Easy Read Trail

Highlights of Glasgow Science Centre

Easy Read

GLASGOW SCIENCE CENTRE

Registered Scottish charity SC030809

Follow this trail to discover the best bits of Glasgow Science Centre.

What to expect

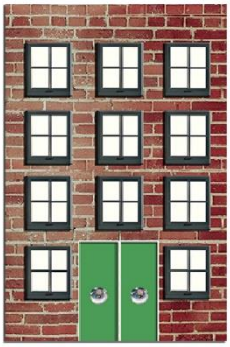
The trail takes you to 10 different stops.

At each stop you will find an activity to do.

You can go through the trail as fast or as slow as you like.

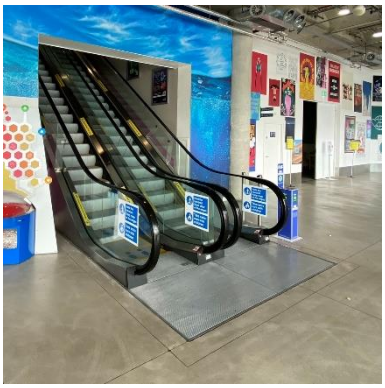
Many people take around 45 minutes to complete the trail.

Getting around the centre

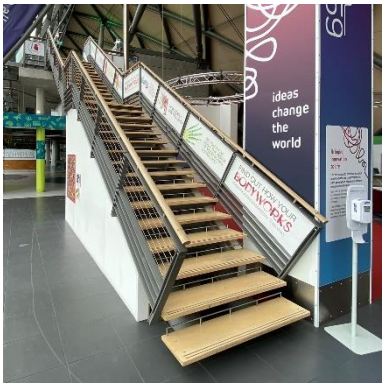


The trail takes you to stops across 4 different floors.

To move between floors, you can use 1 of the 2 lifts.



Or you can use the escalator between the ground floor and Floor 1.



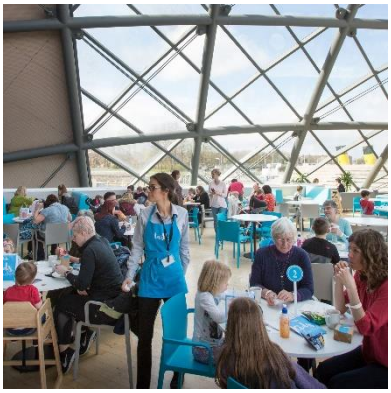
There are stairs between Floors 1, 2 and 3.

Good to know

You enter the building on the ground floor.

There are toilets on the ground floor, Floor 2 and Floor 3.

There are no toilets on Floor 1.



There is a café on the ground floor.

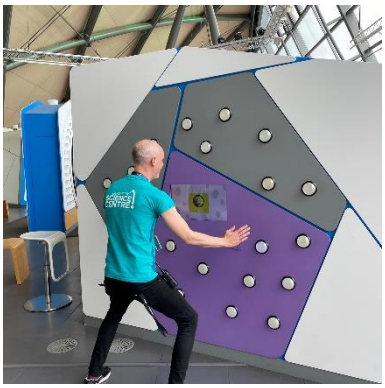
Asking for help

If you have any questions, you can ask a member of our staff.

You can recognise our staff by the blue-green colour of their uniform.

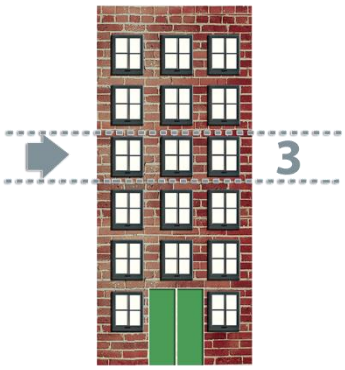
Our staff can also help if any of the activities are broken or missing.

Stop 1: Reaction Timer



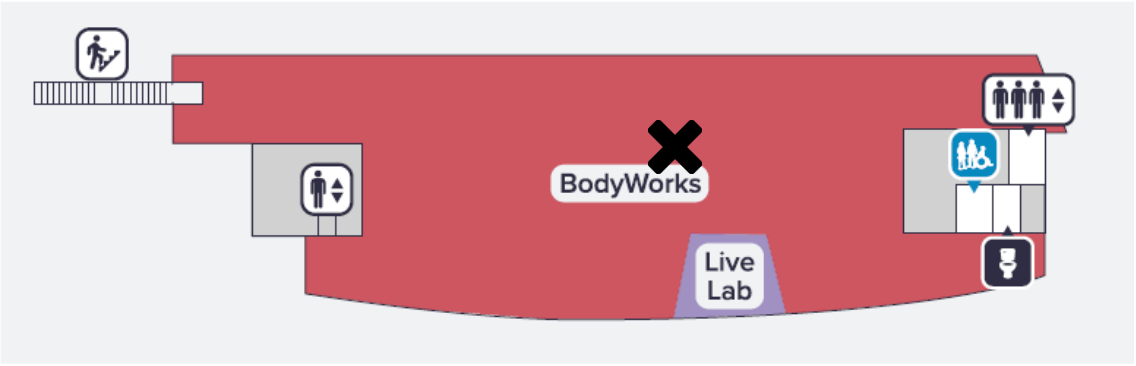
At this stop there is an activity to measure how quickly you can react.

