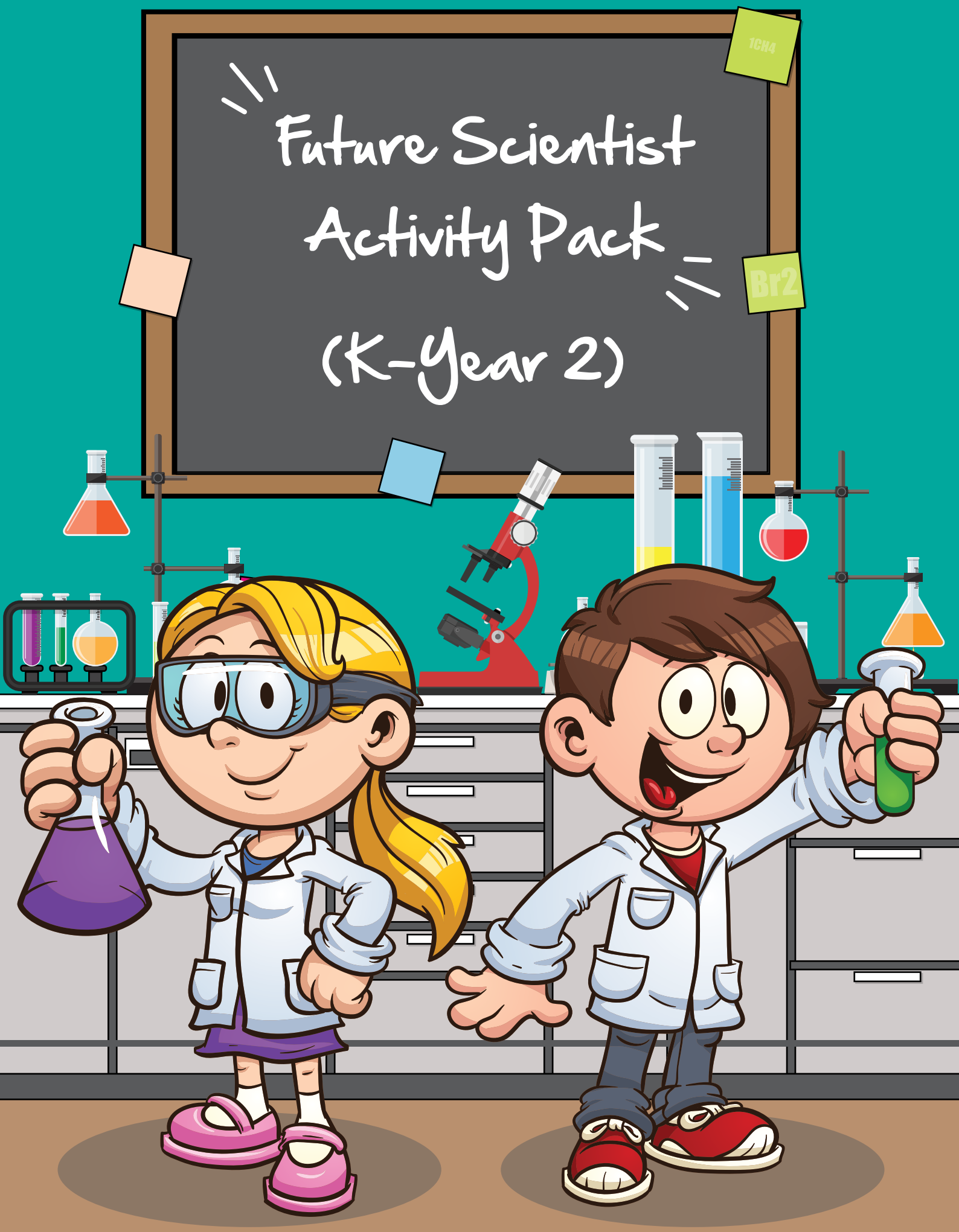
Future Scientist Activity Pack (K-Year 2)



CHILDREN'S MEDICAL RESEARCH INSTITUTE

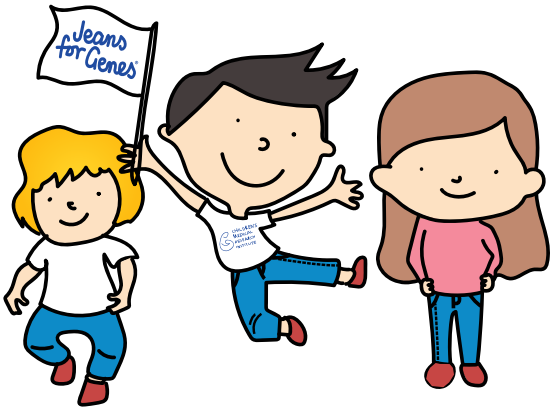
Jeans for Genes®

Finding cures for children's genetic diseases

What you and your school can do to help!

Jeans for Genes was created to raise money to help the scientists at Children's Medical Research Institute find treatments and cures for the 1 in 20 kids facing a birth defect or genetic disease.

You may think you don't know anyone with a genetic disease or birth defect, when in fact – there is one in every classroom across Australia! There are conditions that you may not be aware of, but also more commonly known conditions like cystic fibrosis and cancer.

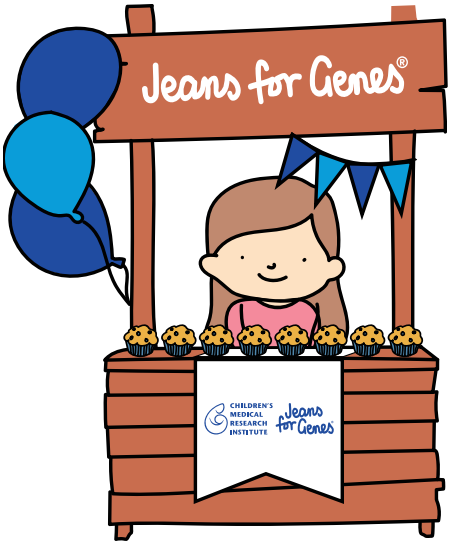


You and your school can help make a difference in the lives of kids who shouldn't have to think about getting liver transplants, taking dozens of medications, or getting their next dose of chemotherapy. We believe all kids should have a chance to just be kids!

Jeans for Genes Day is in August but your school can fundraise any time that suits you.

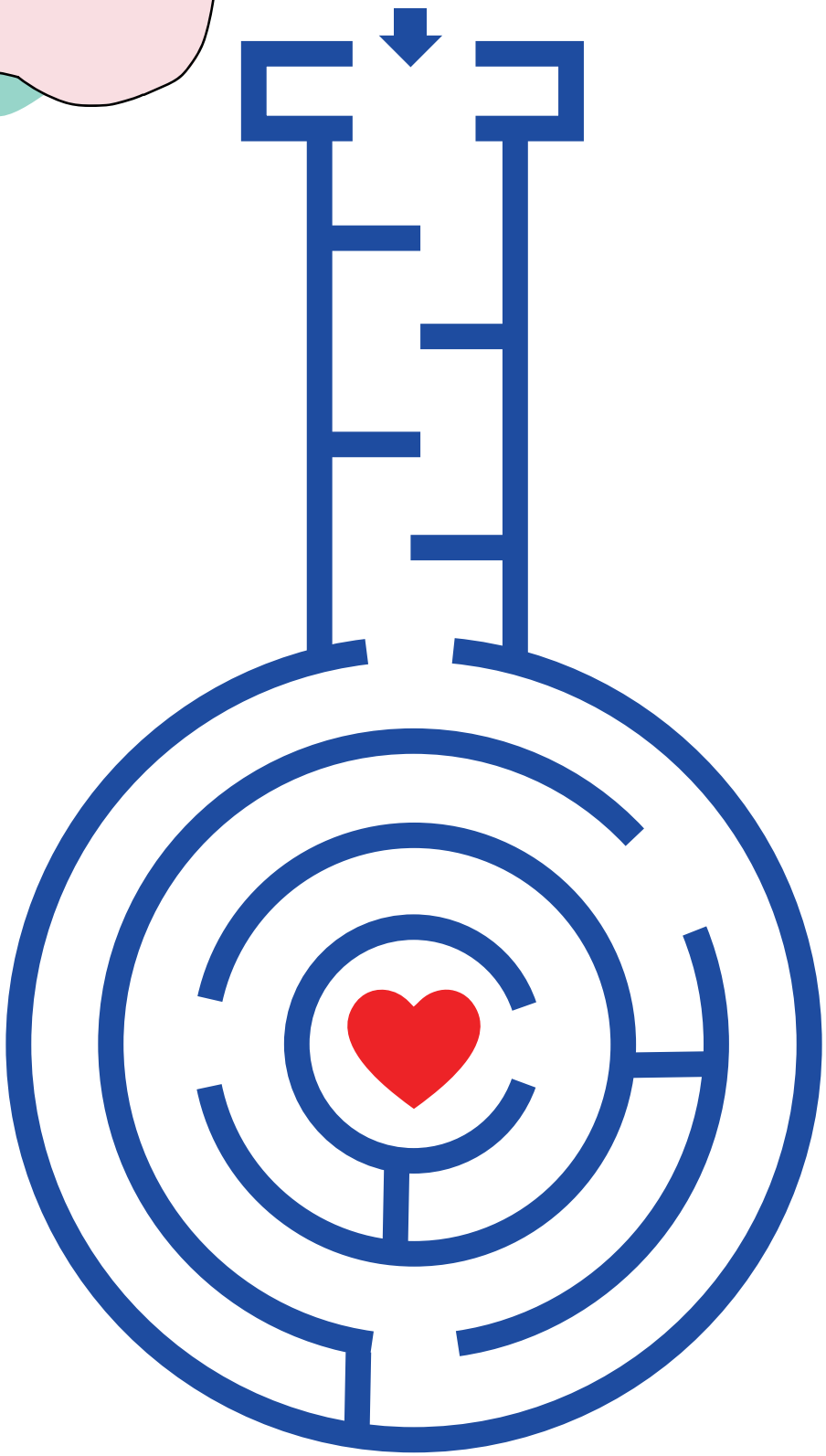
There are lots of fun things you can do to raise money—from holding a denim mufti day,trivia session, taking on our new 100 Skips a Day at School skipping challenge or selling blue baked treats. We have lots of resources to help with whatever you try to do and even have some great downloadable decorations on our website to liven up your space!

