

Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Outline notes

Genre-based Writing



Unit 3 Writing explanations

Explaining HOW and WHY things happen

Set context

3.1 Introduction

3.2 organisation:

Topic; Focus; Detail; Conclusion

3.3 Language

3.4 Final note



Unit 3 Writing explanations

Set Context

Read the following speech bubbles. What do you think these speakers are trying to do?

I did finish my homework, but when I put it in my school bag, my dog chewed it up.

I put my project in the plastic bag, but I left it on the bus. Although I tried to contact the bus station, I was told that they did not see any bags on the bus.

I meant to do my homework on the weekend, but my parents were out of town. I had to take care of my younger sister who was sick. I did not have time to finish it.



Unit 3 Writing explanations

3.1 Introduction

In this unit, we will be looking at written explanations, that is, at writing that explains how and why things happen. We are going to write an explanation about what causes electricity. Here are some further details about the text.

How long will the text be?

The text will be approximately 350 words long.



Unit 3 Writing explanations

3.1 Introduction

Who will the readers be?

The text will appear as one of the texts in the first unit of a simple textbook that introduces science and engineering to students in the first year of high school.

Here are the titles of all of the texts that will appear in the unit. Ours is the first one.

What causes electricity?

How do electrical storms happen?

How is the electricity for our homes, offices, factories and farms produced?

How is electricity stored?

How does an electrical circuit work?

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Unit 3 Writing explanations

3.1 Introduction

Because we know what things will be explained in the other texts in the unit, we also know what we do **not** need to explain in our text.

Our text will be the first text in the first unit of the book so we need to explain to the students some basic facts about electricity.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Once again, we will use a basic four part text structure: **Topic – Focus – Detail – Conclusion (TFDC)**. Let's start from the general text template and insert the more specific structure labels that relate to the type of writing involved, an **explanation** in this case.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Explanation text template	
Topic WHAT WE ARE GOING TO EXPLAIN	The Topic section is usually the title. It indicates what we are going to explain .
Focus BACKGROUND INFORMATION AND COMMENT about the topic OR MORE SPECIFIC INFORMATION about the topic	The Focus section usually provides some background information and comment about the topic <u>OR</u> some further information about the topic.
Detail (PREVIEW) & DETAILS - (WHAT, HOW and, often, WHY)	The DETAIL section often begins with an introduction to the explanation that gives a preview of what you are going to include in your explanation.
	The main part of the Detail section is where you provide your explanation. You need to focus here on WHAT happens, HOW it happens and, often, WHY it happens. Here, we provide the most general information first, moving to more specific information as we proceed. This section often includes examples.
Conclusion SUMMARY AND (COMMENT)	In the Conclusion section, we need to summarise what we have said and we may also wish to add a comment . The comment is optional.

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Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The **Topic (WHAT WE ARE GOING TO EXPLAIN)** section of an explanation text is usually the **title** of the text. In this case, our title is a question: *What causes electricity?* This question tells readers, in general terms, what the text is going to be about.

Explanation text template	
Topic WHAT WE ARE GOING TO EXPLAIN	<i>What causes electricity?</i>



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The next section is the **Focus** section. It introduces the topic by providing some **background information and comment** about it **or** by providing **more specific information** about it, particularly information about what aspect of the topic will be in focus. In this case, the Focus section provides background information and comment about the topic. Here is the first sentence of the Focus section:

Electricity is a very important part of our daily lives.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Readers are then reminded **why** electricity is important (the **reason**) and given some **examples** of electrical appliances that are an important part of our daily lives:

It gives us the power that drives our electrical appliances, such as light bulbs, heaters, televisions and computers.

The **Focus** section of our text is made up of a single short paragraph:

Electricity is a very important part of our daily lives. It gives us the power that drives our electrical appliances, such as light bulbs, heaters, televisions and computers.

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Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Notice that the first sentence of the paragraph sums up what the paragraph is about. This is called the *topic sentence of the paragraph*. Topic sentences usually occur at the beginning of paragraphs.

Focus BACKGROUND INFORMATION AND COMMENT about the topic	Electricity is a very important part of our daily lives. It gives us the power that drives our electrical appliances, such as light bulbs, heaters, televisions and computers.
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Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The next section of our text, the **Detail** section includes a **PREVIEW** of the explanation followed by **DETAILS**, including **WHAT** happens, **HOW** it happens and **WHY** it happens.

The **preview** signals what we are going to write about in the main part of the explanation. Here, we signal in the preview that we are going to be talking about atoms.

To understand what causes electricity, you need to learn something about atoms. Everything that exists is called 'matter'. Matter is made up of elements. There are over 118 different elements. Carbon and oxygen are both elements. Elements are made up of atoms.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Notice that the word ‘matter’ in our text is in single inverted commas. We use single inverted commas when we want to focus on how a particular word or phrase is used.