Finding it

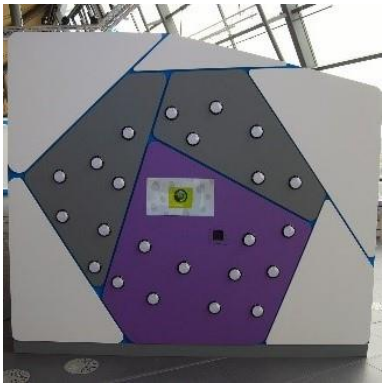


This stop is on Floor 3.

You can find this stop in the BodyWorks exhibition.



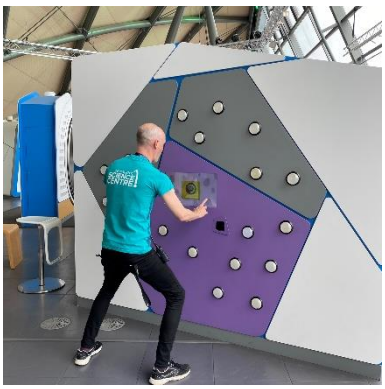
This stop is near the black cross on the map.



The Reaction Timer looks like a wall with lots of buttons.

What to do

Tap the touchscreen to reveal the instructions.



Follow the instructions on-screen.

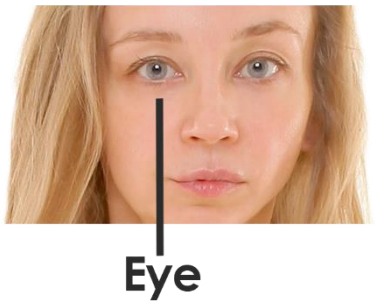
Once the activity is over, you are given your score.

The smaller your score, the better your result.

Who has the smallest score in your group?

What is going on?

This activity measures your body's ability to take in information and react.



Your eyes see the light and send a message to your brain.

Your brain then sends a message to your hand to switch off the light.

Being able to react quickly is useful in sports, such as football.

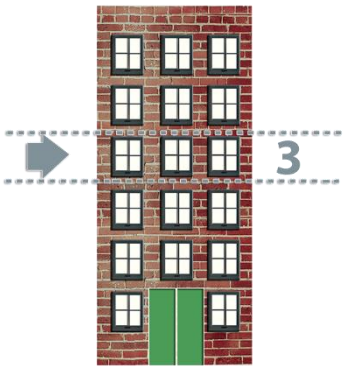
Have a think: Where else can it be useful to react quickly?

Hint: Fast reactions can help us to avoid danger.

Stop 2: Smoker's Lungs

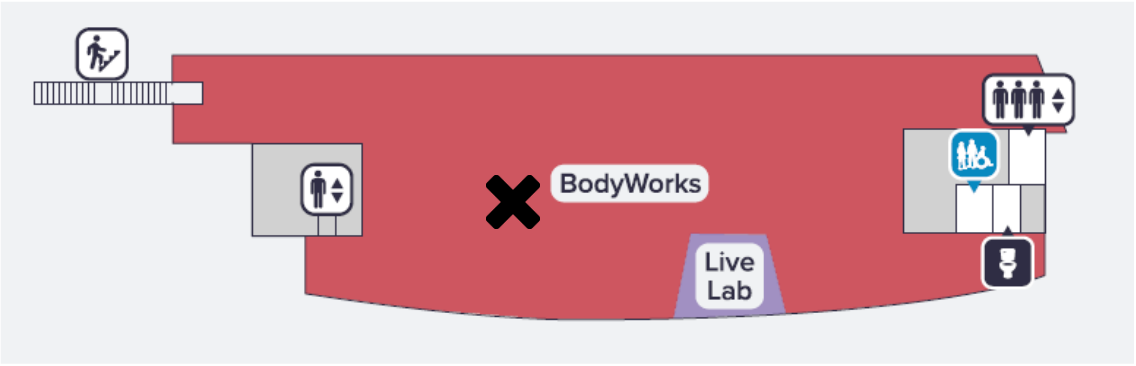
At this stop there is an activity to compare 2 sets of lungs.

Finding it



This stop is on Floor 3.

You can find this spot in the BodyWorks exhibition.



This stop is near the black cross on the map.

The Smoker’s Lungs looks like a table with 2 clear boxes that have lungs inside.

What to do

Look at the lungs inside the clear boxes.

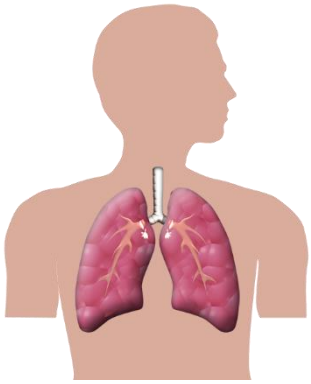
Can you see any differences?

Now squeeze the plastic bags using your hands.

This forces air inside the lungs so you can see how they fill up.

Can you work out which lungs are healthy, and which are lungs of a smoker?

What is going on?

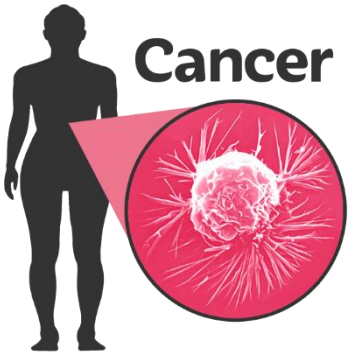


Inside our bodies we have lungs to help us breathe.