Find out more at **JeansForGenes.org.au** or get in contact with our team at **info@jeansforgenes.org.au**



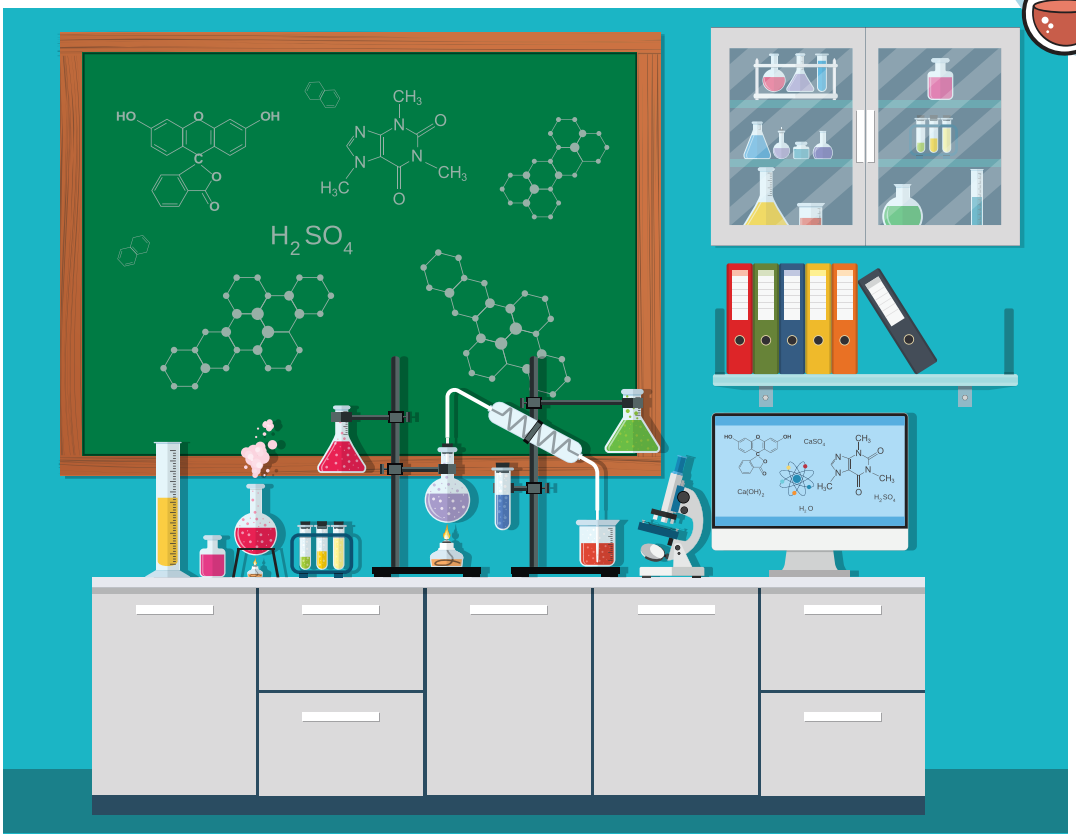
Maze

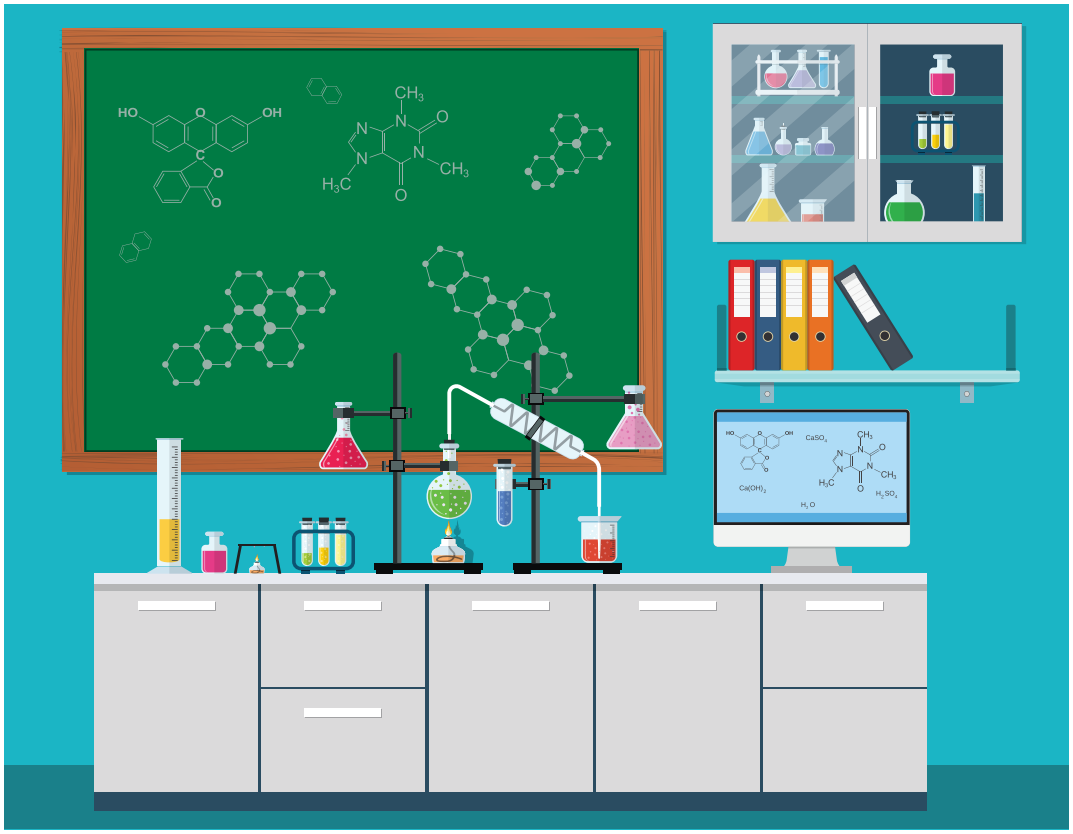
Help Sophie get better. Find her cure in the flask below.



Spot the difference

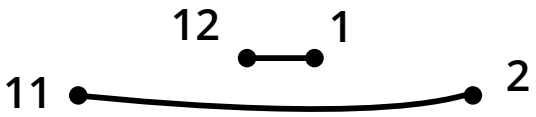
Help Timmy sort out his lab. Can you find all 11 differences?

