# Resources for teachers and parents



06 November 2020

If you have any questions about this resource pack, please contact:

Anna Singleton (anna.singleton@sustrans.org.uk) or Mel Gould (mel.gould@sustrans.org.uk), Schools Cycling Officers, Leicester

#### Sustrans is the charity making it easier for people to walk and cycle.

We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Join us on our journey.

#### www.sustrans.org.uk

Registered Charity No. 326550 (England and Wales) SC039263 (Scotland).



### **Contents**

Before you start	2
Resources	3
Art and design	3
Bike floor art	
Lung art	
Bling your bike	6
Physical education and health	13
Bike board game	14
Changing travel habits	18
Dr Bike Junior	23
Science	24
Animal active travel	25
DIY pollution catcher	27
Pollution jars	
Healthy heart at home	29

### **Useful links**

Sustrans: http://www.sustrans.org.uk/

Choose How You Move: https://www.choosehowyoumove.co.uk/

Healthier Air for Leicester: https://schools.leicester.gov.uk/services/environment-health-

and-well-being/air-quality-education/



### Before you start

### Please read this; it contains important information.

Before starting any of the activities in this resource pack, please make sure that you are up to date with the government and local guidelines set out to protect ourselves and others from coronavirus (COVID-19). This information can be found on: <a href="https://www.gov.uk/coronavirus">https://www.gov.uk/coronavirus</a> and <a href="https://www.leicester.gov.uk/your-council/coronavirus/">https://www.leicester.gov.uk/your-council/coronavirus/</a>. Please make sure to stick to these guidelines at all times.

The aim of this resource pack is to provide a set of activities for teachers and parents alike to educate and engage children with physical activity and active travel, whilst at home or at school.

Here at Sustrans it is our mission to create healthier places and happier people. We do this through connecting people and places, creating liveable neighbourhoods, transforming the school run, and delivering a happier and healthier commute. The coronavirus outbreak has posed a challenge to us all, but it remains our top priority to support staff, volunteers, supporters, partners and the communities we work with. Our website (www.sustrans.org.uk) and social media pages (Twitter and Facebook @SustransEMids) will provide you with the most up-to-date information on future activities and available support. If you require support with your journey to work, you have a bike-related query, or have any questions about this resource pack, please do not hesitate to get in touch with one of our team. We are here to help!

### Your Sustrans Leicester Team:

**Anna Singleton**, Schools Cycling Officer anna.singleton@sustrans.org.uk

**Mel Gould**, Schools Cycling Officer mel.gould@sustrans.org.uk

**George Pollard**, Workplaces and Neighbourhood Cycling Officer george.pollard@sustrans.org.uk

Our partners:











### Resources

This section contains games, artwork ideas, lesson plans and other indoor activities for children.

### Art and design

Artwork is a great way to get creative whilst indoors. In Key Stage 1-3 art and design is part of the National Curriculum. Children can create their own works of art, invent, experiment, craft and design. Below we outline some of our ideas for arts and crafts activities. However, a great way to engage with art and art history may also be to take a virtual tour of a museum (see links below). It's like going on a field trip in your living room!

Bike floor art	4
Lung art	5
Bling your bike	6

### Virtual museum tours

British Museum: <a href="https://britishmuseum.withgoogle.com/">https://britishmuseum.withgoogle.com/</a>

Rijksmuseum, Amsterdam: https://artsandculture.google.com/partner/rijksmuseum

Musée d'Orsay, Paris: <a href="https://artsandculture.google.com/partner/musee-dorsay-paris">https://artsandculture.google.com/partner/musee-dorsay-paris</a>



### BIKE FLOOR ART



30 mins



Items from around the house



**Key stage 1-2** 



### **Activity**

Aim: Create brilliant bike designs using everyday things from around your home!

**Instructions**: Search around your home for items of various shapes and sizes. Clear a space on the floor as your 'canvas!' Using the items you have collected shape these into the design of bicycles!