Healthy lungs are pink.

Lungs of a smoker can be black.

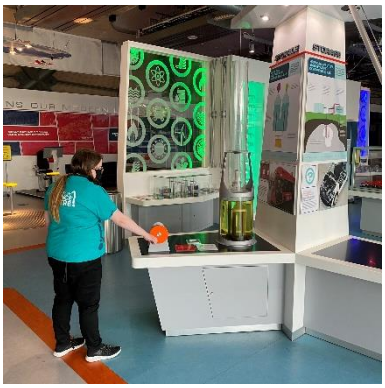
The black colour comes from tar, which is released when smoking.



Smoking can also cause cancer.

Have a think: How can someone keep their lungs healthy?

Stop 3: Hydrogen Rocket



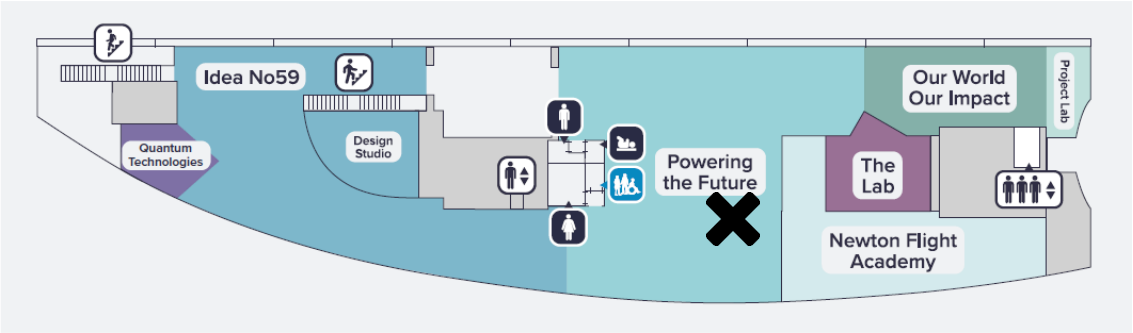
At this stop there is an activity to launch an indoor rocket.

This activity makes a loud bang.

Finding it

This stop is on Floor 2.

You can find the Hydrogen Rocket in the Powering the Future exhibition.



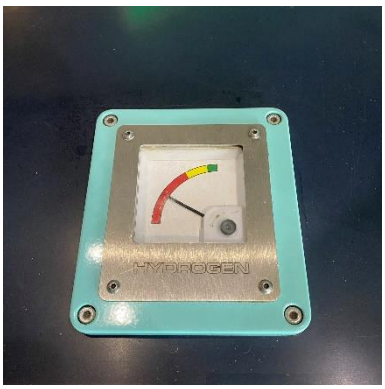
This stop is near the black cross on the map.

The Hydrogen Rocket looks like a table with a glass tank and an orange handle.

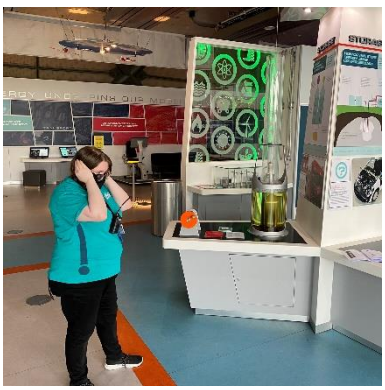
What to do

Start turning the handle.

Look for bubbles in the water.



Stop turning when the needle reaches the green area.



Move back when you hear the countdown.

What do you think will happen?

What is going on?

This activity releases bubbles from water.

These bubbles contain hydrogen.

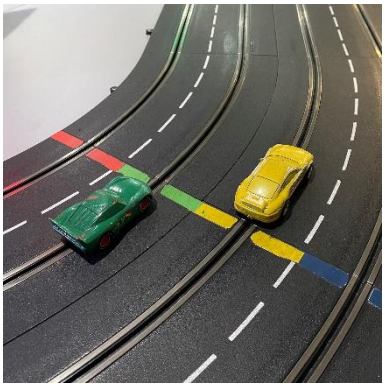
Hydrogen is a store of energy, a bit like a battery.

The stored energy can be released as sound, heat and light.

Hydrogen can be used as a fuel for some types of vehicle.

Have a think: Would you like to travel using hydrogen fuel?

Stop 4: Hand Crank Scalextric

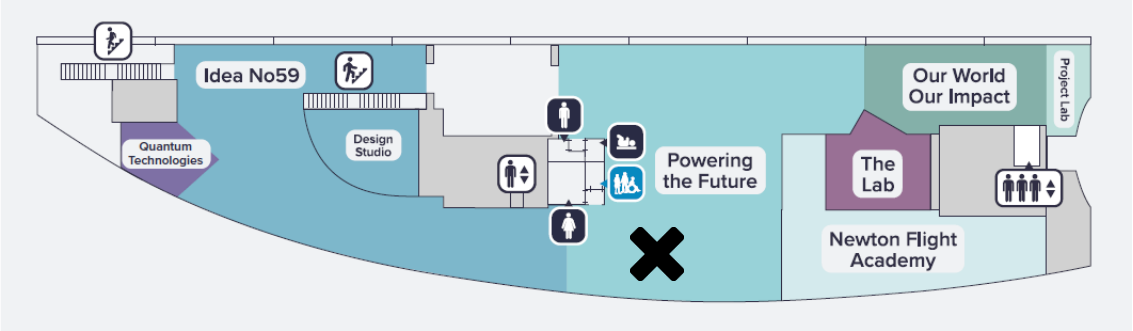


At this stop there is an activity to race toy cars powered by people's muscles.

