



Year 9 - Developing Technology



Task 3 - Impact of drones extended writing task

Summary of task

The assignment is to look at the positive or negative impacts of drones on our lives and the world around us. You are expected to carry out research into the influences of drones on the following headings:

- The positive or negative impact of drones on society
- The positive or negative impact of drones on the economy
- The positive or negative impact of drones on the environment

After completing your research you will need to plan and write a speech on 'the impact that drones have on society, the economy and the environment'. This speech must be written from one view point only, either negative or positive and lead to a conclusion.

Parts

Part 1 – some uses of drones in society

Watch the clip and use it to answer the questions.

Part 2 – identification of positive and negative impacts on society

Read the sources below and highlight in **red** all the **negative impacts** and in **green** all the **positive impacts** drones have in terms of our society. Summarise the positive and negative impacts from both sources in the table.

Part 3 – research

Decide whether **you** are for or against drones then carryout your own research into the impact drones have on society, the economy and the environment.

Part 4 – plan your speech

Using the information you have collected from parts 2 and 3, plan your persuasive argument using the planning skeleton provided.

Part 5 - write your speech

Write your speech on the impact of drones using your plan to help you structure it and use the reading materials provided and your own research to ensure your argument covers the following key points (it is important that you stick to one side of the argument only):

- The positive or negative impacts of drones in society
- The positive or negative impacts of drones on the economy
- The positive or negative impacts of drones on the environment

Part 6 - self assessment

Check your speech against the success criteria provided, suggest a **WWW** and **EBI**.



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Task 3 - Impact of drones extended writing task

Learning Objectives

1. Can I state some positive and negative impacts of drones on society, the economy and the environment?
2. Can I research the science needed to support the argument positive or negative on the impact of drones on society, the economy and the environment?
3. Can I write a speech using persuasive connectives and link ideas which leads to a conclusion?





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Task 3 - Impact of drones extended writing task

Aim

To write a speech arguing for or against the use of drones. The speech must consider the impact on society, the economy and the environment'.

Question

Do drones have a positive or negative impact on our society, the economy and the environment?

Part 1 – some uses of drones in society



Watch the clip and use it to answer the questions below -

<https://www.youtube.com/watch?v=1bg0vRQOc9Q>



Questions

1. List the ways drones are being used in the clip.

2. What is being placed on the father's chest?

3. What is being delivered to the man and the boy?

4. How is the fire being put out?

5. How long did it take the drone to reach the small island?



Part 2 – identification of positive and negative impacts on society

- Read the sources below and highlight in **red** all the **negative impacts** and in **green** all the **positive impacts** drones have in terms of our society.

Source A - ajura.com blog

Drone or unmanned aerial vehicle (UAV) is an aircraft without a human pilot aboard. They are remotely controlled or can fly autonomously with the help of Artificial Intelligence or AI. Usually, in this case, they work with GPS or Global Positioning Service. Technology has come a long way in 2019. In the present day, drones are a usual thing, nothing surprising. They are a part of the time that we live in. Originally the invention of a drone was for military purposes. It helped in missions which were too dangerous for humans but at present civilian drone outnumbers the military ones by far. Apart from the military, the usage of drones is expanding to other sectors like commercial, scientific, recreational and agricultural. Drones can also help in special activities like surveillance, product delivery, and aerial photography.

Depending on the number of wings or rotors, there are 3 types of drones. The first type is called **Fixed Wing**: These drones have one or more propellers for forwarding motion. But these cannot hover in one place. They are battery powered and useful for long range and high payload. These drones are best for surveillance and combat. The second type is called **Single Rotors**: Similar to the structure of a helicopter, these drones have one large rotor and one small tail to stabilize it. The drones in these categories have higher efficiency and stability. Finally the third type is **Multi Rotors**: Most common form among the drones and also the most popular ones. With 4-8 rotors, these are also known as quad-rotor drones. As a downside, these drones have limited flying time.

Drones have many positive and negative impacts. Drones help a lot in scientific research, for surveys, surveillance difficult terrains, mapping and geophysics surveys. It helps in monitoring hostile situations and in a remote environment. Also, drones have helped greatly in aerial photography. A useful tool, drone helps to track endangered species and monitor changes in wildlife habitats and behaviours and helping in pinpointing wildfires and gauging movements, drones make it possible to actually fight fire without putting another human in danger. Further, this technology can assist in disaster management, through presenting an aerial view of the situation.

