Disclaimer/s

We hope you find the information on our website and resources useful.

Medical Advice

This resource is provided for informational and educational purposes only. It is intended to offer general information and should never be taken as medical advice. As medical information is situation-specific and can change, we do not warrant that the information provided is correct. You and your students should not rely on the material included within this resource and we do not accept any responsibility if you or your students do. It is up to you to contact a suitably qualified health professional if you are concerned about your health and it is up to you to advise your students to contact a suitably qualified health professional if they are concerned about their health.

Sensitive Topic

This resource contains potentially sensitive and/or upsetting topics that may emotionally impact on students you use it with due to their experiences in their past. It is your responsibility to consider whether it is appropriate to use this resource with your students. If you do use this resource, it is your responsibility to ensure that appropriate support is available for anyone affected.

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Animations

This resource has been designed with animations to make it as fun and engaging as possible. To view the content in the correct formatting, please view the PowerPoint in 'slide show mode'. This takes you from desktop to presentation mode. If you view the slides out of 'slide show mode', you may find that some of the text and images overlap each other and/or are difficult to read.

To enter slide show mode, go to the **slide show menu tab** and select either **from beginning or from current slide**.

Question Marks

You will spot question marks at certain points in this Lesson Presentation.

Clicking the question marks will bring up key questions.



The assessment questions that appear will enable you to check your understanding against the lesson aim and success criteria.

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Science

Animals Including Humans

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Aim

• To be able to recognise the impact of drugs and alcohol on the way bodies function.

Success Criteria

- I can explain how drugs and alcohol can affect the body.
- I can describe the impact of drugs and alcohol on the circulatory system.
- I can give my opinion about whether or not the government guidance on drugs and alcohol is suitable.

Remember It



Last lesson, we discussed diet and exercise. We learnt that different people have different calorie requirements. This depends on a number of factors.

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Why would the 12-year-old girl and the 70-year-old man have different calorie requirements?

What Are Drugs?



What are drugs?

Can you give any examples?

Are all drugs bad?

A drug is any substance that has an effect on your body when it enters your system. Drugs contain chemicals which can either be human-made or from natural sources.

What Are Drugs?



Do you know any drugs that would be considered legal?

A **side effect** is any effect that is not the main intended effect of the drug. This can be either positive or negative.

Legal drugs include medicines like cough syrup and substances like caffeine, which is found in tea, coffee and even chocolate!

If used properly, these substances are not considered harmful and don't have serious negative **side effects**. However, even drugs you can buy in shops can be dangerous if you take too much.



Legal Drugs





What kind of drugs might you get on prescription?

This is due to several factors:

- Preser perdicines glot as an plessing tablet free on tain substances which could become addictive.
- Prescription drugs may not be suitable for
- Sontaipedpugsshhuld ponthenaken at the papertime washing could have serious side effects so a doctor needs to check a
- Medicines mayar. This is why your should have if the mater and that the preseribdes for anyone else.

What Are Drugs? Illegal Drugs



Illegal drugs are against the law to make, sell, have in your possession or use.

Can you name any illegal drugs?

Illegal drugs include cannabis, heroin, stimulants such as cocaine and ecstasy, psychedelic drugs such as LSD and magic mushrooms and psychoactive drugs such as nitrous oxide and 'legal highs' (which are not legal). It is also illegal to sell volatile substances such as glues, gases, solvents or aerosols to someone who is likely to use them as a drug.

What Are Drugs?



Some of the main reasons why these drugs are illegal:

- They are linked to many serious physical and mental health problems, including cancer, heart attacks, strokes, long-term anxiety, paranoia and making risky choices that can also lead to physical harm.
- They can be highly addictive and people become dependent on them.
- There are no controls on how they are made so they may contain substances that are even more harmful.

What Are Drugs? Alcohol





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Can you explain how drugs and alcohol affect us?



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The Circulatory System



What is the circulatory system? Use your **Knowledge Organiser** to remind yourself what the circulatory system is.

Animals Including Humans Key Vocabulary drug A substance containing natural or man-made chemicals that has an effect on your body when it enters your system. alcohol A drug produced from grains, fruits or vegetables when they are put through a process called fermentation Substances that animals need to stay alive nutrients and healthu Platelets help you Plasma stop bleeding when is liquid. you get hurt. The other parts Red blood cells White blood cells uour blood carru oxygen fight infection 2 are solid. through your body. when you're sick. Drugs, alcohol and smoking A healthy diet involves eating have negative effects on the right types of nutrients in the body. the right amounts.