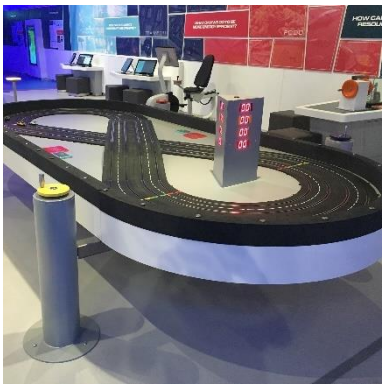
Finding it

This stop is on Floor 2.

You can find the Hand Crank Scalextric in the Powering the Future exhibition.



This stop is near the black cross on the map.

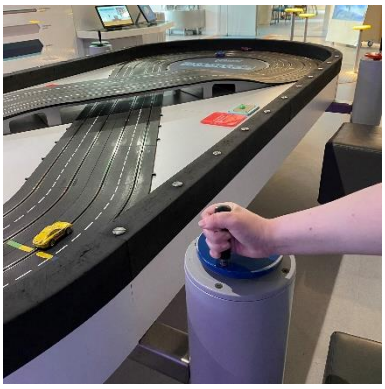


The Hand Crank Scalextric looks like a toy racetrack with 4 coloured handles.

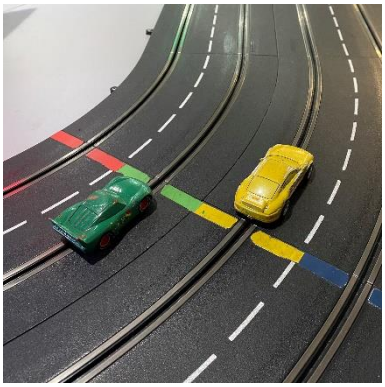
What to do

Position yourself at 1 of the 4 coloured handles.

The colour of the handle shows you which racetrack it controls.



Turn the handle to make your car move.



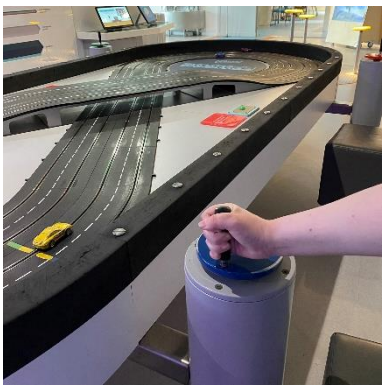
If the car does not move, lift it on to the track with the same colour.

Can you provide enough power to win the race?

What is going on?

This activity is inspired by the toy Scalextric.

Scalextric cars are powered by electricity.



In this activity, the electricity comes from the handles.

Electric cars are becoming more popular in the UK.

Electric cars do not produce pollution in the same way as cars fuelled by petrol or diesel.

Have a think: Would you like to travel in an electric car?

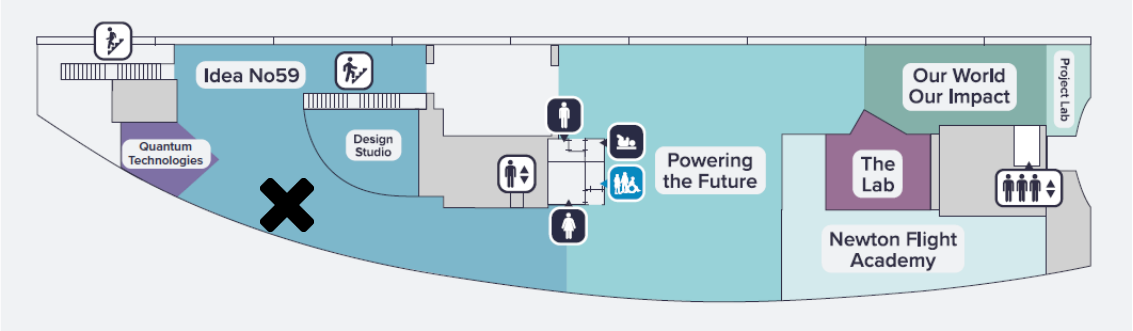
Stop 5: Collaborative Robot

At this stop there is an activity to play a game against a robot.

Finding it

This stop is on Floor 2.

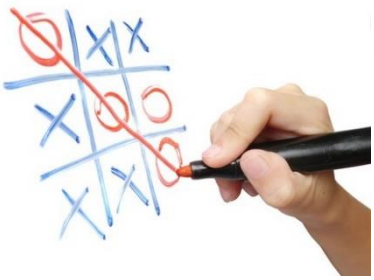
You can find the Collaborative Robot in the Idea No59 exhibition.



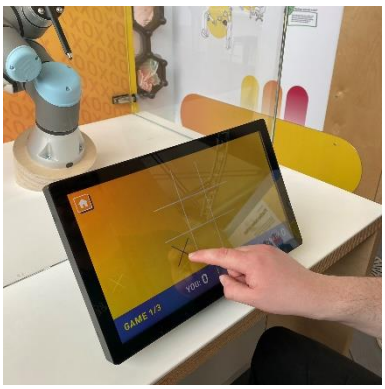
This stop is near the black cross on the map.