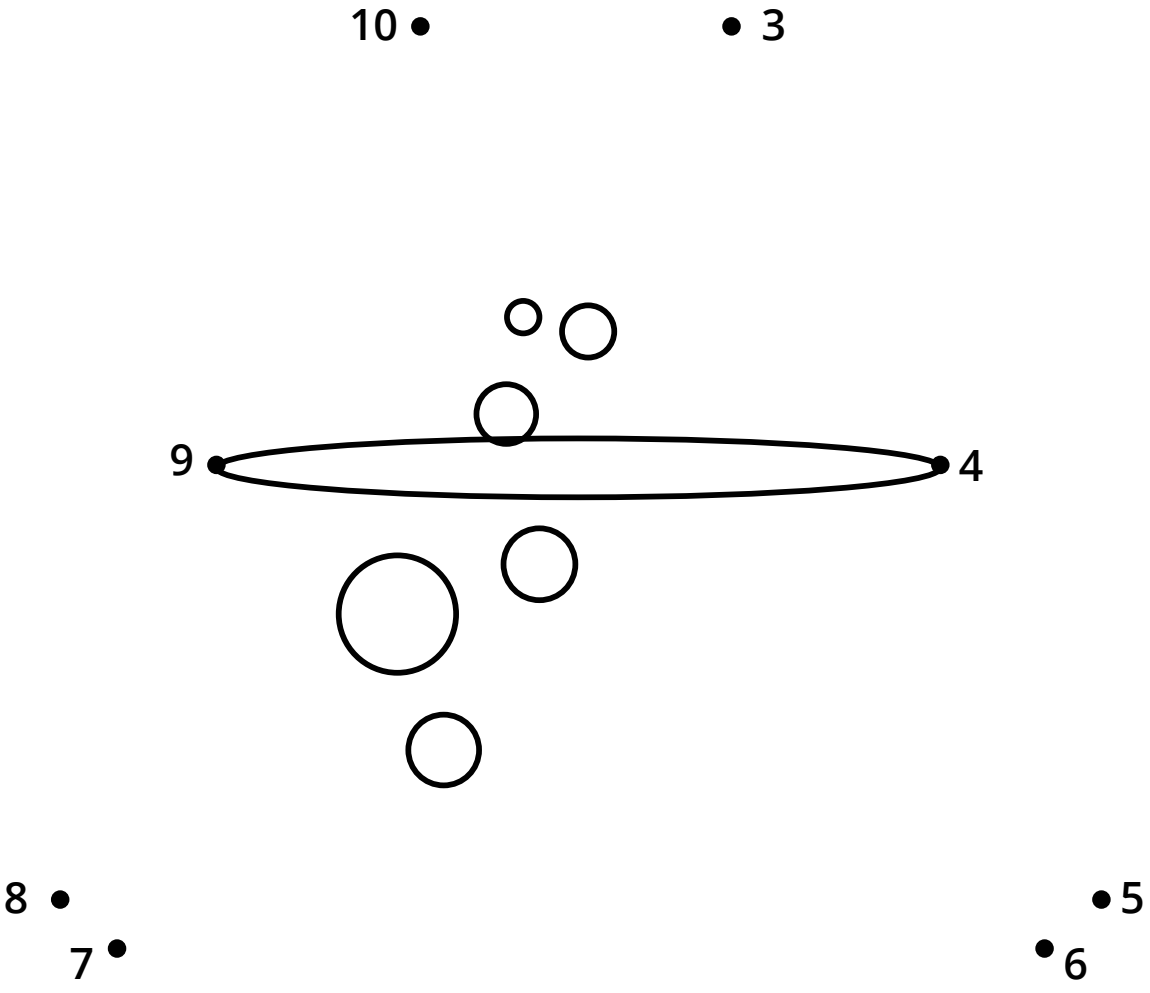




Join the dots

Alvin has a vital new instrument. Can you join the dots to find out what it is?





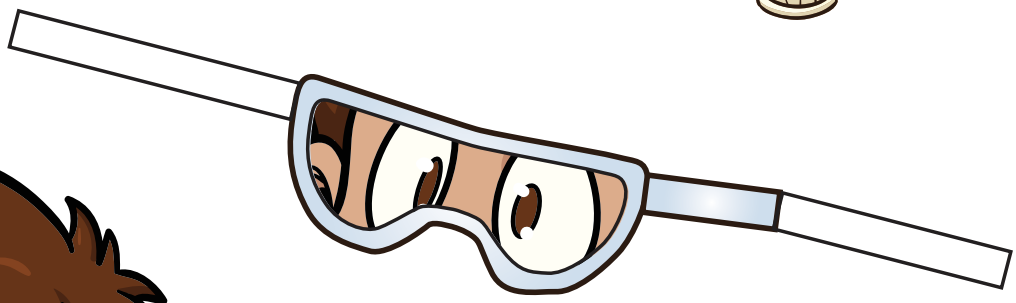
Colour by numbers

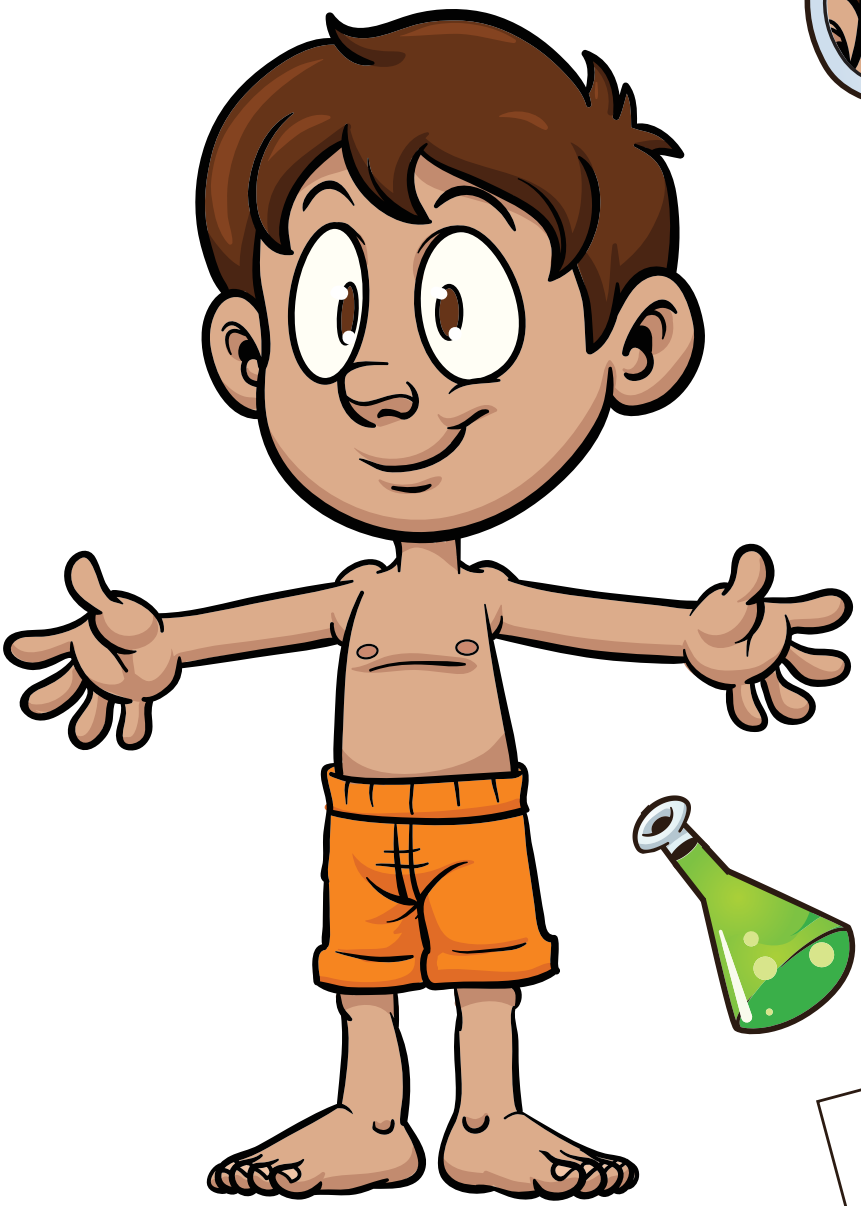
Can you help Katie colour her DNA?

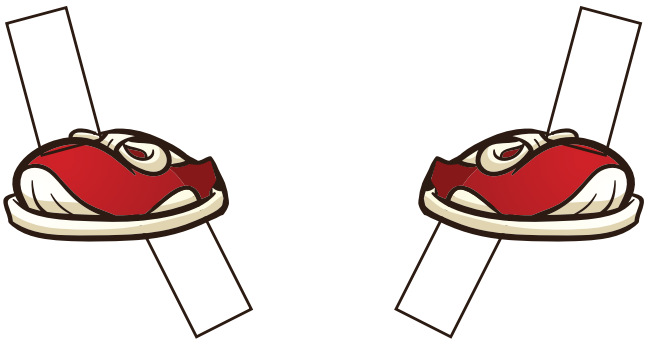
1	Red
2	Blue
3	Green
4	Pink
5	Purple
6	Yellow
7	Orange

Future Scientist - cut out doll

Can you help Gary get ready to do some research in the lab?

