

How To Guide The 6 Mark Question

Plants and animals have become adapted in many different ways to reduce the risk of being eaten by predators.
Describe these adaptations.
Give examples of animals and plants adapted in the ways you describe.

Question

Command word

Describe - You need to **recall** facts in an **accurate** way

Part 1

Describe more than one adaptation that reduces the risk of **animals** being eaten by a predator.

Part 2

Describe more than one adaptation that reduces the risk of **plants** being eaten by a predator.

**Decoded
Question**

**Scientific
Knowledge &
Understanding**

- **camouflage** – the method of camouflage should be described plus a statement that the predator is less likely to see the prey
- **mimicry / warning colouration** – the method should be described plus a statement that the predator is likely to confuse the prey with e.g. a poisonous organism
- **thorns / prickles / spines / horns** – a statement that these are sharp and are likely to hurt a predator
- **long limbs / streamlining** – a statement that these increase speed and make it more likely that prey will outrun predator
- **bad taste / poison** – a statement that predator will find this unpleasant and 'spit out' prey / not attack same prey again
- **large ears / position of eyes** – a statement that predators will be detected earlier so the prey can escape sooner

Point

Many animals adapted to reduce the risk of being eaten by predators to ensure their survival. One example is the arctic hare. They have number of adaptations that enable its survival.

Evidence and Analysis

Firstly it is camouflaged to its environment, in the summer it has blue-grey fur that blends in with the rocks and vegetation and in the winter it has white fur that blends in with the snow and ice. **This camouflage makes it difficult for predators to see them.** Secondly it has long hind legs which enables the hare to run at speeds of up to 40 miles per hour. **This makes it more likely that the hare will outrun its predators.**

Point

Plants also have adaptations which reduce the risk of them being eaten. A good example of this is a cactus.

Evidence and Analysis

Many species of cactus have spines. **These spines protect the cactus from being eaten as they are sharp and painful for animals to eat.**

Point

Another way in which plants can protect themselves from being eaten is to be toxic.

Evidence and Analysis

An example of this is eucalypts tree which has produces toxins in its leaves. **These toxins kill many potential predators before they are able to cause too much damage to the tree plus for any animal which does not die will become poisoned and learn that the eucalypts tree is not good to eat.**

Remember there are many other examples that you could give when answering this question.

**Model Answer
Using PEA**

**Generic mark
scheme**

**Level 1: Basic
1-2 Marks**

**Level 2: Clear
3-4 Marks**

**Level 3: Detailed
5-6 Marks**

Knowledge

- Knowledge of basic information

- Knowledge of accurate information

- Knowledge of accurate information appropriately contextualised

Understanding

- Simple understanding

- Clear understanding

- Detailed understanding, supported by relevant evidence and examples

Organisation

- The answer is poorly organised, with almost no specialist terms and their use demonstrating a general lack of understanding of their meaning, little or no detail

- The answer has some structure and organisation, use of specialist terms has been attempted but not always accurately, some detail is given

- Answer is coherent and in an organised, logical sequence, containing a wide range of appropriate or relevant specialist terms used accurately

**Spelling, punctuation &
grammar**

- The spelling, punctuation and grammar are very weak.

- There is reasonable accuracy in spelling, punctuation and grammar, although there may still be some errors.

- The answer shows almost faultless spelling, punctuation and grammar.

How To Guide The 6 Mark Question

Each year in the UK, billions of plastic bags are given free to shoppers. These bags are made from poly(ethene) and are often used only once. After being used many of these plastic bags are either thrown away as litter or buried in landfill sites. In 2006 over 10 billion of these plastic bags were given free to shoppers. In 2009 the number of plastic bags given to shoppers had decreased to 6.1 billion. One reason for the decrease was because some supermarkets made people pay for their plastic bags. From 2011 a new type of plastic shopping bag made mainly from poly(ethene) had a use-by date of only one year printed on the bag. Use the information above and your knowledge and understanding to describe advantages and disadvantages of using plastic shopping bags made from poly(ethene).