**Extension**: Research iconic bicycles through history such as the 'Penny Farthing', 'Boneshaker' & the 'Velocipide'. Find out what they looked like; what they were made of; who invented them and what year they were first made. See if you can recreate these historic bikes at home using floor art!





### LUNG ART



20 mins





Paint/Ink
One straw
Sheets of paper (the bigger the better!)



Key stage 1-2

### **Activity**

**Aim**: To create art by breathing out of a straw! This activity is a useful conversation starter, to make the link between the importance of breathing and what is in our air.

**Instructions**: Take a deep breath and make a drawing to represent the human lungs, using ink or paint.

**Link:** <a href="https://www.healthyair.org.uk/documents/2013/02/healthy-air-education-pack-2012.pdf/">https://www.healthyair.org.uk/documents/2013/02/healthy-air-education-pack-2012.pdf/</a>

**Source:** Healthy Air Education Pack, Environmental Protection UK for the Healthy Air campaign, page 10 of pack





### BLING YOUR BIKE



### 45-60 mins



Your bike, helmet, scooter or backpack Items to decorate with (preferably recyclable or recycled), such as toilet roll, tape, old cereal boxes, colouring pens, plastic bottles, tin foil, old CD/DVD's.



Key stage 1-2

TOP TIP: USE REFLECTIVE Materials for extra Brightness!

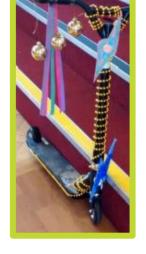
### **Activity**

**Aim**: To decorate your bike, helmet, scooter or backpack as creatively as possible, using bits and pieces of recycled/recyclable materials. Make sure that you don't obstruct the chain on the bike, and don't prevent your wheels or handlebars from moving as normal.

**Why?** It's not just tons of fun, but it also keeps you safe on the road! Being bright and colourful means you are easier to see by people on the road. Also, right now, rainbows are being used to show appreciation for the NHS, so why not make your decorations rainbow-themed!