The Collaborative Robot looks like a wooden table with a glass case that contains a robot arm.

What to do



In this activity you will play a game of noughts and crosses against the robot.



Tap the touchscreen to reveal the instructions.

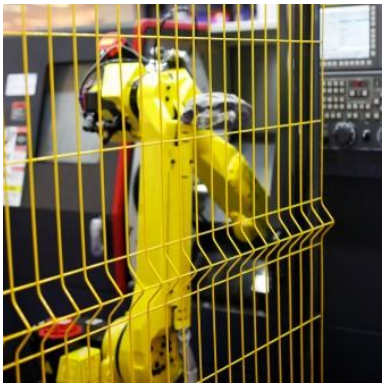
Follow the instructions on-screen.

Watch as the robot makes its moves.

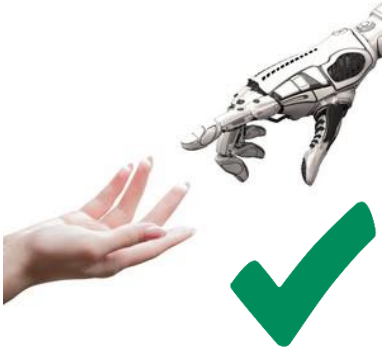
Can you beat the robot?

What is going on?

The robot in the glass case is not a normal robot.



Normal robots in factories can be dangerous.



The robot in the glass case has been designed to work safely with humans.

This type of safe robot is called a collaborative robot.

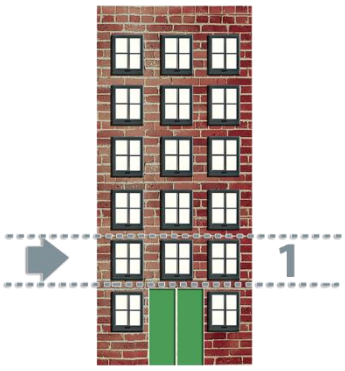
Collaborative robots are making factories safer and less wasteful.

Have a think: Would you like to work with a robot?

Stop 6: Gravity Well

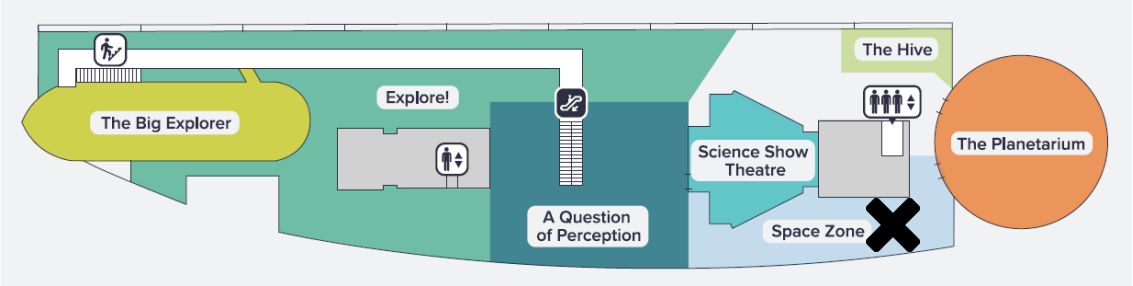
At this stop there is an activity to roll balls around in oval-shaped orbits.

Finding it



This stop is on Floor 1.

You can find the Gravity Well in the Space Zone.



This stop is near the black cross on the map.

The Gravity Well looks like round black well.

What to do

First find the tray of plastic balls.

Roll a ball along the rim of the well.

Watch how the ball moves.

What happens when you roll lots of balls at the same time?

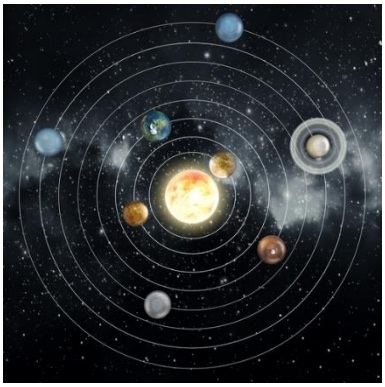
What is the name of the shape that the balls move along?

What is going on?

Balls roll around the dish in oval-shaped tracks.

These tracks are known as orbits.

This type of movement can also be seen in planets, such as the Earth.



Planets move around a star in oval-shaped orbits.

Have a think: How often does the Earth orbit the Sun?

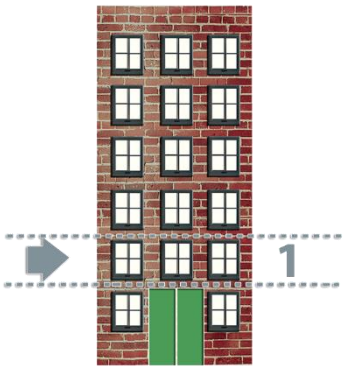
Hint: It is the same as the length of time between your birthdays.

Stop 7: Ames Room

At this stop there is an activity to make you look bigger or smaller.

