



YEAR 8

Health and Wellbeing (The impact of drugs)



Name: _____

Tutor Group: _____

School is not just about boosting your knowledge and getting good grades, it is also a chance for you to **learn new skills, develop as an individual** and get a **good understanding of the world around you.**

In your Personal Development lessons you will learn lots of **new skills and knowledge** which will help you in school, and get **involved in lots of different issues** which **will help you in life.**





Lesson 2—What are the effects of vaping / e-cigarettes?



What do you know already about e-cigarettes?

1. _____
2. _____
3. _____
4. _____

What are the effects of vaping / e-cigarettes?

Key:

Positive consequences of vaping / e-cigarettes	
Negative consequences of vaping / e-cigarettes	

How do vaping devices work?

Most e-cigarettes consist of four different components, including:

- a cartridge or reservoir or pod, which holds a liquid solution (e-liquid or e-juice) containing varying amounts of nicotine, flavourings, and other chemicals
- a heating element (atomizer)
- a power source (usually a battery)
- a mouthpiece that the person uses to inhale

In many e-cigarettes, puffing activates the battery-powered heating device, which vaporizes the liquid in the cartridge. The person then inhales the resulting aerosol or vapour (called vaping).

Vaping Among Teens

Vaping devices are popular among teens and are now the most commonly used form of nicotine among youth. Some research shows that many teens do not even realize that vaping cartridges contain nicotine, and assume the pods contain only flavouring. The easy availability of these devices, alluring advertisements, various e-liquid flavours, and the belief that they're safer than cigarettes have helped make them appealing to this age group. In addition, they are easy to hide from teachers and parents because they do not leave behind the stench of tobacco cigarettes, and are often disguised as flash drives. Further, a study of high school students found that one in four teens reported using e-cigarettes for dripping, a practice in which people produce and inhale vapours by placing e-liquid drops directly onto heated atomizer coils. Teens reported the following reasons for dripping: to create thicker vapour (63.5 per cent), to improve flavours (38.7 per cent), and to produce a stronger throat hit—a pleasurable feeling that the vapour creates when it causes the throat to contract (27.7 per cent). More research is needed on the risks of this practice.

In addition to the unknown health effects, early evidence suggests that vaping might serve as an introductory product for preteens and teens who then go on to use other nicotine products, including cigarettes, which are known to cause disease and premature death. A study showed that students who had used e-cigarettes by the time they were in school were more likely than others to start smoking cigarettes and other smokable tobacco products within the next year. Another study supports these findings, showing that high school students who used e-cigarettes in the last

month were about 7 times more likely to report that they smoked cigarettes when asked approximately 6 months later, as compared to students who said they didn't use e-cigarettes. Like the previous study, these results suggest that teens using e-cigarettes are at a greater risk for smoking cigarettes in the future. Another study has shown an association between e-cigarette smoking and progression to smoking actual cigarettes. This study suggests that vaping nicotine might actually encourage cigarette smoking in adolescents.

How does vaping affect the brain?

The nicotine in e-liquids is readily absorbed from the lungs into the bloodstream when a person vapes an e-cigarette. Upon entering the blood, nicotine stimulates the adrenal glands to release the hormone epinephrine (adrenaline). Epinephrine stimulates the central nervous system and increases blood pressure, breathing, and heart rate. As with most addictive substances, nicotine activates the brain's reward circuits and also increases levels of a chemical messenger in the brain called dopamine, which reinforces rewarding behaviours. Pleasure caused by nicotine's interaction with the reward circuit motivates some people to use nicotine again and again, despite risks to their health and well-being.

What are the health effects of vaping? Is it safer than smoking tobacco cigarettes?

Research so far suggests that vaping devices might be less harmful than combustible cigarettes when people who regularly smoke switch to them as a complete replacement. But nicotine in any form is a highly addictive drug. Research suggests it can even prime the brain's reward system, putting vapers at risk for addiction to other drugs. Also, e-cigarette use exposes the lungs to a variety of chemicals, including those added to e-liquids, and other chemicals produced during the heating/vaporizing process. A study of some e-cigarette products found the vapour contains known carcinogens and toxic chemicals, as well as potentially toxic metal nanoparticles from the device itself. The study showed that the e-liquids of certain cig-a-like brands contain high levels of nickel and chromium, which may come from the nichrome heating coils of the vaporizing device. Cig-a-likes may also contain low levels of cadmium, a toxic metal also found in cigarette smoke that can cause breathing problems and disease. More research is needed on the health consequences of repeated exposure to these chemicals. There are also reports of lung illnesses and deaths related to inhalation of certain vaping oils into the lungs, which have no way to filter out toxic ingredients.