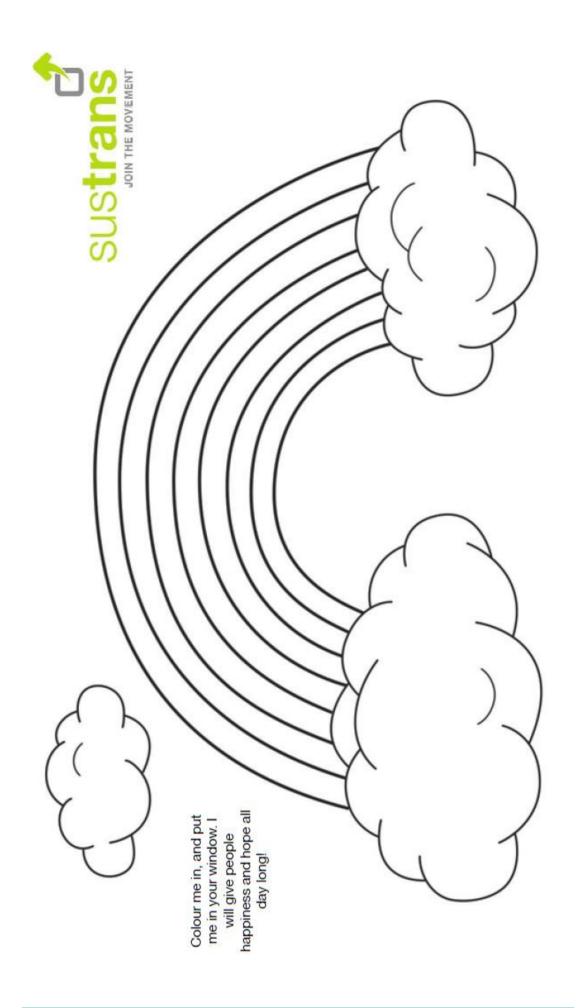














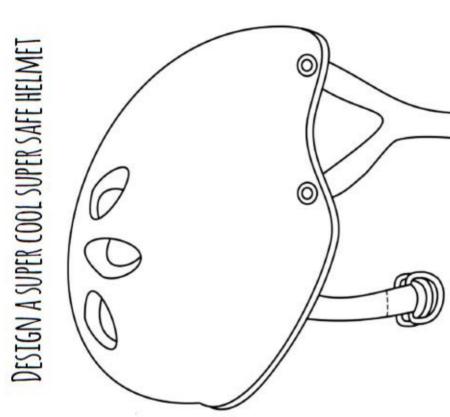












Remember to be safe on the road

you need to be seen!

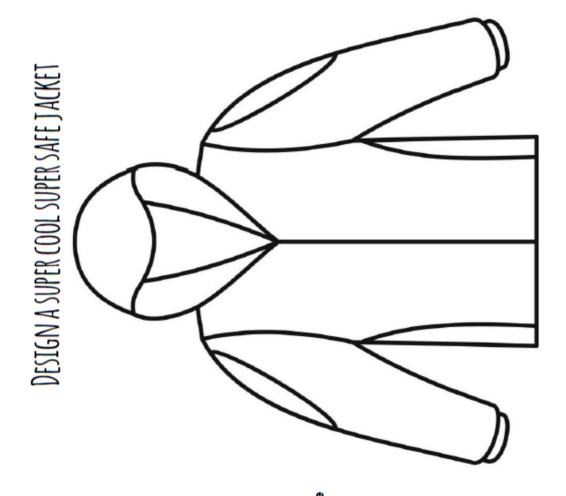
 Bright Colours You should wear

 Reflective clothing •Lights

And a helmet

sus**trans** 





Remember to be safe on the road

you need to be seen!

Bright Colours

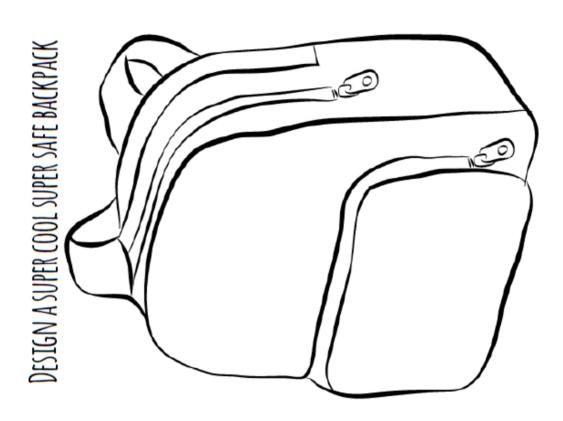
You should wear

Reflective clothing

And a helmet

•Lights





Remember to be safe on the road

you need to be seen! You should wear

snould wear

Bright Colours

Reflective clothing

•Lights

And a helmet

### Physical education and health

Engaging in some form of physical activity every day is great for your health and fitness. In fact, physical education is part of the national curriculum for Key Stage 1-4. Right now, the ways in which we can undertake physical activity is challenged, however we have come up with some fun ways to stay physically active whilst indoors and learn about all the benefits that come with staying active.

Bike board game	14
Changing travel habits	18
Dr Bike Junior	23

### DID YOU KNOW?

A 2012 STUDY OF 20,000 CHILDREN IN DENMARK FOUND THAT THOSE WHO CYCLE OR WALK TO SCHOOL DEMONSTRATE A MEASURABLE INCREASE IN CONCENTRATION THAT LAST FOR UP TO FOUR HOURS

### DID YOU KNOW?

STUDIES HAVE FOUND THAT CHILDREN WHO TRAVEL ACTIVELY TO SCHOOL HAVE BETTER SPATIAL AWARENESS AND MORE ROAD SENSE THAN CHILDREN WHO ARE DRIVEN TO SCHOOL