Question

Command words

Use the information - The answer **must** be based on the information given in the question.
Describe - You need to **recall** facts in an **accurate** way

Part 1

Describe in detail one than one **advantage** of using poly(ethene) to make plastic shopping bags

Part 2

Describe in detail more than one **disadvantage** of using poly(ethene) to make plastic shopping bags

**Decoded
Question**

Scientific Knowledge & Understanding

Advantages:

- Simple properties e.g. strong / low density / water resistant
- Poly(ethene) bags can be recycled e.g. made into milk bottle crates
- Poly(ethene) bags can be burned to provide heat for buildings/generation of electricity
- New bags are now made that can biodegrade

Disadvantages:

- (Older) bags can take many years to biodegrade
- There is a shortage of landfill space
- Bags are made from (crude) oil which is a non-renewable resource/running out
- Large amounts of energy/fuel are used for the production of poly(ethene)

**Model Answer
Using PEA**

Point

There are many advantages and disadvantages to using poly(ethene) to make plastic shopping bags. Some of the advantages include...

Evidence and Analysis

... poly(ethene) is strong, low density and water resistant. These properties make poly(ethene) a good material to use because the bags will not break under the strain of heavy shopping, the bags are light so will save fuel when they are transported to the shops and they will prevent the shopping from getting wet in the rain. Secondly the bags can be recycled in to milk bottle crates, and also many are reused by the consumer to carry their shopping during other shopping trips. This means that they will not be going to landfill, of which there is a shortage.

Point

However there are still many disadvantages to using poly(ethene) to make plastic shopping bags including...

Evidence and Analysis

... the fact that poly(ethene) is made from crude oil. Crude oil is a non-renewable resource, which is running out, so poly(ethene) will eventually no longer be a viable material for making shopping bags. Secondly whilst some people will recycle and reuse their shopping bags other will just throw them away. This is an issue because we are running out of landfill space so to overcome this is lack of space rubbish being dumped at sea where the bags get eaten by sea turtles as they look like jellyfish. This has led to the death of many sea turtles and they are an endangered species.

Remember there are many other examples that you could give when answering this question.

Generic mark scheme

	Level 1: Basic 1-2 Marks	Level 2: Clear 3-4 Marks	Level 3: Detailed 5-6 Marks
Knowledge	<ul style="list-style-type: none"> • Knowledge of basic information 	<ul style="list-style-type: none"> • Knowledge of accurate information 	<ul style="list-style-type: none"> • Knowledge of accurate information appropriately contextualised
Understanding	<ul style="list-style-type: none"> • Simple understanding 	<ul style="list-style-type: none"> • Clear understanding 	<ul style="list-style-type: none"> • Detailed understanding, supported by relevant evidence and examples
Organisation	<ul style="list-style-type: none"> • The answer is poorly organised, with almost no specialist terms and their use demonstrating a general lack of understanding of their meaning, little or no detail 	<ul style="list-style-type: none"> • The answer has some structure and organisation, use of specialist terms has been attempted but not always accurately, some detail is given 	<ul style="list-style-type: none"> • Answer is coherent and in an organised, logical sequence, containing a wide range of appropriate or relevant specialist terms used accurately
Spelling, punctuation & grammar	<ul style="list-style-type: none"> • The spelling, punctuation and grammar are very weak. 	<ul style="list-style-type: none"> • There is reasonable accuracy in spelling, punctuation and grammar, although there may still be some errors. 	<ul style="list-style-type: none"> • The answer shows almost faultless spelling, punctuation and grammar.

How To Guide The 6 Mark Question

Over the next 10 years, more than 300 kilometres of new high voltage transmission cables are to be added to the National Grid. Most of the new cables will be suspended from pylons and run overhead while the Rest will be buried underground.
Outline the advantages and disadvantages of both overhead transmission cables and underground transmission cables.

Question

Command word

Compare - If you are asked to "compare x with y", you need to write down something about x **and** something about y, and should give a comparison.