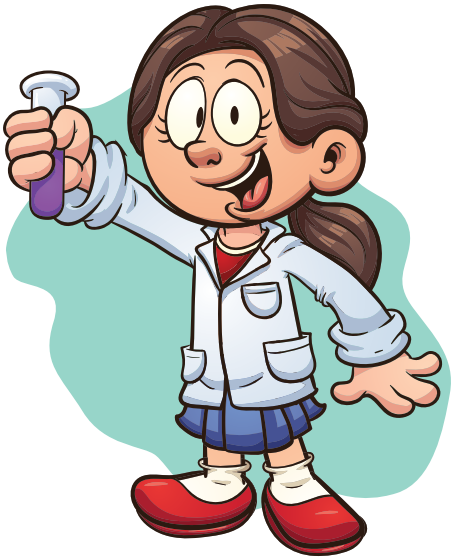


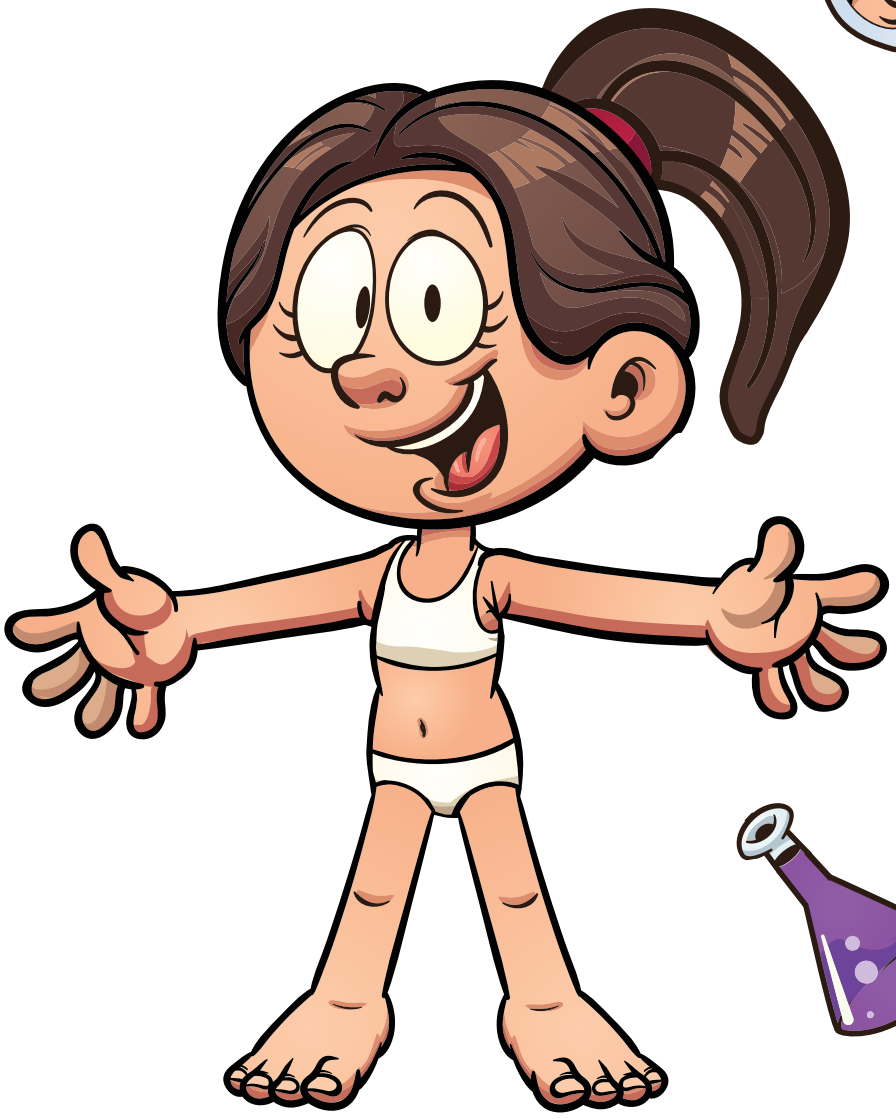


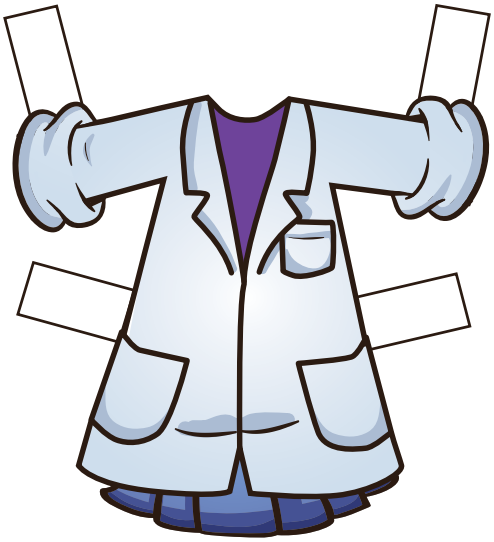


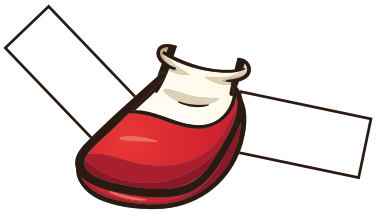
Future Scientist - cut out doll

Can you help Zoey get ready to do some research in the lab?









My Lab

Understanding Genes—Genetic Traits

Can you roll your Tongue?

How are your earlobes attached?

Have you got a hitch-hikers thumb?

What kind of hair-line do you have?

What other traits do you have? Think about...

- Eye colour
- Hair colour
- Curly, straight, or wavy hair
- Freckles
- Nose shape
- Dimples
- How tall you are
- Your skin colour

Write them down:

Activity

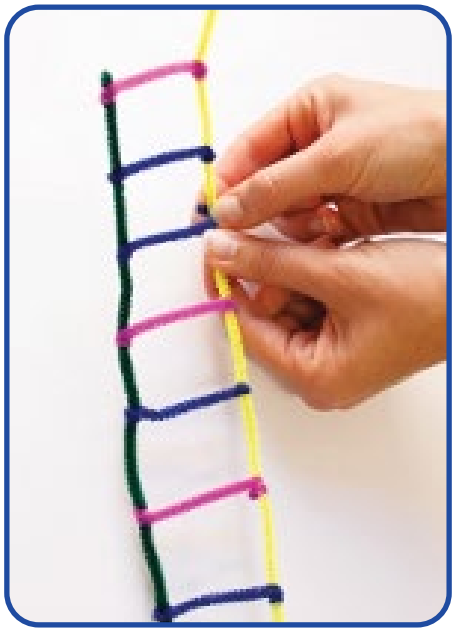
1. List as many things that you have in common with a family member and as many things that are different:

SAME AS FAILY MEMBER 1	DIFFERENT FROM FAMILY MEMBER 1
e.g. blue eyes	*e.g. freckles*

Build DNA using pipe cleaners

This experiment requires:

- Set of pipe cleaners (different colours)



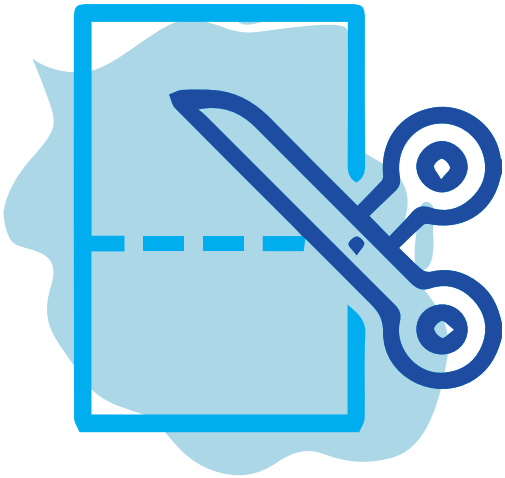
1. Use 2 long pipe cleaners for the sides of the ‘ladder’.

2. Cut 3cm long segments from other pipe cleaners until you have 6 or 7 segments (ideally of different colours)—wind together to look like the above images.

3. Then twist into a spiral staircase. This is what your DNA looks like!

4. Each rung on the ladder is a letter in the genetic code. Your actual DNA contains trillions of letters, and carries the instructions for making your entire body.