## BIKE BOARD GAME



### **30-40 mins**



Board (see following page)
Set of green cards (see following pages)
Set of red cards (see following pages)
Dice
Object to move across the board with



Key stage 2-3

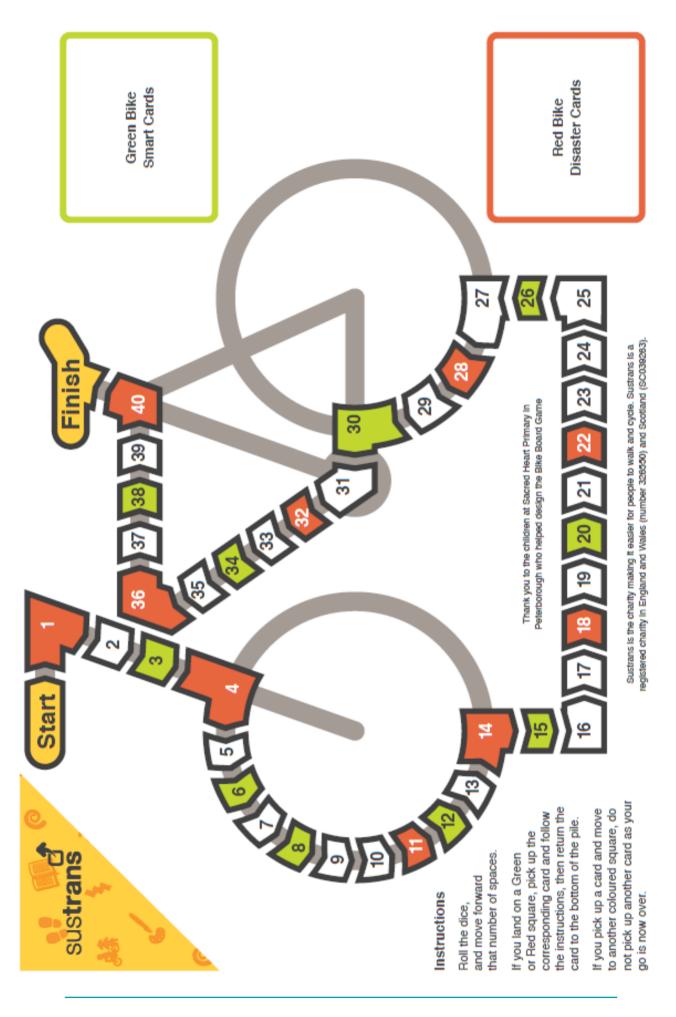
### **Activity**

Aim: Through this fun game you will learn about how to ride your bike safely.

**Instructions**: See game board.









Green Bike Smart Cards You packed a healthy lunch for the blke ride Zoom forward three spaces	Green Bike Smart Cards  You remembered your lights  Move forward two spaces	Green Bike Smart Cards  You Inflated your tyres before you left Move forward one space	Green Bike Smart Cards You found a big downhill section Whiz forward four spaces
Green Bike Smart Cards Your trlp was good for the environment Move forward two spaces	Green Bike Smart Cards Your helmet stopped you banging your head Roll again	Green Bike Smart Cards You saved money on your trip Move forward two spaces to spend it In the sweet shop	Green Bike Smart Cards  You packed plenty of water  Move forward one space
Green Bike Smart Cards You made It home In time for dinner Move forward two spaces	Green Bike Smart Cards Your hI-vIs jacket means that you were seen Move forward two spaces	Green Bike Smart Cards  Sun cream stopped you gettling burnt  Move forward one space	Green Bike Smart Cards You checked your blke before you rode It Roll again
Green Bike Smart Cards You planned a great route using a map Roll again	Green Bike Smart Cards You got home In time to play outside Roll again	Green Bike Smart Cards You found a new section of the cycling route Move forward two spaces	Green Bike Smart Cards  Cycling has made you more healthy  Roll again
Green Bike Smart Cards  You had a drink of water Move forward one space	Green Bike Smart Cards You overtook standing traffic Move one square in front of the next player	Green Bike Smart Cards  You remembered an extra layer of clothling and keep warm  Move forward two spaces	Green Bike Smart Cards  You used your bell to let others know you are nearby  Move forward one space