Once again, the paragraph begins with a *topic sentence* that sums up what the paragraph is about:

To understand what causes electricity, you need to learn something about atoms.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Detail (PREVIEW) &	To understand what causes electricity, you need to learn something about atoms. Everything that exists is called 'matter'. Matter is made up of elements. There are over 118 different elements. Carbon and oxygen are both elements. Elements are made up of atoms.	PREVIEW of the explanation General - matter Specific - elements (with examples) More specific - atoms
DETAILS - (WHAT, HOW and, often, WHY)		



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The next paragraph – following the preview – provides information about atoms that readers will need in order to learn about electricity. Here readers learn WHAT the main components of atoms are.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The paragraph begins with a *topic sentence* that tells readers in general terms what the paragraph is about (i.e., what atoms are made of). Here is the complete paragraph with the topic sentence in bold print:

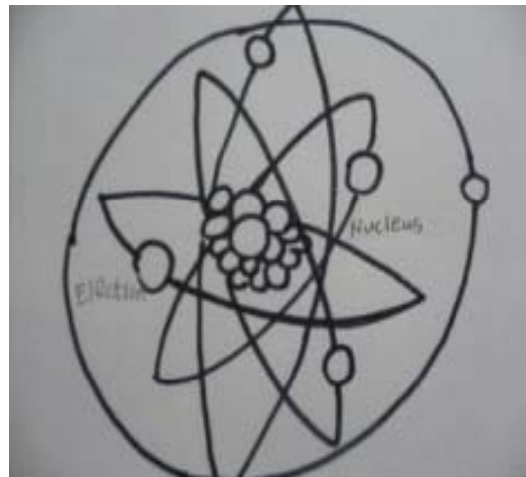
Atoms are made up of small particles. The three main particles that atoms are made of are protons, neutrons and electrons. The nucleus (centre) of an atom is made up of protons and neutrons. Electrons spin round the nucleus. Electrons have a negative charge; protons have a positive charge; neutrons do not have any charge.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Readers are then given a simple diagram of an atom to help them to understand its structure.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The next paragraph begins with a topic sentence that tells readers more about atoms. Here, there is a contrast between what is **usually** the case and what is **sometimes** the case. This is an important contrast because we are going to focus in our explanation on what happens when elements have more protons or more electrons:

Atoms **usually** have the same number of protons and electrons, **but** they can **sometimes** have more protons or more electrons.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Next, readers learn **WHY** atoms sometimes have more electrons or more protons:

This is **because** the electrons of some atoms are loosely attached and **so** these electrons can be lost to other atoms.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Readers then learn **HOW** atoms can become positively charged (if they lose an electron) or negatively charged (if they gain an electron) and **WHY** they become negatively or positively charged (because they have more positively charged protons or negatively charged electrons).

An atom becomes positively charged **if** it loses an electron **because** it then has more positively charged protons than negatively charged electrons.

An atom becomes negatively charged **if** it gains an electron **because** it then has more negatively charged electrons than positively charged protons.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Here is the complete paragraph with the topic sentence highlighted:

Atoms usually have the same number of protons and electrons, but they can sometimes have more protons or more electrons. This is because the electrons of some atoms are loosely attached and so these electrons can be lost to other atoms. An atom becomes positively charged if it loses an electron because it then has more positively charged protons than negatively charged electrons. An atom becomes negatively charged if it gains an electron because it then has more negatively charged electrons than positively charged protons.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The next paragraph begins with a topic sentence that introduces the important fact that positively charged atoms and negatively charged atoms are not balanced:

Positively charged and negatively charged atoms do not have the same number of protons and electrons so they are not balanced.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Next, readers learn WHY positively charged atoms and negatively charged atoms try to lose or gain electrons:

Atoms try to remain balanced so negatively charged atoms try to lose an electron to another atom and positively charged atoms try to gain an electron from another atom.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Next, readers learn what happens when electrons pass from one atom to another, that is, **HOW** an electric current is created:

When electrons pass from one atom to another,
an electric current is created.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

The paragraph ends by providing some more information along with an example:

Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity'. One **example** of a good conductor of electricity is a piece of copper wire.

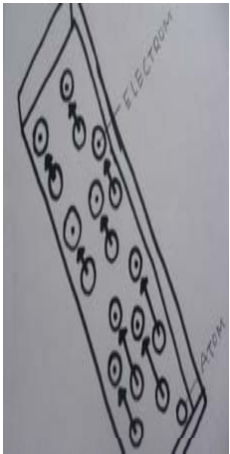


Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Here is the complete paragraph (which is followed by a diagram) with the topic sentence highlighted:

Positively charged and negatively charged atoms do not have the same number of protons and electrons so they are not balanced. Atoms try to remain balanced so negatively charged atoms try to lose an electron to another atom and positively charged atoms try to gain an electron from another atom. When electrons pass from one atom to another, an electric current is created. Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity'. One example of a good conductor of electricity is a piece of copper wire.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Now let's look at the whole of the Detail part of the text, that is, at the explanation part, including the preview.