Create different body parts with your rainbow paper

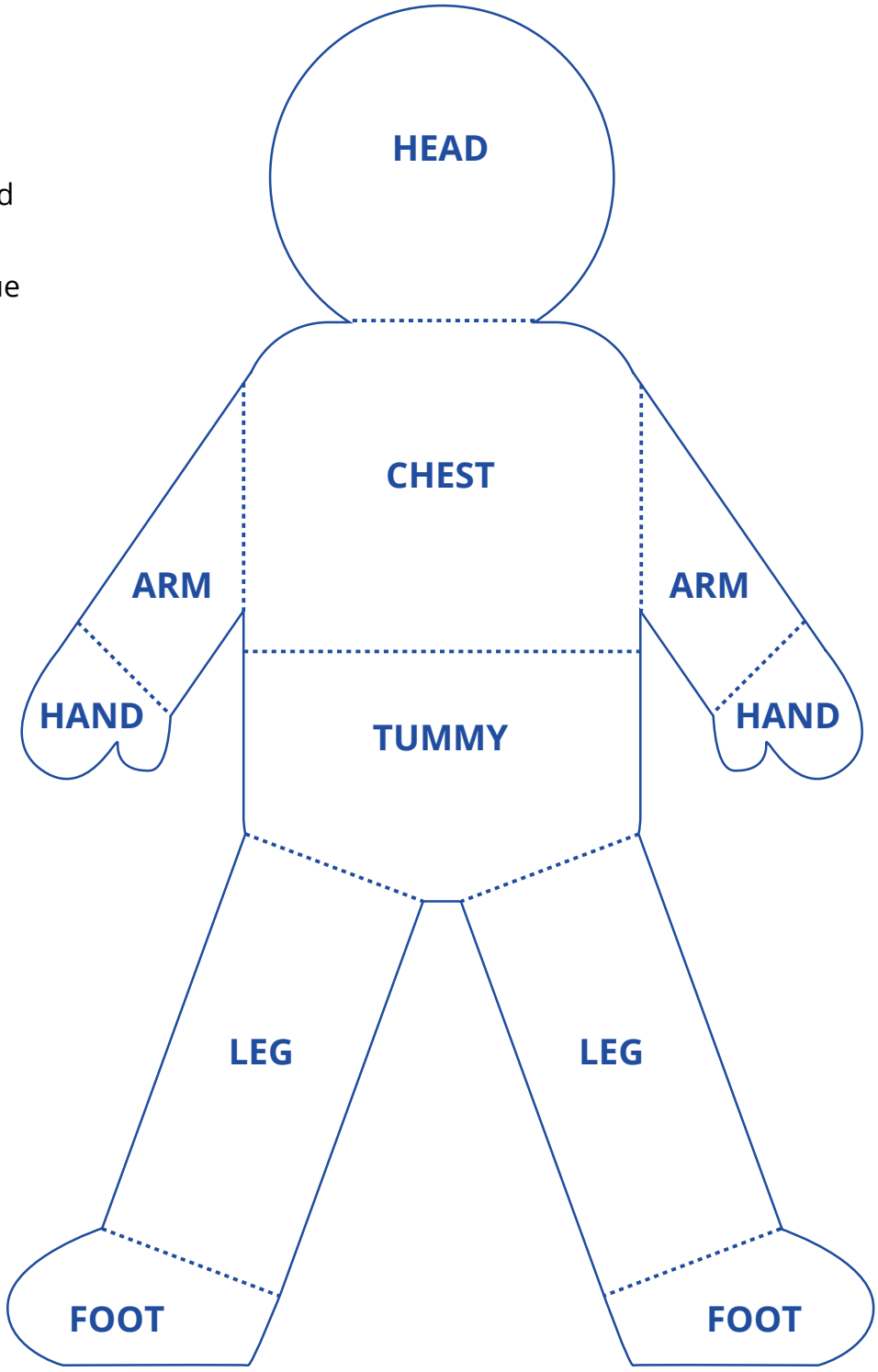


This experiment requires:

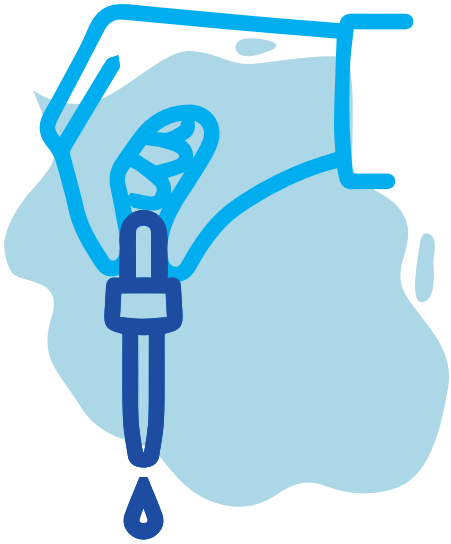
- Coloured paper (multiple colours)

Cut out different body parts in different coloured paper. Do different coloured eyes, hair, different sized lips and eyes and ears and noses...

Use these parts to create unique people. You'll see that no two people are the same, just like real life!



Fine Motor Pipetting practice



This experiment requires:

- Conical tube (or smaller container)
- Squeezy pipette
- Culture plate
- Plastic beaker (or container)
- Food colouring
- Water

This is available as a kit at shop.cmri.org.au (while stocks last)

Get food colouring and dye some water. Kids can practice moving water from conical tube or beaker to culture plates using pipette only—no spilling!

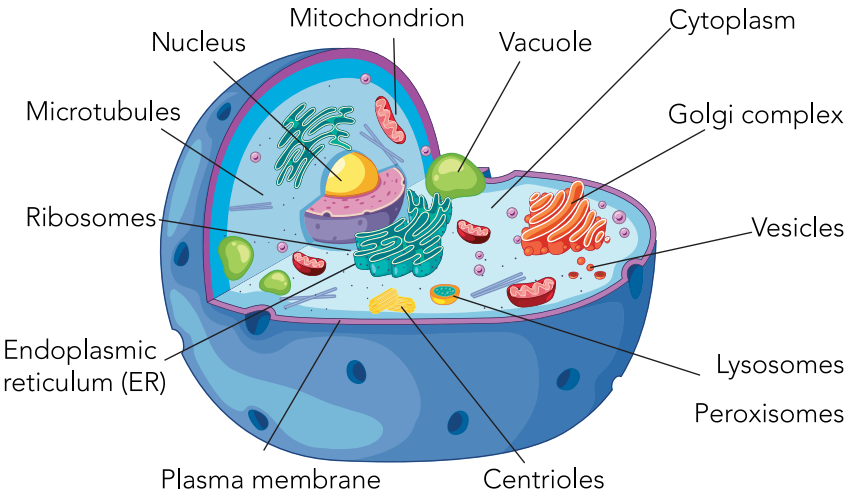
Wear gloves for added difficulty in your practice.

See if you can draw a picture in your culture plate.

Craft Cells

This experiment requires:

- Modelling clay (multiple colours)
- Pom poms (ideally red, blue and green)