Health Effects for Teens

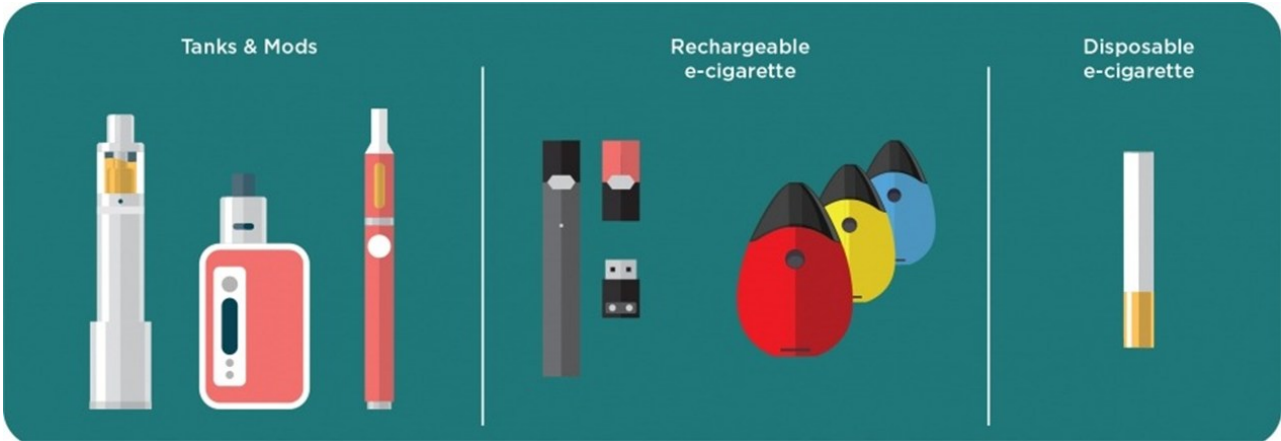
The teen years are critical for brain development, which continues into young adulthood. Young people who use nicotine products in any form, including e-cigarettes, are uniquely at risk for long-lasting effects. Because nicotine affects the development of the brain's reward system, continued nicotine vaping can not only lead to nicotine addiction, but it also can make other drugs such as cocaine and methamphetamine more pleasurable to a teen's developing brain. Nicotine also affects the development of brain circuits that control attention and learning. Other risks include mood disorders and permanent problems with impulse control—failure to fight an urge or impulse that may harm oneself or others.

Can vaping help a person quit smoking?

Some people believe e-cigarettes may help lower nicotine cravings in those who are trying to quit smoking. However, e-cigarettes are not an approved quit aid, and there is no conclusive scientific evidence on the effectiveness of vaping for long-term smoking cessation. It should be noted that there are seven approved quit aids that are proven safe and can be effective when used as directed. Vaping nicotine has not been thoroughly evaluated in scientific studies. For now, not enough data exists on the safety of e-cigarettes, how the health effects compare to traditional cigarettes, and if they are helpful for people trying to quit smoking.

What are the effects of vaping / e-cigarettes on individuals and communities?

Effects on individuals	Effects on communities





Where to find out more information or gain support and help outside of school?



Smoking and Vaping

NHS – Smoking & Vaping

<https://www.nhs.uk/live-well/quit-smoking/>

→ Clear health information about smoking, vaping, and how to get help.

ASH (Action on Smoking and Health)

<https://ash.org.uk>

→ Explains the risks of smoking and vaping in an accessible way.

Alcohol Awareness

Drinkaware

<https://www.drinkaware.co.uk>

→ Advice on alcohol, its effects, and staying safe.

Talk About Alcohol (Youth Site)

<https://talkaboutalcohol.com>

→ Specifically designed for young people with quizzes, facts, and real-life scenarios.

Drugs Education and Support

FRANK (Talk to FRANK)

<https://www.talktofrank.com>

→ Honest information about drugs, effects, and where to get help.

The Mix (for Under 25s)

<https://www.themix.org.uk>

→ Support for mental health, substance use, and lifestyle issues.

Combined Health & Lifestyle Support

NHS Better Health

<https://www.nhs.uk/better-health/>

→ Covers healthy habits, including avoiding harmful substances.

Young Minds

<https://www.youngminds.org.uk>

→ Links substance use with mental health and coping strategies.

Safety and Advice

NSPCC

<https://www.nspcc.org.uk>

→ Guidance on staying safe and getting help if worried about substance use.

Childline

<https://www.childline.org.uk>

→ Confidential advice and support for young people about drugs, alcohol, and peer pressure.