Ned Bike Disaster Cards  You get hungry and need to slow down  MISS a go	Red Bike Disaster Cards  You forgot your Ilghts and have to walk In the dark Go back three spaces	Red Bike Disaster Cards  Your tyres are not inflated properly, so you get a puncture  Go back two spaces	Red Bike Disaster Cards  Your shoe laces are undone and they get tangled In the chaln Go back one space
Red Bike Disaster Cards  You have forgotten your helmet Go back to the start and collect It	Red Bike Disaster Cards  Your chain breaks  Miss a go	Red Bike Disaster Cards  You forgot your  coat and get cold  Go back one space	Red Bike Disaster Cards  You get a puncture Go back two spaces
Red Bike Disaster Cards  You brakes don't work  Go back two spaces	Red Bike Disaster Cards  Your seat Is too low  Go back one space	Red Bike Disaster Cards  You forgot to do a quick bike check before you rode your bike	Red Bike Disaster Cards  Your bag Is undone and everything falls out Miss a turn to pick it up
Red Bike Disaster Cards  You get lost  Miss a go	Red Bike Disaster Cards  You have forgotten your padlock Go back one space	Red Bike Disaster Cards  You forgot to slgnal to other road users  Go back one space	Red Bike Disaster Cards  You forgot to look over your right shoulder when out cycling on the road Go back one space
Red Bike Disaster Cards  Your water bottle runs out Go back two spaces	Red Bike Disaster Cards  You get stuck In traffic MIss a go	Red Bike Disaster Cards  You get a puncture  Miss a go	Red Bike Disaster Cards  Your trouser leg gets stuck In the chaln Go back two spaces



### CHANGING TRAVEL HABITS



### 45-60 mins





Green cards for walking (see following pages)
Blue cards for cycling (see following pages)
Pens or stickers



Key stage 2-3

### **Activity**

Aim: To learn about how we can overcome challenges to active travel.

**Instructions:** Cut out the cards in the following pages. Lay all the green cards on the table. The green cards have statements written on them relating to reasons why you might choose NOT to walk to a destination such as school.

Step 1: Take some time to read them all.

<u>Step 2:</u> It's time to vote! Think about which reasons you use the most for choosing NOT to walk. You have 10 votes. This means you can use a maximum of 10 stickers OR write 10 'X' on the cards. You can use all of your votes for one card, if that is the only reason you don't walk. Or you can spread your votes out, and vote for multiple cards. It's entirely up to you. Once you've used up all of your 10 votes, go to step 3.

Step 3: Count the number of votes on each card.

Step 4: Arrange the cards from the highest number to the lowest number of votes.

<u>Step 5:</u> Discuss the three cards with the most votes. How could you overcome these challenges? What solutions can you think of? If you are struggling to think of a solution, we have written some down in the following pages. Make sure not to read these until you have completed the activity! If those don't help you find a solution, get in touch with the Sustrans Team and we will do our best to help you!

Repeat the steps for the blue cards, which have statements written on them relating to reasons why you might choose NOT to cycle.



#### **EXAMPLE SOLUTIONS:**



#### Overcoming challenges with distance and time:

Could you start your journey earlier?

Are you taking the shortest route? Is there a better route?

Can you park and stride/ride instead of walk/cycling the whole way?



#### Overcoming challenges with enjoyment and tiredness:

Could your friends or family walk/ride the journey with you? You could spend more quality time with family and friends.

Remember that the more exercise you do, the fitter you will become and the less tired you will feel. Is there a more scenic route that you can take that you would enjoy more?



#### Overcoming challenges with safety:

Could your friends or family walk/ride the journey with you?

Is there a safer route that you can take?