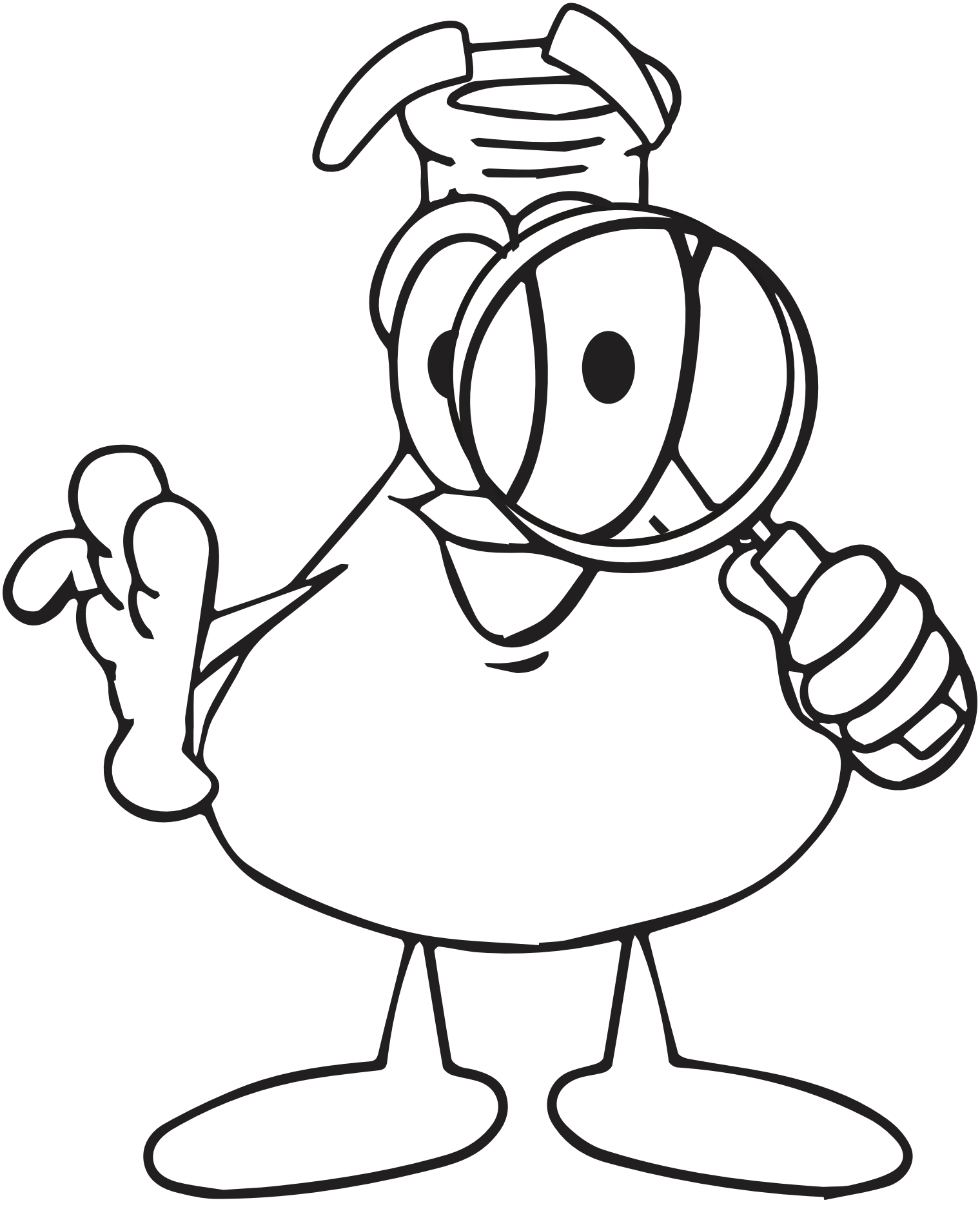
1. Create a flat circle of modelling clay.

2. Attach blue pom-pom for the nucleus in the centre (this is where the DNA lives, the instruction manual for the cell).

3. Use red pom-poms for ribosomes (the construction centres of cells), green for mitochondria (the energy source of cells).

4. If you want to craft your cell components out of modelling clay too, you can get more advanced like the pictures above (do a Google search to find out about each cell component).

Colour Me



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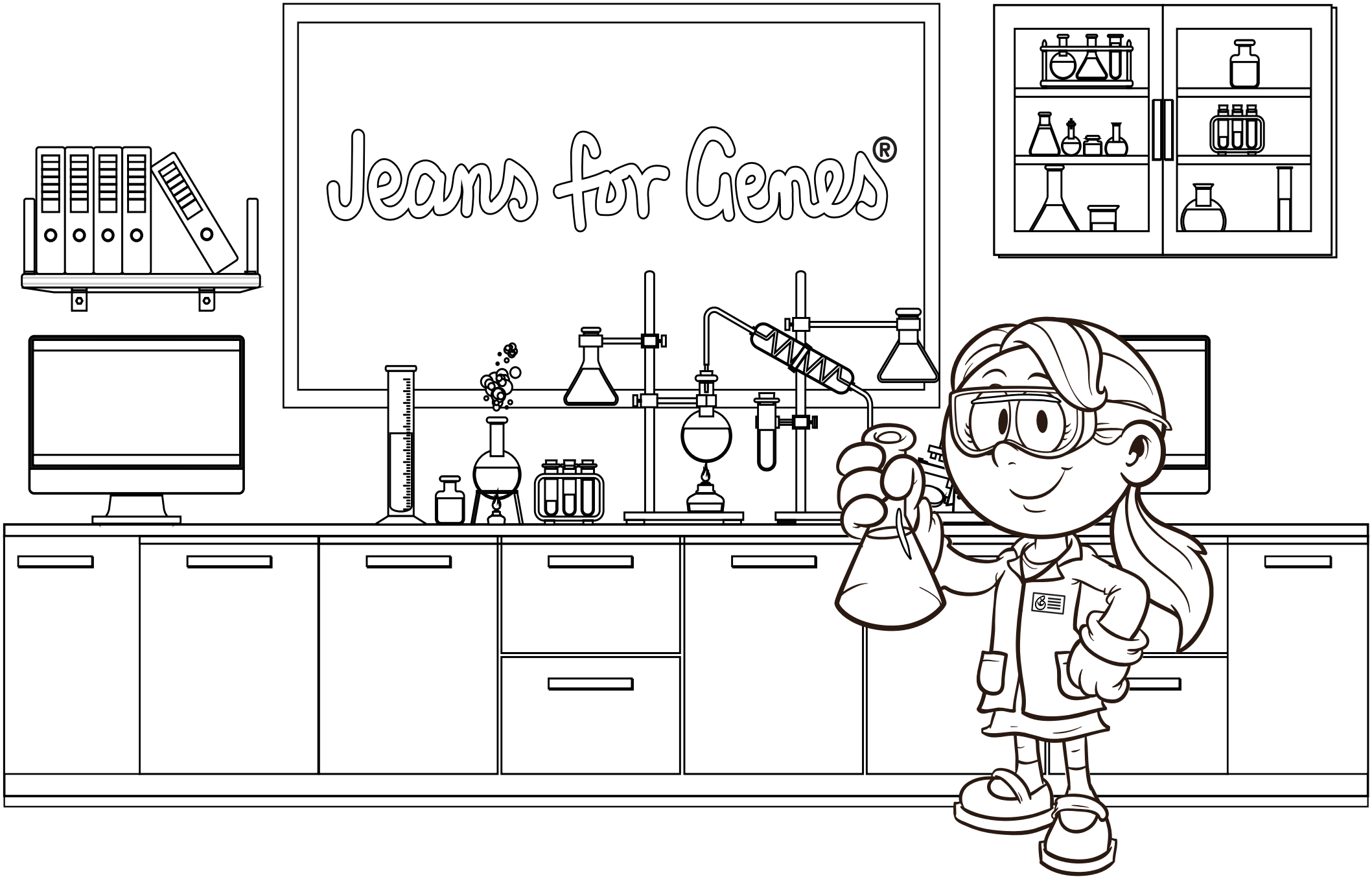

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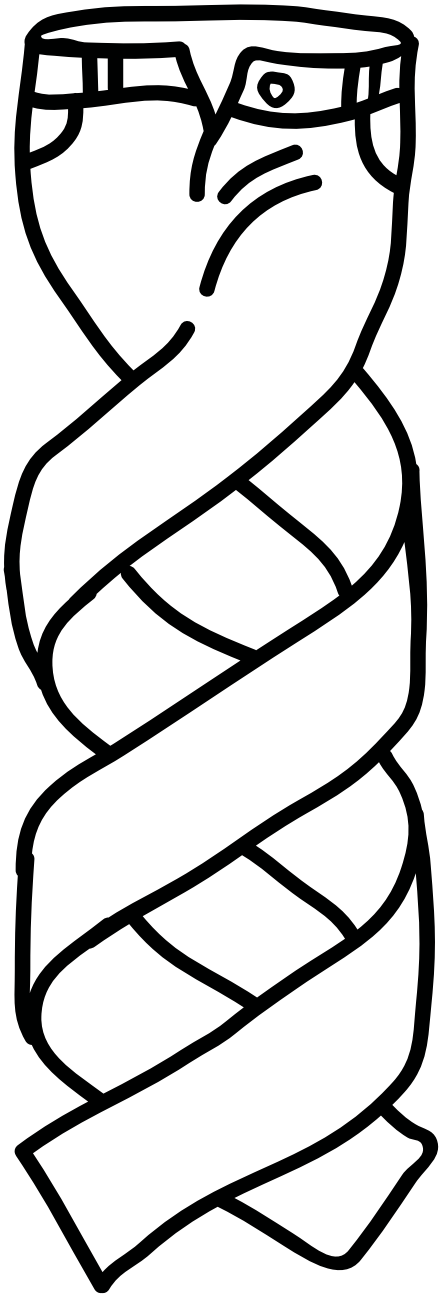