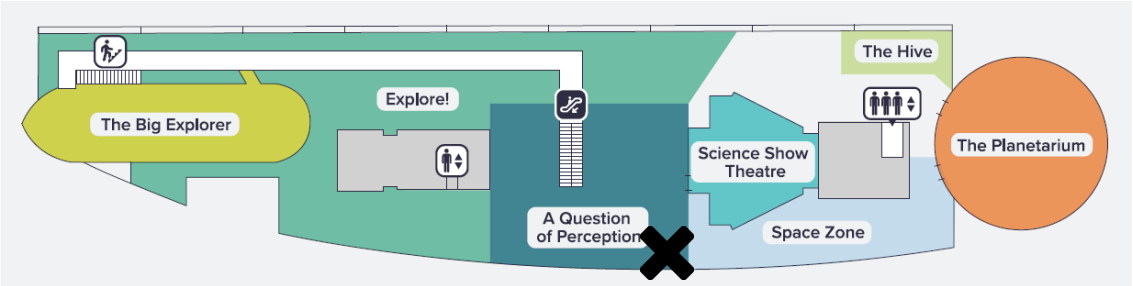
This activity works best with 2 people.

Finding it



This stop is on Floor 1.

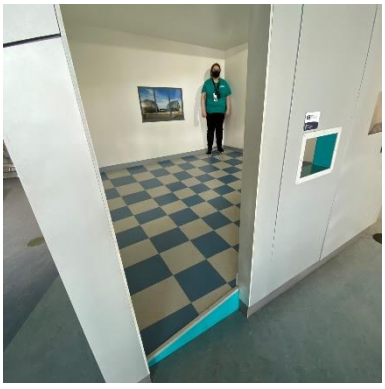
You can find the Ames Room in the A Question of Perception exhibition.



This stop is near the black cross on the map.

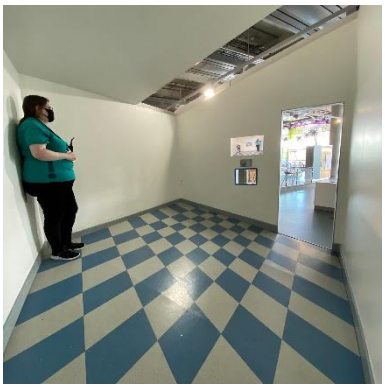
The Ames Room looks like a room with a sloped floor inside.

What to do

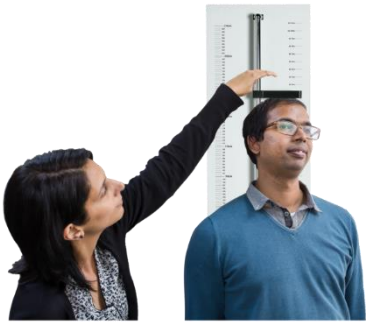


Step inside the room and move to the back corners.

Be careful because the floor is on a slope.



Look at yourselves on the screen.



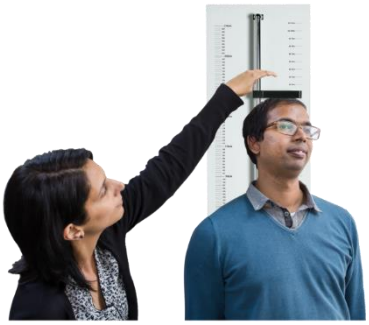
Does your height look the same as normal?

What happens when you swap positions?

What is going on?

This special room is called an Ames Room.

The unusual shape of the room tricks your brain.



This can make anyone inside the room look bigger or smaller than they are.

This type of room is sometimes used when making films.

It can make actors look like fictional characters such as Hobbits from the Lord of the Rings.

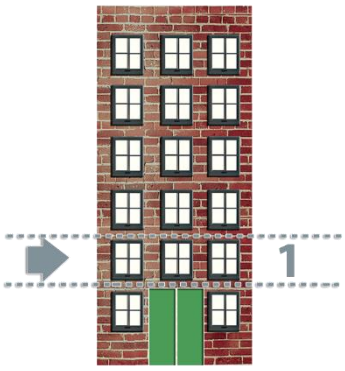
Have a think: Can you be fooled by an illusion?

Stop 8: Floating Head Illusion

At this stop there is an activity to make it look like your head is sitting on a table.

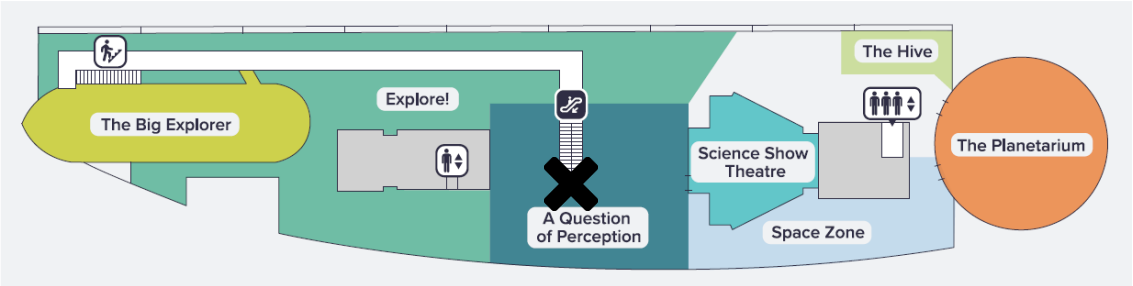
This activity works best with 2 people.