Are you able to change your clothing or bike/scooter to make yourself more visible on the road?

the weather is bad Reasons why not (Walk) Reasons why not (Walk) don't feel safe Reasons why not (Walk) Reasons why not (Walk)



We drive as my O walk  work in the car  afterwards  Reasons why not (Walk)  Reasons why not (Walk)  I get up too late to walk	 school school make it crossing a road(s) on
Reasons why not (Walk)  It's too far to walk	 My parents don't want to walk to school

I can't ride a bike very   well - I'm wobbly	  -  -  -  -  -  -  -	Reasons why not (Bike)	I have lots of things to carry
I don't ride a bike because of the rain - I'll get wet	  -  -  -  -  -  -  -  -	Reasons why not (Bike)	It will make me feel hot and sweaty
I don't know a safe route / journey		Reasons why not (Bike)	It's too far to ride

Reasons why not (Bike)  I'm worried my bike  will get stolen		Reasons why not (Bike)	I'm not fit enough / I don't have enough energy to cycle
Reasons why not (Bike)  I don't own a bike		Reasons why not (Bike)	Nobody else I know rides a bike



# DR BIKE JUNIOR



### 30 mins



Your bike Bike pump Allen key Bike oil Checklist (below) SAFETY TIP: THE SAFETY LINE ---SHOULD <u>not</u> be visible on the Seat or handlebar frames





Key stage 3-4





### **Activity**

**Aim**: For pupils and parents to check over their bicycles together to ensure they are safe and working well. Children should not do this activity unsupervised.

**Instructions:** Use the checklist below to investigate the various parts of your bicycle. If you find any problems you might be able to fix them yourself. For example, pumping tyres, oiling the chain and adjusting the seat. More specialist repairs should be taken to a local bike mechanic, once it's safe to do so.

Bike Part	<b>√</b>	Details
Brakes		Do your brakes stop your bike well? Look at the brake blocks, are they worn? Are the brake levers tight and level?
Wheels & Tyres		Check tyres are pumped up and feeling firm. Is the tyre tread on both wheels in good condition or worn?
Steering		Handlebars should be straight. Does the front tyre line up in the middle when you look down?
Saddle & Seatpost		Give your saddle a wiggle to ensure the seat clamp is tight and the saddle doesn't move.
Pedals & Chain		Spin your pedals, do they move smoothly? Take a look at your chain, it should be silver or grey not rusty brown! Make sure you add a little bike oil to the chain links regularly to help it work well.
Frame		Check over the frame for damage, dents and rust. It's important to keep your bike clean and dry after use to keep it in tip-top condition!
Other		



### **Science**

Science helps us understand the world around us. Scientific discovery and analysis helps us to shape a better future for everyone. It can help us predict behaviour, understand causes, and answer many questions rationally. Biology, chemistry and physics are all part of the science curriculum from Key Stage 1 to Key Stage 4. Here, we look at questions such as what it means to be healthy, what sustainability means, and what exercise does to the body!

Animal active travel	25
DIY pollution catcher	27
Pollution jars	28
Healthy heart at home	29

### Virtual museum tours

Science Museum: https://www.sciencemuseum.org.uk/virtual-tour-science-museum

**Natural History Museum, London:** 

https://artsandculture.google.com/partner/natural-history-museum

Smithsonian Museum of Natural History: <a href="https://naturalhistory.si.edu/visit/virtual-tour">https://naturalhistory.si.edu/visit/virtual-tour</a>



### ANIMAL ACTIVE TRAVEL



30-40 mins



Plenty of free floor space!



EYFS / Key stage 1



### **Activity**

**Aim**: This is an interactive lesson that teaches children about diversity within the animal kingdom, including the differences and similarities in ways of travelling between animals and humans. The uniting factor in this lesson is active travel. The children will learn what active travel means and what the benefits are. The takehome message for the children should be that active travel is something fun and easy to do, and is a better option to choose relative to non-active travel.