Jeans for Genes®

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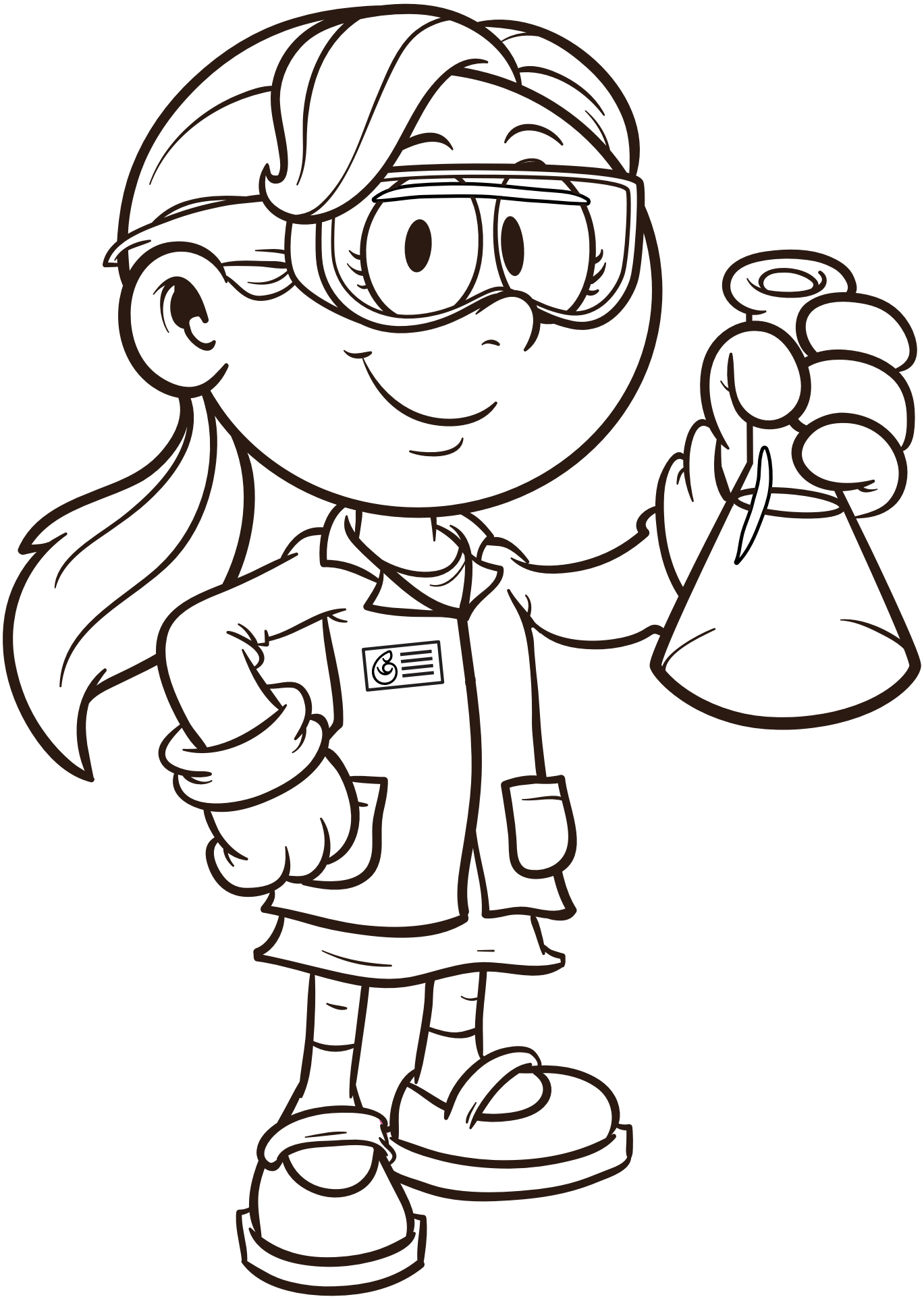

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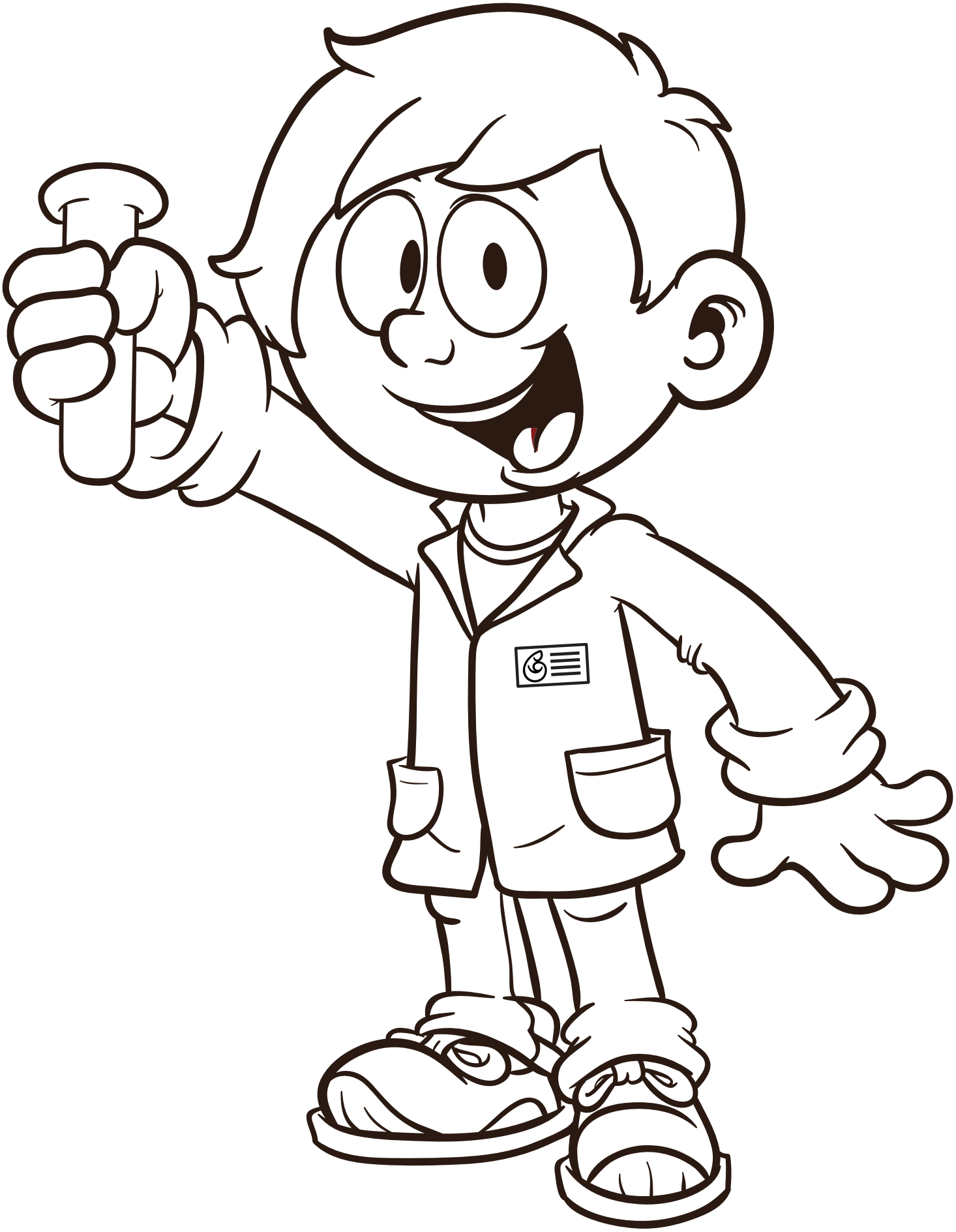