Finding it



This stop is on Floor 1.

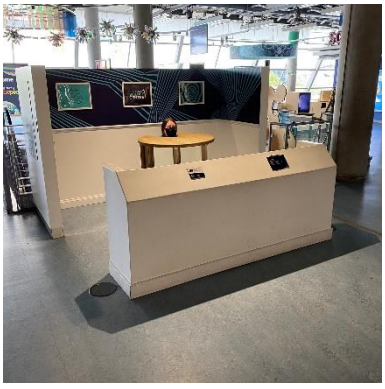
You can find the Floating Head Illusion in the A Question of Perception exhibition.



This stop is near the black cross on the map.

The Floating Head Illusion looks like round wooden table.

What to do



Your partner should stay behind the small white wall.

Move to the back of the wooden table.

Position your head in the gap.

Your partner can see your head but not your body.

What is their reaction?

What is going on?

This activity works because of a mirror.

The mirror is hidden under the table.

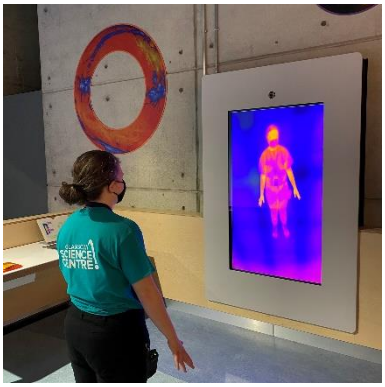
Your partner sees a reflection in the mirror.

The reflection tricks your partner's brain.

Illusions like this can help scientists understand the human brain.

Have a think: What other illusions do you know?

Stop 9: Thermal Imaging Camera

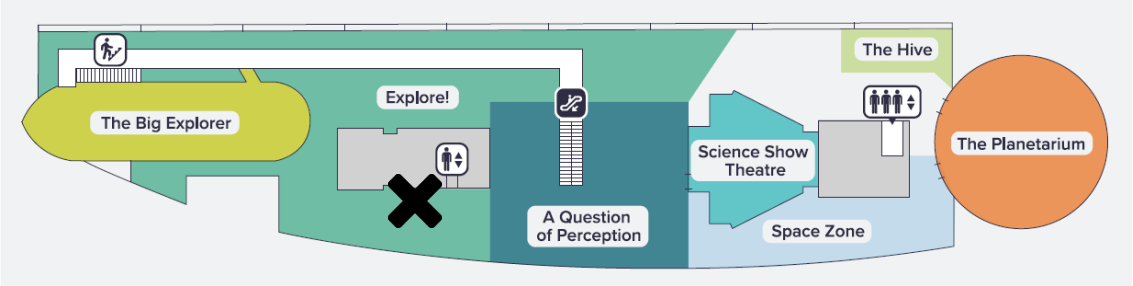


At this stop there is an activity to see the heat of your body.

Finding it

This stop is on Floor 1.

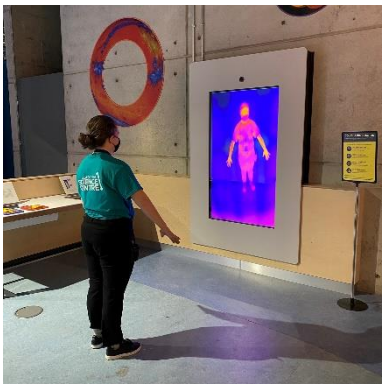
You can find the Thermal Imaging Camera in the Explore! exhibition.



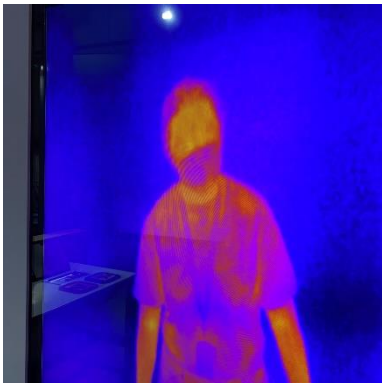
This stop is near the black cross on the map.

The Thermal Imaging Camera looks like a big TV screen on the wall with a nearby table.

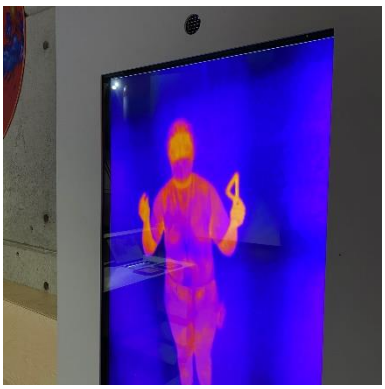
What to do



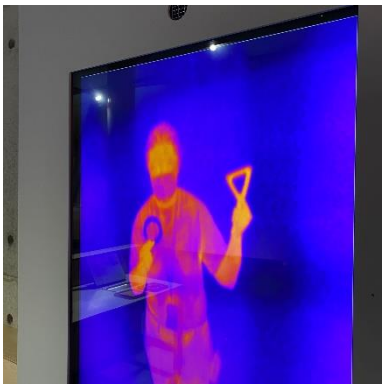
Move in front of the TV screen.



The colours show you how hot or cold something is.



Your body is warm, so it shows as red, yellow and white.