Logistic sector is also trying to involve the drones. This is because bigger companies like Amazon are considering using drones for a faster product delivery form door-to-door. Most importantly, the usefulness of drones for military purposes. Drones originated because of this sector and continues to evolve with the assistance of new technology. This eventually leads to better results than before. While drones contribute a lot in researches, rescue missions and the development of the world, there are also many adverse effects of it. Drone strikes are one of the most popular yet double edged tool which has many side effects. These attacks affect the public health to a great extent. They de-stabilize regional economic and political condition. The damage is at par with aerial missile attacks. The chemical content and residue left from these strikes, harm agriculture, public health and cause numerous skin and respiratory diseases. Apart from these air attacks, the usage of drones also lead to invasion of privacy, interference with air activity, storage of weapons and many other illegal activities.

Source B - What Impact Will Drones Have On Society? *By Morgan Franklin*

Although Drone technology has been around a while in some niche circles, we are now starting to see them enter the mainstream in a big way. No longer are they only used by defence organizations and tech expert consumers. Large scale companies and private individuals are now starting to see the potential drones may possess.

Drones are becoming more accessible by the day, possibly leading them to replace humans in highly dangerous jobs. Also, delivery services may have to start taking a serious look at using drones for their benefit.

Drones could be a cost effective solution for many businesses, cutting out the need for human resources. Drones will almost certainly improve over the next ten or 20 years as autonomy and collision avoidance technology improves.

The Military are way ahead of the game and have been using drones for many years. Tiny flying drones are now used regularly, reducing the risk of human death in violent and precarious situations. They can be used for spying and data collecting and even as weapons.

The USA has a defence budget of \$640 billion which means drone manufacturers have an unbelievable opportunity to develop the technology to unheard of levels.

The combination of artificial intelligence and drone technology could see modern warfare enter into sci-fi movie territory a lot sooner than you would think.

Drones could help the emergency services in the near future. Camera technology has seen an upwards spike in recent years meaning drones have become far more effective at spotting things humans find hard to see.

The Red Cross specifically has been using thermal imaging drones to help find people trapped in places such as mountain sides and forests.

New ambulance drones could expand the emergency infrastructure. Developing drones to be able to, for example, administer medicine could dramatically improve survival rates of people in more remote areas.

In relation to emergency response, drones could be helpful during times of natural disaster. Drones may be able to access areas cut off by floods, hurricanes and earthquakes. They may be able to locate survivors, assess damage and deliver aid.

The prevention of forest fires is literally a hot topic at the moment. Tech companies believe drones could evaluate and monitor forest temperatures therefore preventing the wide scale blazes we have witnessed in recent years.

Some of the more morally bankrupt sections of society will not be welcoming the rise of drone technology. Illegal loggers could find themselves being caught much more easily as drones monitor the world's rainforests. The same situation applies to poachers as environments such as animal sanctuaries around the world can be monitored with the use of camera drones.

If used correctly and morally drones could have a hugely positive effect on our planet and our wellbeing.

➤ Summarise the positive and negative impacts from both sources in the table.

Positive impacts	Negative impacts

Part 3 – research



Decide whether **you** are for or against drones then carryout your own research into the impact drones have on society, the economy and the environment.

Listed below are some useful websites which you may use.

<https://www.edie.net/news/8/Drone-technology-environmental-sustainability-impact-for-the-UK/>

https://en.wikipedia.org/wiki/Agricultural_drone

<https://www.pwc.co.uk/issues/intelligent-digital/the-impact-of-drones-on-the-uk-economy.html>

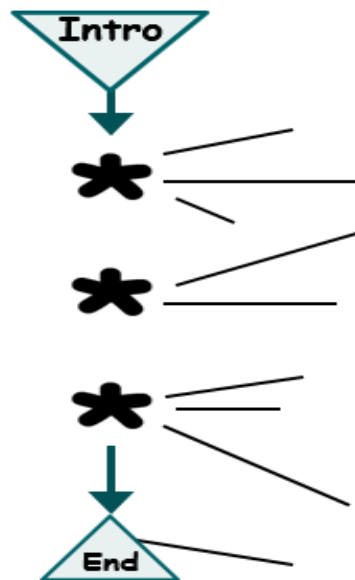
Part 4 – plan your speech

Using the information you have collected from parts 2 and 3, plan your persuasive argument using the planning skeleton provided.