Detail PREVIEW of the explanation	To understand what causes electricity, you need to learn something about atoms. Everything that exists is called 'matter'. Matter is made up of elements. There are over 118 different elements. Carbon and oxygen are both elements. Elements are made up of atoms.	PREVIEW of the explanation



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

DETAILS General information about atoms and their main components	Atoms are made up of small particles. The three main particles that atoms are made of are protons, neutrons and electrons. The nucleus (centre) of an atom is made up of protons and neutrons. Electrons spin round the nucleus. Electrons have a negative charge; protons have a positive charge; neutrons do not have any charge.	DETAILS of the EXPLANATION WHAT the main components of atoms are
More specific information about atoms and about protons and neutrons.	Atoms usually have the same number of protons and electrons, but they can sometimes have more protons or more electrons. This is because the electrons of some atoms are loosely attached and so these electrons can be lost to other atoms. An atom becomes positively charged if it loses an electron because it then has more positively charged protons than negatively charged electrons. An atom becomes negatively charged if it gains an electron because it then has more negatively charged electrons than positively charged protons.	WHY atoms sometimes have more protons or electrons and HOW atoms become positively or negatively charged

Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

DETAILS		
Most specific information about electrical current and good conductors of electricity	Positively charged and negatively charged atoms do not have the same number of protons and electrons so they are not balanced. Atoms try to remain balanced so negatively charged atoms try to lose an electron to another atom and positively charged atoms try to gain an electron from another atom. When electrons pass from one atom to another, an electric current is created. Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity'. One example of a good conductor of electricity is a piece of copper wire.	WHY atoms try to lose or gain electrons (i.e., to remain balanced) and HOW electric current is created

Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

Now let's consider the final part of the text, that is, the **Conclusion** section. The Conclusion section begins with a *topic sentence* that provides a very brief summary of the information in the text.

Now you know that electricity is the energy that is created when free electrons are attracted to positive atoms.



Unit 3 Writing explanations

3.2 The overall organisation of an explanation text

It ends with a comment:

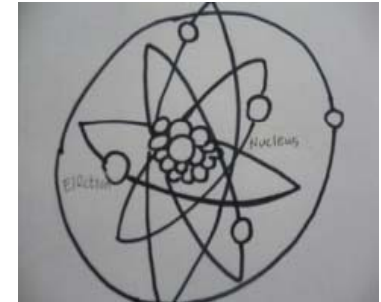
Next time you flick a switch to turn on an electrical appliance, you might think about what is happening.

Conclusion SUMMARY AND (COMMENT)	Now you know that electricity is the energy that is created when free electrons are attracted to positive atoms. Next time you flick a switch to turn on an electrical appliance, you might think about what is happening.	SUMMARY and COMMENT (optional)
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Here is the complete text:

What causes electricity? ↵

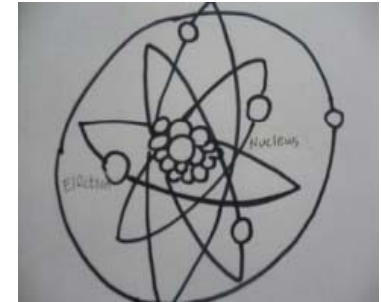


Electricity is a very important part of our daily lives. · It gives us the power that drives our electrical appliances, such as light bulbs, heaters, televisions and computers. ↵

To understand what causes electricity, you need to learn something about atoms. Everything that exists is called ‘matter’. Matter is made up of elements. There are over 118 different elements. Carbon and oxygen are both elements. Elements are made up of atoms. · ↵



Here is the complete text:



Atoms are made up of small particles. The three main particles that atoms are made of are protons, neutrons and electrons. The nucleus (centre) of an atom is made up of protons and neutrons. Electrons spin round the nucleus. Electrons have a negative charge; protons have a positive charge; neutrons do not have any charge.