Part 1

Compare more than one **advantage** of overhead cables to more than one **disadvantage** of underground cables

Part 2

Compare more than one **advantage** of underground cables to more than one **disadvantage** of overhead cables

Decoded Question

Scientific Knowledge & Understanding

	Advantages	Disadvantages
Overhead cables	<ul style="list-style-type: none"> (relatively) quick / easy to repair / maintain / access less expensive to install / repair / maintain cables cooled by the air air acts as <u>electrical</u> insulator can use thinner cables 	<ul style="list-style-type: none"> spoil the landscape greater risk of (fatal) electric shock damaged / affected by (severe) weather hazard to low flying aircraft / helicopters
Underground cables	<ul style="list-style-type: none"> cannot be seen no hazard to aircraft / helicopters unlikely to be / not damaged / affected by (severe) weather (normally) no / reduced shock hazard 	<ul style="list-style-type: none"> repairs take longer / are more expensive (more) difficult to access (cables) (very) expensive to install thicker cables required need cooling systems need layers of <u>electrical</u> insulation land disruption (to lay cables) or cannot use land either side of cable path

Point

Both overhead and underground transmission cables have their advantages and disadvantages. The advantages of overhead transmission cables compared to underground cables are...

Evidence and Analysis

...due to the fact the cables are above ground they are relatively quick and easy to repair. This is because unlike underground cables that need to be dug up to find any faults and make repairs which makes repairs difficult and expensive, with overhead cables you can see any faults and the cables can easily be accessed with a cherry-picker. Secondly overhead cables have the advantages of the cables being cooled by the air as well as the air acting as an electrical insulator. This means that unlike underground cables you do not need to install a cooling system to overcome the heat caused by the resistance in the wire and you do not need to add layers of electrical insulation to prevent the loss of current to the surroundings, which also reduces the cost.

Point

The advantages of underground cables compared to overhead cables are...

Evidence and Analysis

...they do not spoil the landscape. This is because unlike overhead cables that are held up by unsightly pylons which are a blight upon the countryside, underground cables cannot be seen. Secondly underground cables are less likely to be damaged by severe weather. This is because unlike overhead cables which can be damaged by strong winds which not only causes them to fall down and be a hazard but also causes power blackouts in the areas where they are damaged, underground cables are not affected by strong winds so are less hazardous and are less likely to lead to a blackout.

Remember there are many other examples that you could give when answering this question.

Model Answer Using PEA

Generic mark scheme

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The 6 Mark Question Template

Question

Command word

Rewrite the question to show you understand what it is asking you to do.

Decoded Question

Scientific Knowledge & Understanding

Here you need to write the key scientific points you should include in your answer.

Remember you do not need to use all of these points but you should always use more than one.

P = Point

Each paragraph should begin with a clear topic sentence stating the point that paragraph seeks to make. Your point should be a claim, something that needs to be supported or illustrated with evidence. The point should be **your** idea, not an idea from another source.

E = Evidence

Once you state the point the paragraph intends to make, provide evidence to support that point. That evidence can take a variety of forms: examples, descriptions, quotations, paraphrases, statistics, anecdotes, etc. The amount of evidence you include will depend upon the point you make.

A = Analysis

For each piece of evidence you need to explicitly explain what you want your audience to notice about it. Help them see what you see. Fully explain a couple pieces of evidence rather than list many pieces of evidence.

Your Answer Using PEA

Generic mark scheme

Level 1: Basic 1-2 Marks

Level 2: Clear 3-4 Marks

Level 3: Detailed 5-6 Marks

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The 6 Mark Question Technique



START



Step 1 - Read the question

Question

06:00
Minutes Seconds

Step 2 - Identify the command word

Underline the command word and give its definition

Step 3 - Reword the question *(you can skip this step)*

Rewrite the question to show you understand what it is asking you to do.

Step 4 - Bullet point the key information

Write the key scientific points you should include in your answer, in bullet point form. Remember you do not need to use all of these points but you should always use more than one.

05:00
Minutes Seconds

Step 5 - Write your answer using PEA paragraphs

P = Point

Each paragraph should begin with a clear topic sentence stating the point that paragraph seeks to make.

Your point should be a claim, something that needs to be supported or illustrated with evidence.

The point should be **your** idea, not an idea from another source.

E = Evidence

Once you state the point the paragraph intends to make, provide evidence to support that point.

That evidence can take a variety of forms: examples, descriptions, quotations, paraphrases, statistics, anecdotes, etc.

The amount of evidence you include will depend upon the point you make.

A = Analysis

For each piece of evidence you need to explicitly explain what you want your audience to notice about it. Help them see what you see. Fully explain a couple pieces of evidence rather than list many pieces of evidence.

04:00
Minutes Seconds

Step 6 - Double check your answer

01:00
Minutes Seconds

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Seconds



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Seconds