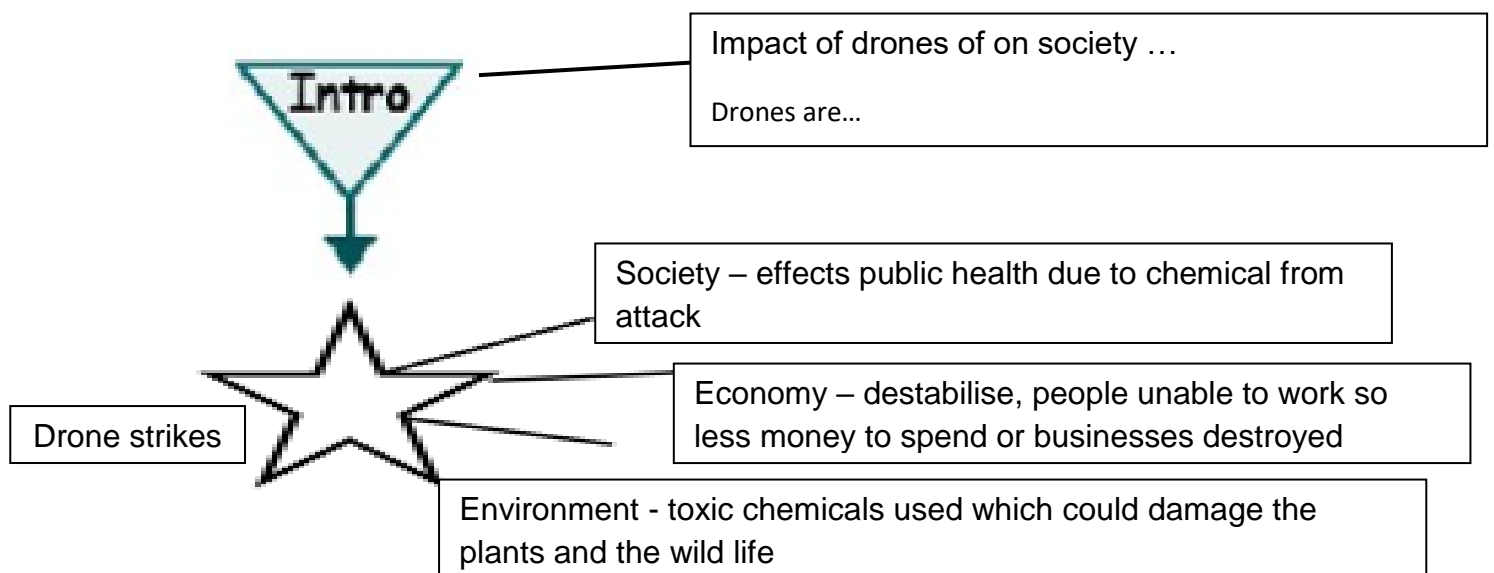


On each star give a positive or negative impact and support with reasons or opinions. Your speech must have at least three points for society, economy and the environment.

Planning Skeleton



Example below (WAGOLL):



Useful connectives when thinking about your argument:

because ... , consequently ... , nevertheless ... , as a result ... , first ... , also ... , in conclusion ...

Part 6 - self assessment

Check your speech against the success criteria provided, suggest a **WWW** and **EBI**.

Success Criteria	Pupil (✓ or ✗)	Teacher (✓ or ✗)
Can I state some negative or positive impacts for society, economy and the environment?		
Can I support my persuasive argument using the correct scientific terminology/ideas?		
Can I use persuasive connectives in my speech to link ideas fluently? E.g. then, lastly		
Can I structure my argument clearly?		
Can I make my argument convincing?		
Can I organise my ideas into paragraphs and use lots of examples and reasons?		
<p>Most Challenging:</p> <p>Use a range of sensible and well-argued points and have a clear structure and purpose to the speech.</p> <p>Sustain detailed and convincing arguments using language techniques used purposefully to engage the reader's interest.</p> <p>Uses scientific language/ideas correctly and write a conclusion considering ideas from research, and use a wide range of abstract scientific vocabulary to explain to what extent the findings are consistent with the abstract scientific ideas.</p>		

WWW:	
EBI:	

Persuasion

This is what you should think / believe



For and why not against *or* against and why not for

Useful connectives:

because ...
consequently ...
nevertheless ...
as a result ...
first ...
also ...
in conclusion ...

Support for planning and writing your speech

Persuasive speech features

Parts 4 and 5: Use some of the following features when you are planning and writing your speech to help engage the listener and the reader.