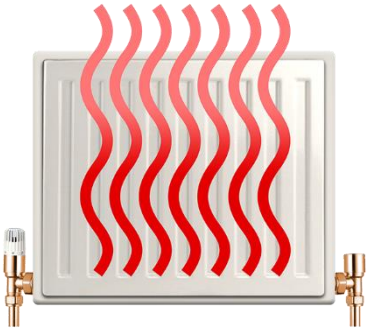


The room around you is cooler, so it shows as blue, purple and black.

Can you use the objects on the table to change your temperature?

What is going on?

The pictures on the TV screen are made by an infrared camera.



Infrared cameras can detect the heat of people and objects.

This type of camera can see a type of light that is invisible to our eyes.

Infrared cameras are useful to see where heat is escaping from a building.

Have a think: Why might a police helicopter use an infrared camera?

Hint: An infrared camera can see people even at night-time.

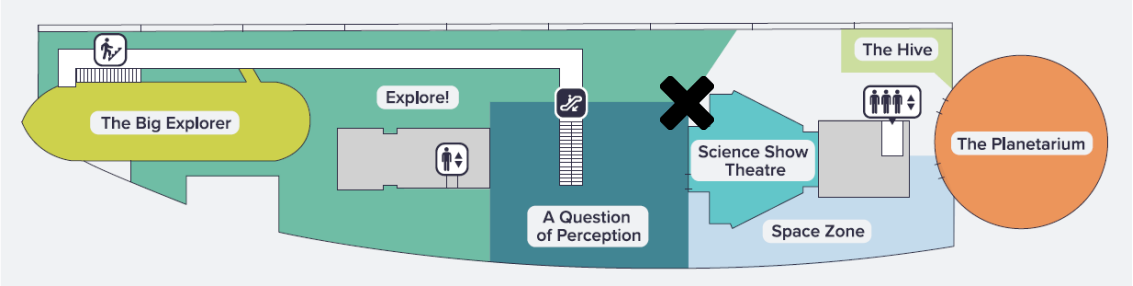
Stop 10: Bubble Wall

At this stop there is an activity to make a flat soap bubble.

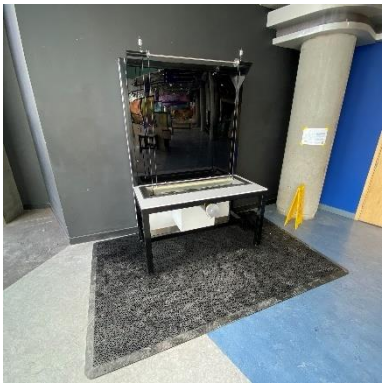
Finding it

This stop is on Floor 1.

You can find the Bubble Wall in the Explore! exhibition.



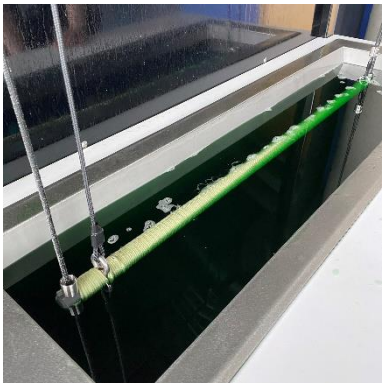
This stop is near the black cross on the map.



The Bubble Wall looks like black wall with a table in front.

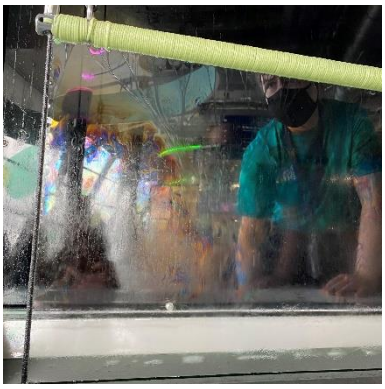
What to do

Turn the handle to make the white bar move.



First move the bar into the soapy water.

Now make the bar move up to make a bubble.



Different colours can be seen in the bubble.

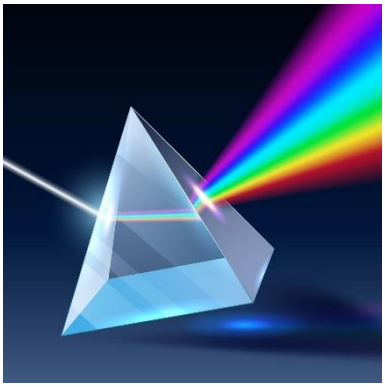
How long does the bubble last before it pops?

What is going on?

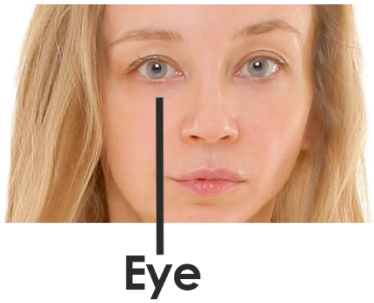
In this activity you are making a big soap bubble.

When you look at a bubble, you can see lots of colours.

Colours appear when white light hits the bubble.



The white light is transformed into the colours of the rainbow.



The coloured light then travels to your eye.

Have a think: Why is this bubble flat and not round?

Well done

Congratulations on finishing the trail.

We hope you enjoyed the activities.

Please let us know what you liked and did not like so we can make this trail even better.

You can send us your thoughts by email to:

contact.us@gsc.org.uk

Or you can chat to a member of staff.

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