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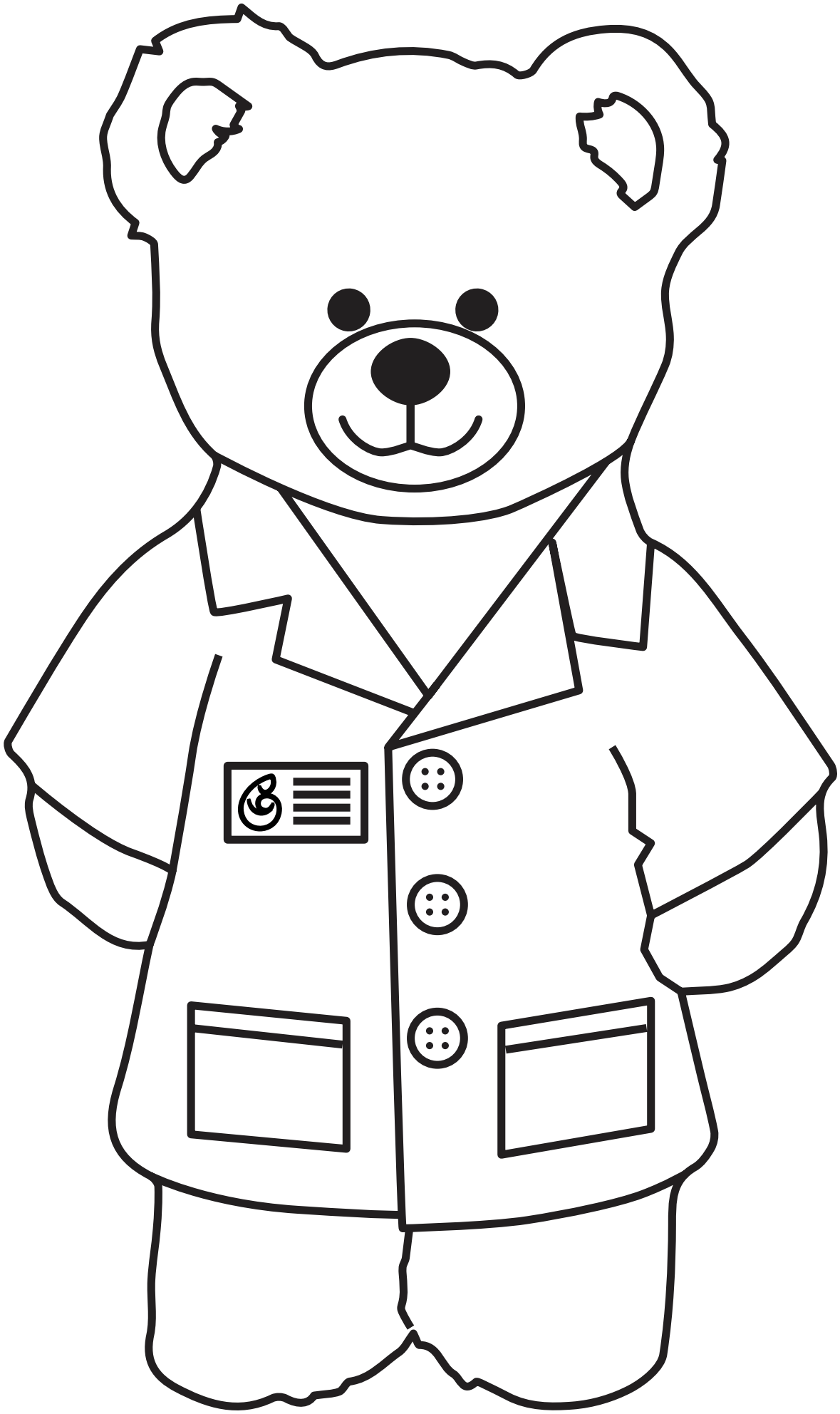
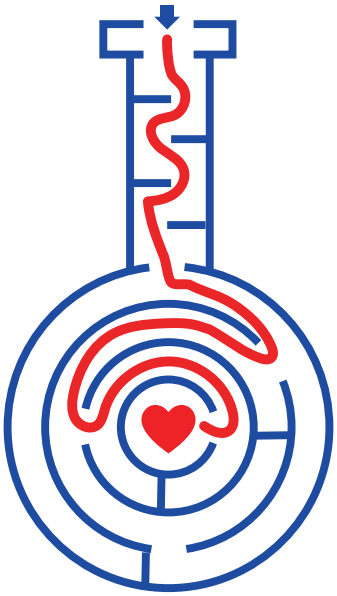
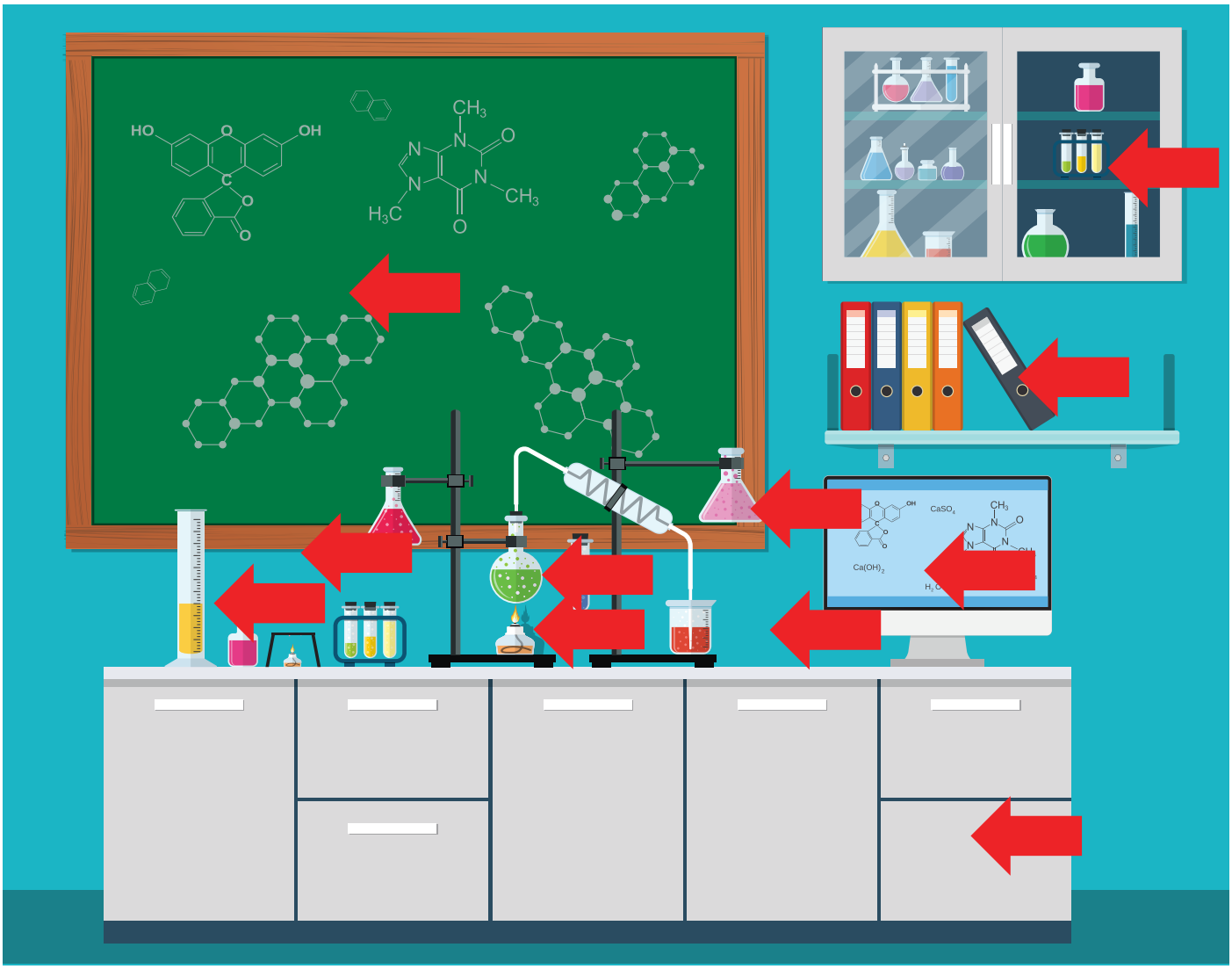


Answers

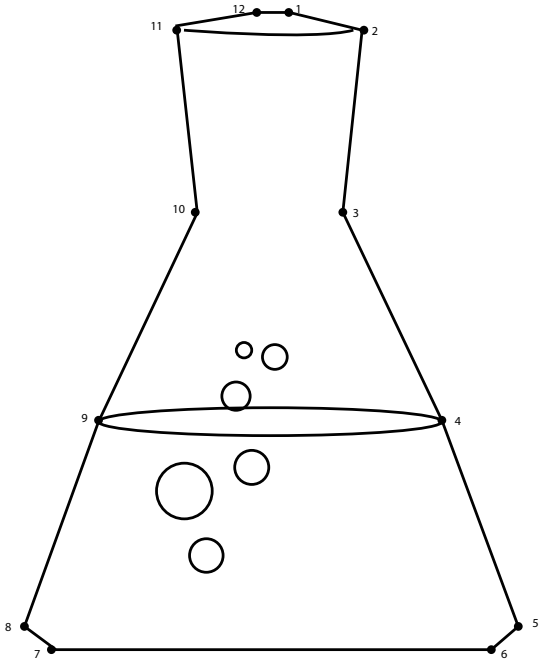
Maze



Spot the difference



Join the dots



Colour by numbers

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