Fact A true statement that can be proved
Statistic A fact that includes a number
Rhetorical question A question that doesn't need an answer but gets the reader to think of the answer
Alliteration The letter or letter sound of two or more words is repeated
Quote Somebody else's words on the topic
Opinion A personal view on a topic.
List Several items following each other, separated by commas
Tripling Grouping ideas together in threes
Anecdote Using a personal story/experience
Emphasis Giving stress or importance
Direct address Use of a name , using "You", "We"
Hyperbole Obvious and deliberate exaggeration
Repetition Repeating words or phrases for effect
Expert opinion The RSPB claim... Professor Bishop from... claims ...
Emotive language words or phrases to make the reader feel a strong emotion (sadness, happiness, sympathy)

Support for planning and writing your speech

Planning and sentence starters

Parts 4 and 5: To plan and write a speech arguing for or against the use of drones. The speech must consider the impact on society, the economy and the environment'.

Speech plan:

- 1) Introduction – Say who you are and why you are speaking to the class.

Say which side of the argument have you chosen for/against the use of drones?

Good afternoon/morning Year 9. Today I am here to speak to you about the uses of drones...

- 2) Give some information on the background of drones – when was it first developed? Who developed them? What they are used for?

Drones where first developed by...

The drones are used in the following applications...

- 3) Explain why you are for or against the use of drones. Discuss for all three areas society, economy and the environment.

I would like to limit the use of drones...

This is because the damage the environment ...

I would like to promote the use of drones...

This is because they can help society ...

- 4) Discuss the types of issues/benefits of using drones.

Some people say that drones are very useful...

Some organisations say that drones are having a major impact...

- 5) Summarise your arguments for or against drones (Repeat key points made earlier in your speech).

I am against / for the use of drones because....

I conclude that drones are ...

WAGOLL – Global Warming

Example of a speech layout.

There is little doubt that the planet is warming. Over the last century, the planet's temperature has risen by around 1.8 degrees Fahrenheit (1 degree Celsius). The warmest since the mid 1800's was the 1990s and since then only 1998 has broken this record. The hottest years recorded were 1997, 1998, 2001, 2002, 2003. In fact 14 of the hottest years on record have been in the last 15 years.

The United Nations panel on climate change projects that the global temperatures will rise 3-10 degrees Fahrenheit by the century's end – enough to have the polar caps all but melted. If the ice caps melt, a vast majority of our countries borders will be under water. Monuments and great buildings, as well as homes and lives will be under water, including New York City.

So now we know what some of the causes are for global warming, how can we as individuals do our part to help save the planet?

The answer is simpler than you may think. You don't have to go miles away from home to protest, or spend masses of money. If you try to follow the few simple steps that I shall now give you, you will have started to help us all.

Firstly, plant a tree. This could be easier than it sounds. Join or help out a local wildlife group and ask to plant a tree. Trees, when fully grown, will help keep the planet cooler. On the same point, you could protest against the demolition of the rainforests. This is the same principle, we need the trees to cool our planet and yet they are chopping them down to create roads or homes.

Something as simple as walking instead of taking the car will help reduce pollution. As well as stopping pollution, you are giving yourself exercise, something important for our bodies. So the next time you get into your car, or your motorbike, think – do I have to make this journey by vehicle or can I walk?

When you are at home, and your getting a little cold. Put a jumper on and do not adjust the heating. The extra heat produced by our homes also affects the planet. So try wearing an extra layer in winter.

If possible, buy your fruit and vegetables from local suppliers. And try to avoid imported goods. The more foreign food that we import the more pollution from aeroplanes and boats it will create.

Keeping to the speed limit can also help the environment. The more you speed the more petrol you are going to use, making the pollution higher. Also, SUV's make about six times their own weight in CO₂ each year. A small efficient diesel car covering the same distance not only uses much less fuel; it makes two thirds less.

If possible use solar energy, after all it is free; all you need to buy is the equipment. You can get much of your hot water and heating from the sun and even generate electricity.

Reduce, reuse and recycle. Only buy what you need; don't stock the cupboards with things you may or may not use. Reuse whatever you can, like containers and paper, and recycle what you cannot reuse. It really is as simple as that.

Finally turning off unused sources of power such as televisions and heaters will help the environment, as well as save you money.

If everybody stuck to these rules, we would be doing a great thing by protecting the earth. So please take into consideration what I have said, and try to do your part. After all, it will be our next generation that will feel the effects.