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Animals Including H Key Vocabulary	umuns	Year 6			
circulatory system	A system which includes the heart, veins, arteries and blood transporting substances around the body.	four chambers. Notice from body how the blood that has come from the body is lungs			
heart	An organ which constantly pumps blood around the circulatory system.	deoxygenated, and the blood that has come from the lungs is oxygenated			
blood vessels	The tube-like structures that carry blood through the tissues and organs. Veins, arteries and capillaries are the three types of blood vessels.	again. The blood isn't from body actually red and blue: we just show it like that on a diagram. decoxygenated blood			
oxygenated blood	Oxygenated blood has more oxygen. It is pumped from the heart to the rest of the body.	I I Capillaries are the smallest blood vessels in the boau			
deoxygenated blood	Deoxygenated blood is blood where most of the oxygen has already been transferred to the rest of the body.	takes place. Arteries carry arteries veins veins carry			
The heart pumps blood the lungs to get oxyger It then pumps this oxygenated blood around the body.		blood away from the heart.			
	A CON	If you linked up all of the body's blood vessels, including arteries, capillaries, and veins, they would measure over 60,000 miles.			

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The Circulatory System





The circulatory system is a system which includes the <u>heart</u>, <u>blood vessels</u> and <u>blood</u> transporting substances round the body.



The Circulatory System

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What do you think would be the difference between a healthy and unhealthy circulatory system?

Drugs and The Circulatory System Smoking Cigarettes



Cigarettes contain a drug called nicotine which is very addictive. There are lots of harmful chemicals in a cigarette.

These chemicals make our body form something called plaque inside our blood vessels.

Coronary heart disease can occur when blood vessels that carry blood to the heart muscle are narrowed by plaque or blocked by clots. Chemicals in cigarettes can actually cause the blood to thicken. This thickened blood and narrowing of vessels can form clots inside veins and arteries and an increase in blood pressure. Smokers are also at risk from an increased heart rate and possible irregular heartbeat.

Drugs and The Circulatory System Smoking E-cigarettes



We know what drugs are, but how can they affect our health?

In theory, e-cigarettes are less harmful than normal cigarettes as they don't contain the same harmful chemicals. However, people who smoke e-cigarettes (or 'vape') are still inhaling nicotine so they would still suffer the health problems associated with this. Also the effects of smoking nicotine in this way are not yet known, so it may not be less damaging to the body after all.



Drugs and The Circulatory System Alcohol



We know what drugs are, but how can they affect our health?

Alcohol can certainly affect our body. You might know it can harm the liver, but did you know it can even harm the heart? At the time of drinking, alcohol causes a temporary increase in heart rate and blood pressure. Over time, drinking heavily can lead to a long-term increased heart rate, higher blood pressure, weakened heart muscle and irregular heartbeat.

Can you describe the impact of drugs and alcohol on the circulatory system?



RED WINE



Complete the **Impact of Smoking and Alcohol on the Body Activity Sheet** - showing your understanding of the effects of the different drugs and which areas of the body they impact.



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Animals Including Humans: Drugs and Alcohol