### Introduction (5 mins):

What is active travel? Being active means exercising and moving our body. Travel means going from one place to another. Active travel means that by using our body we can go from one place to another.

So how do WE do active travel?

Walking/running – how do we move from A to B? By moving our legs and feet.

Riding a scooter (scooting)/bike (cycling) – how do we move from A to B? By moving our legs and steering with our hands. The scooter/bike doesn't go anywhere on its own!

#### How do animals do active travel (15 mins):

So are we the only ones on the planet that do active travel? NO. Who else does active travel?

Monkey – swings from branch to branch. *Together act out swinging.* That's how it travels through the trees.

Snake – slithers. *Together act out slithering*. That's how it travels through the grass.

Bird – flaps its wings to fly. *Together act out flapping wings.* That's how it travels through the sky.

Rabbit – hops. *Together act out hopping.* That's how it travels on the grass.



Spider – crawls. Together act out crawling. That's how it travels on the wall.

Fish – swims. *Together act out swimming.* That's how it travels through the water.

Frog – jumps. *Together act out jumping.* That's how it crosses the pond.

#### How we do active travel (10 mins):

So now we know how all these animals do active travel. Can you show me how we do active travel?

Can you tell me about one way that we do active travel (repeat question until all answers have been covered)?

Walking! Can everyone show me their best walk. Together act out walking.

Skipping! Can everyone show me their best skip. *Together act out skipping.* 

Scooting/cycling! Can everyone show me their best impression of how we cycle/scoot. *Together act out scooting/cycling.* 

Well done! You are already great at active travel!

### Why do active travel? (5 mins)

So why does everyone do active travel?

- <u>It's good for our heart.</u> When you walk, cycle or scoot have you noticed that sometimes you start breathing quicker or get out of breath? That means you are doing exercise, which keeps your body healthy.
- <u>It's good for our head.</u> When you walk, scoot or cycle it helps us to feel good. Who here thinks riding a bike is a lot of fun? Me too! It keeps us happy!
- <u>It's good for making friends.</u> Monkey swing together. Fish swim together. Rabbits hop together. So why can't we do active travel together? Walking, scooting or cycling together is a really good way to make new friends and have lots of fun!
- <u>It's good for the environment.</u> Have you ever noticed how cars can be quite noisy and smelly? That's the noise and smell of a car using petrol. Without petrol, the car can't work. But when petrol is used by the car it goes back into the air, making the air dirty and smelly. Dirty air isn't good for us, for animals or for plants. So if instead of going by car, we travel by bike, scooter or we walk we are keeping the environment happy and healthy!

### Conclusion (5 mins):

You are all already really good at active travel as you've shown me. And now we know that it's something really important and easy that we can do for our planet. So who here thinks that after today they are going to do some more active travel?











### DIY POLLUTION CATCHER



### 30 mins





Tetra Pak carton for each team / individual child
Double-sided tape
Permanent marker
Directional compass – or estimate using the rise and fall
of the sun
Magnifying glass (optional)
Coloured pencils, felt tips, or crayons



**Key stage 1-2** 

### **Activity**

**Aim:** What's up there besides air? Make a DIY pollution catcher. An experiment to make a Tetra Pak carton air pollution catcher. An opportunity to take a closer look at what is floating around in the air. You could make one to set up now (while the roads are quieter) and one for another time (when the roads are busier), to see if there is a difference.

**Link:** https://www.airnow.gov/sites/default/files/2018-04/Whats-Up-There-Besides-Air.pdf

#### **Further resources:**

https://www.airnow.gov/education/teachers-activities-and-materials/

**Sources:** United States Environmental Protection Agency, Air Now, Air Quality Flag Programme



# POLLUTION JARS



### 30 mins





**Eight jars** 

Water

**Matches** 

Plastic wrappers or small pieces of plastic waste Soil

**Popcorn (represents dirty snow)** 

Unpolluted snow (to make snow dough: baking powder and water)

Moss for the earth or grass (this could be a photo)

Polluted land: add plastic to soil, moss, small plants, or

Polluted land: add plastic to soil, moss, small plants, or grass



Key stage 1-2

### **Activity**

**Aim:** Introduction to different types of pollution: air, sea, land. A useful introduction to pollution and thinking about the differences between polluted and unpolluted environments. Once complete, the jars stand as a useful reminder and can be used as props to assist with other pollution-based environmental activities and assemblies.