Aim		de studio e di se di secondo se	Lesson Duration	b	
	e impact of diet, exercise, drugs and lifestyle on the way t	All timings are approximate.	15		
lo be able to	recognise the impact of drugs and alcohol on the way bo	dies function.			
Success Crit I can explain	eria how drugs and alcohol can affect the body.				
I can describ	e the impact of drugs and alcohol on the circulatory syste	em.			
l can give my	opinion about whether or not the government guidance of	on drugs and alcohol is suitable.			
Standard Sc Mini Whitebo	h ool Equipment ards	Preparation Differentiated Impact of Smoki Activity Sheets – per child	ng and Alcohol on the Body		
		Knowledge Organiser – per ch	ld		
Key Vocabul Heart, arterie	ary s, veins, capillaries, blood vessels, blood, alcohol, smokii	ng, drugs, plaque, circulatory syst	em.		
Prior Learnin	ng: In previous lessons, children will have learnt about ho	w the circulatory system function	5.		
Learning Sequ	lence				
Remember It: Follow prompts on the Lesson Presentation and ask children to recall why the 12-year-old girl and the 70-year-old man would have different calorie requirements.					
What Are Drugs? As a class, discuss the questions on the Lesson Presentation to find out children's prior knowledge. Then, show children the range of slides with information about the different types of drugs. Discuss prescription drugs, legal drugs, illegal drugs and alcohol and see what the children know about each of these terms and the effects of the different drugs. Can children explain how drugs and alcohol affect us?					
The Circulatory System: Share the information on the Lesson Presentation and encourage children to use their Knowledge Organiser to confidently talk with their partner about what they already know about the circulatory system.					
Drugs and the Circulatory System: Follow prompts on the Lesson Presentation discussing the effects of smoking and alcohol on the circulatory system. Ask children to compare what the healthy and unhealthy circulatory systems look like. Can children describe the impact of drugs and alcohol on the circulatory system?					
Impact of Smoking and Alcohol on the Body: Children to complete the differentiated Impact of Smoking and Alcohol on the Body Activity Sheets. Children will sort or create information about the effects on the body of smoking and the effects of drinking too much alcohol. Can children explain how drugs and alcohol can affect our bodies?					
	★ Impact of Smoking and Alcohol on the Body Activity Sheets. Statements provided for children to sort	t of Smoking cohol on the Activity Sheets. Doank provided to ete statements children will	ildren complete the pact of Smoking d Alcohol on the dy Activity Sheets.		
	Drug and Alcohol Laws: Share some of the main drug an these with the children and whether they think the laws opinion about whether or not the government guidance	go far enough and are justified. C	an children give their)	

Exploreit

Researchit: Children can research different laws on smoking in different places around the world.

Matchit: Children use these Harmful Substances and Their Effects Matching Cards to match the possible effects to different drugs and alcohol.

Reasonit

Children discuss **Reasoning Card 6: Drugs and Alcohol**. Children look at the map showing the legal drinking age around the world and apply their knowledge of drugs and alcohol to reason about the legal drinking age in the UK.

Assessment

Scientific Knowledge	
Working Towards the Expected Level	Children:
With scaffolding and/or support, children can discuss the impact of drugs and lifestyle on the way their bodies function.	
Working At the Expected Level	Children:
Children can discuss the impact of drugs and lifestyle on the way their bodies function.	
Working At Greater Depth	Children:
Children can confidently discuss the impact of drugs and lifestyle on the way their bodies function.	

Aim: To be able to recognise the impact of drugs and alcohol on the way bodies function.			Date:						
				Delive	ered By:		Suppo	ort:	
Success Criteria	Ме	Friend	Teacher	т	PPA	S	I	AL	GP
I can explain how drugs and alcohol can affect the body.				Notes/Evidence					
I can describe the impact of drugs and alcohol on the circulatory system.				-					
I can give my opinion about whether or not the government guidance on drugs and alcohol is suitable.				-					
Next Steps									
•									
•									

Т	Teacher	I	Independent
PPA	Planning, Preparation and Assessment	AL	Adult Led
S	Supply	GP	Guided Practice

Aim: To be able to recognise the impact of drugs and alcohol on the way bodies function.				Date:					
					Delivered By: Support:				
Success Criteria	Me	Friend	Teacher	Т	PPA	S	1	AL	GP
I can explain how drugs and alcohol can the body.				Notes	Notes/Evidence				
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•									
•									

Т	Teacher	I	Independent
PPA	Planning, Preparation and Assessment	AL	Adult Led
S	Supply	GP	Guided Practice

To be able to recognise the imp	pact of drugs and alcoh	ol on the way bodies function.
Drinking Too Much Alcohol	Body Part	Smoking Cigarettes
raises blood pressure		
can weaken heart muscle		

Cut out the following statements and stick them in the correct column to show if they refer to the effects of drinking too much alcohol or the effects of smoking. The first two have been done for you.

⊶	,
raises blood pressure	can cause an irregular heartbeat
raises heart rate	can cause blood to thicken
can cause blood clots	can narrow arteries
can weaken heart muscle	can cause plaque to form inside blood vessels and narrow them
can cause an irregular heartbeat	raises blood pressure
can cause plaque to form inside blood vessels and narrow them	raises heart rate

pact of drugs and alcoh	ol on the way bodies function.
Body Part	Smoking Cigarettes

- 1. Use the word bank to complete the statements below to show the effects on the body of drinking too much and/or smoking.
- 2. Then cut out the statements and stick them in the correct column to show if they refer to the effects of drinking too much alcohol or the effects of smoking.

raises blood	can cause an irregular heartbeat	Word Bank narrow
raises rate	can cause to thicken	clot
can make your blood more likely to	can narrow	heart pressure
can weaken heart	can cause plaque to form inside blood vessels and them	heart blood
can cause an irregular heartbeat	raises blood	pressure muscle
can cause to form inside blood vessels and narrow them	raises rate	plaque arteries

To be able to recognise the impact of drugs and alcohol on the way bodies function.

- 1. Use the word bank to help you complete the table below showing the effects on the circulatory system of drinking too much alcohol and/or smoking.
- 2. Can you add any effects on other parts of the body from drinking too much alcohol or smoking? A couple of examples are already provided.

Part of Body	Effect from Drinking Too Much Alcohol	Effect from Smoking
heart	raises/increases heart rate	
blood vessels		can cause plaque to form in
		blood vessels
blood		
blood pressure		
other parts of		
the body		

	Word Bank	
narrow/widen	weaken/strengthen	plaque
thin/thicken	decrease/increase	arteries
regular/irregular	lower/raise	clot

3. Using what you have found out about the effects of drinking too much alcohol and the effects of smoking, which do you think is more of a health risk? Give reasons for your choice.



Drinking Too Much Alcohol	Body Part	Smoking Cigarettes
raises blood <u>pressure</u>		raises blood <u>pressure</u>
raises <u>heart</u> rate		raises <u>heart</u> rate
can narrow <u>arteries</u>		can cause an irregular heartbeat
can weaken heart <u>muscle</u>		can cause <u>blood</u> to thicken
can cause an irregular heartbeat		can make your blood more likely to <u>clot</u>
can cause <u>plaque</u> to form inside blood vessels and <u>narrow</u> them		can cause <u>plaque</u> to form inside blood vessels and <u>narrow</u> them

		
Part of body	Effect from drinking too much alcohol	Effect from smoking
heart	increases/raises heart rate	increases/raises heart rate
	can cause an irregular heartbeat can weaken heart muscle	can cause an irregular heartbeat
blood vessels	can cause plaque to form in blood vessels can narrow arteries	can cause plaque to form in blood vessels can narrow arteries
blood		can cause blood to thicken can make blood more likely to clot
blood pressure	increases/raises blood pressure	increases/raises blood pressure
other parts of the body	Children may refer to some of these examples. loss of control over speech and movement memory loss loss of impulse control may cause sickness and feeling unwell	Children may refer to this example or may have some examples of their own. breathing problems

	Word Bank	
narrow/ <u>widen</u>	weaken/ strengthen	plaque
thin /thicken	decrease /increase	arteries
regular /irregular	<u>lower</u> /raise	clot

Using what you have found out about the effects of drinking too much alcohol and the effects of smoking, which do you think is more of a health risk? Please give reasons for your choice.

This requires a personal response. Children should give examples of the effects to provide reasoning for their choice.



Here is a map that shows the legal age for drinking alcohol in different places around the world.

Should there be laws about the legal drinking age in the UK and why?

Things to consider:

- Why do you think countries set an age limit on when you can buy and drink alcohol?
- What is the most common legal drinking age?
- What do the countries coloured in the darkest colour represent?

What can happen if a person drinks a lot of alcohol over a long period of time?



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Reasoning Card 6

Here is a map that shows the legal age for drinking alcohol in different places around the world.

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Things to consider:

- Why do you think countries set an age limit on when you can buy and drink alcohol?
- What is the most common legal drinking age?
- What do the countries coloured in the darkest colour represent?

What can happen if a person drinks a lot of alcohol over a long period of time?

Example answer:

The legal drinking age should be set by law, and it should be at a suitable age, like 18 years old or above because alcohol can cause short and long-term health problems.

Different countries have laws about alcohol that are even stricter than the UK. Looking at the map, the most common legal drinking age around the world is 18 years old. The countries in the darkest colour represent countries where drinking alcohol is illegal.

Countries put laws in place because drinking a lot over a long time can be very harmful to a person's body. It can affect the liver, but it can also affect the circulatory system by causing plaque to build up in the arteries. This can increase the risk of coronary heart disease and high blood pressure.

Animals Including Humans | Drugs and Alcohol

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