Links: https://www.plt.org/educatortips/science-projects-pollution/ (when on website, scroll down to number five). https://www.naturalbeachliving.com/teachingkids-about-pollution

**Sources:** Project Learning Tree and Natural beach living blog





### HEALTHY HEART AT HOME



### 30-40 mins



Pen, paper
Calculator
Stopwatch/timer
Plenty of free floor space!





### Key stage 2

### **Activity**

**Aim**: In this session you will learn some interesting facts about the heart with some fun exercises which include maths and some jumping around!

### Why is the heart so unique?

The heart is a large muscular organ with the very important job of circulating blood through the blood vessels to the body. Located in the centre of the chest, the heart is the hardest working muscle in the human body — always working, even while we are sleeping. The heart and blood vessels together make up the body's cardiovascular system and are vital to supplying the body with the necessary oxygen and nutrients

needed to survive. When you breathe, your lungs take in oxygen. The heart pumps blood to the lungs to pick up oxygen, and then it pumps blood through the body to deliver that oxygen.





Every day, your heart creates enough energy to drive a truck for 20 miles.



On average, it takes about 45 seconds for blood to circulate from the heart, all around the body.



The human heart is not this...



it actually looks like .....





### Can you guess how many times your heartbeats in a minute?

Write your answer down. The answer is on the bottom of the page\*.

### Now let's calculate the total number of heartbeats in an average lifetime!

This is a good time to practice your long multiplication, so have your pen and paper ready!

We are going to say your heart beats an average of **100 times a minute**. We will say the average lifetime is **80 years**.

Question: What is the total number of heartbeats in an average lifetime?

Try to do the sums yourself, or ask a family member to help you.

Hint: start by calculating the number of heartbeats per hour.

First sum:  $100 \times 60 = \text{One Hour!}$ That number  $\times 24 = \text{One Day!}$ That number  $\times 365 = \text{One Year!}$ That number  $\times 80 = \text{One Lifetime!}$ 

Once you have a number have a go and practice how to say the whole number in one go.

Is it anything like this: 4,204,800,000!?

That's four billion, two hundred and four million, eight hundred thousand!

Have a think about why the numbers are slightly different, is there any time during the day when your heart rate would be less?

#### Let's find our own heartbeat!

Make sure jumpers are pushed back and are not covering the wrists.

Step 1: Hold out two fingers on your right hand

<u>Step 2:</u> Hold out the other hand, bend your elbow and bend your wrist away from your body

<u>Step 3:</u> Place your two fingers on your bent wrist in line with your thumb and press firmly

<u>Step 4:</u> You should now feel the faint pump of blood running through your veins



You may find this hard at first, but that's ok! Repeat the action several times until you can feel it.

Now let's find out what your 'resting' heartrate is, this will help you practice being able to find our heart beat easily. Todo this, sit on a chair for a minute, no fidgeting! Use this time to find your heartbeat. After a minute use the stopwatch to count your



heart beat for ten seconds. Take that number and multiply by six to get your beats per minute! You can ask a family member to help you, they could do it too! Once you know what your 'resting' heartrate is, let's find out how much it changes compared to when you are active. For each way of travel, do the below activity as described for thirty seconds. Find your heartbeat and count it for ten seconds. Then multiply by six! Write your results down. Make sure you have plenty of space to do the activities in.



Driving: remain seated and pretend to drive- slowly!

Walking: Stand up and walk on the spot





Scooting: On one foot balance scoot with the other leg, fast!



Cycling: From a crouching position jump up into the air and back down over and over.