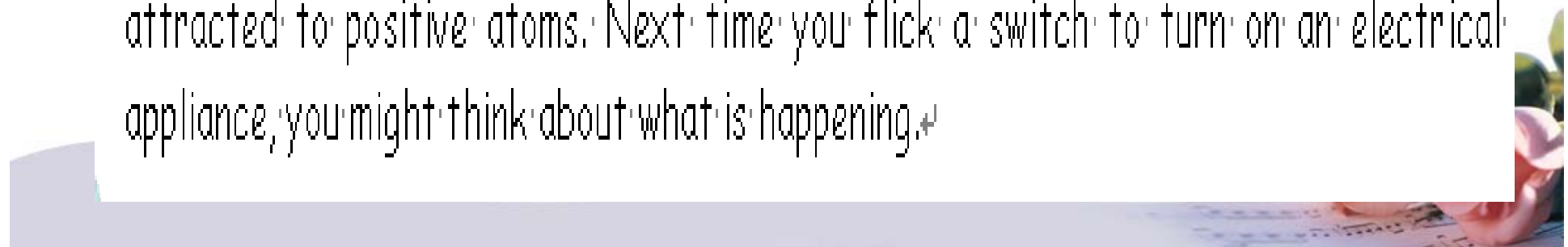


Atoms usually have the same number of protons and electrons, but they can sometimes have more protons or more electrons. This is because the electrons of some atoms are loosely attached and so these electrons can be lost to other atoms. An atom becomes positively charged if it loses an electron because it then has more positively charged protons than negatively charged electrons. An atom becomes negatively charged if it gains an electron because it then has more negatively charged electrons than positively charged protons.



Positively charged and negatively charged atoms are not balanced. This is because they do not have the same number of protons and electrons. Atoms try to remain balanced so negatively charged atoms try to gain an electron from another atom and positively charged atoms try to gain an electron from another atom. When electrons pass from one atom to another, an electric current is created. Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity'. One example of a good conductor of electricity is a piece of copper wire.*

Now you know that electricity is the energy that is created when free electrons are attracted to positive atoms. Next time you flick a switch to turn on an electrical appliance, you might think about what is happening.*



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 1

Genre-based Writing



Unit 3 Writing explanations:



TASK 1

Your task is to rearrange the paragraphs below to create an **explanation** text about how personal computers work. The text is the first part of a document that is written for a group of older people who are attending a class designed to get them to start using computers for the first time.

Each paragraph has a letter beside it (A, B, C, D, E, F, G, H). Decide which order the paragraphs should be in and insert the correct paragraph number into the text template that follows the paragraphs.



Unit 3 Writing explanations:

LETTER	PARAGRAPH
A	If you want to store what you have typed to use later, you need to give an instruction to your computer. The computer will then store what you have typed in its auxiliary storage and keep it there so that it is available for you to consult later.
B	To understand how a personal computer works, you need to know about its hardware (the various bits of the computer) and its software (the programmes that it needs in order to do the things you want it to do).
C	All of the data you enter gets converted into strings of zeros and ones that are stored in the computer's main memory. This is because the only things that your computer can process are strings of zeros and ones. When you enter a command to delete or move a bit of text, your computer deletes or moves the string of zeros and ones that represent that bit of text. When you look at your computer monitor or print what you have written, you do not see strings of zeros and ones. This is because your computer converts these strings back into output that is in the form of text.
D	Now you know a little about your personal computer, about hardware, software, data input, data processing and data storage. You can begin to enjoy using your computer.
E	Your computer needs input to work on. When you turn on your computer, you provide input that starts up the operating system. The operating system tells the central processing unit to start up certain programmes and to turn on certain hardware devices.

Unit 3 Writing explanations:

F	Personal computers have a keyboard for entering data, a monitor for displaying information, a storage device for saving data and a microprocessor, sometimes called a central processing unit (CPU), for doing all the calculations. These things are called 'hardware'. Personal computers can also have other types of hardware, such as a mouse, speakers and a printer. Computers also have programmes, that is, sets of instructions that direct the computer to do things. There are programmes for running the computer's hardware (operating systems) and programmes for doing other things, such as playing games, writing letters or keeping accounts (utility programmes).
G	A personal computer is a computer that is designed to be used by one person at a time.
H	<i>How do personal computers (PCs) work?</i>
I	Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme. For example, you can click on the icon that starts up your computer's word processing programme. Now your computer knows what programme you want to use but it can not do anything useful because it does not have any data to work on. By using your keyboard, you can input data. Just type some text.

Unit 3 Writing explanations:



TASK 1

Explanation text template		PARAGRAPH NUMBER
Topic WHAT YOU ARE GOING TO EXPLAIN	<i>How do personal computers (PCs) work?</i>	H
Focus MORE SPECIFIC INFORMATION about the topic		
Detail (PREVIEW) & DETAILS - (WHAT, HOW and, often, WHY)		
Conclusion SUMMARY AND (COMMENT)		



Unit 3 Writing explanations

3.3 The language of explanation texts

Let's begin this section by thinking about the textual relationships that occurred in the text we have examined.

We introduced textual relationships in *Unit 2* where we noted that they always have two or more parts. One of the textual relationships that we discussed there was **Reason-Result**. In the texts we examined in *Unit 2*, the reason part of the Reason-Result relationships occurred **before** the result part and the result part functioned as a warning. (e.g., Camera lenses are very delicate and easily damaged (REASON); DO NOT clean your lens more often than is strictly necessary. (RESULT))



Unit 3 Writing explanations

3.3 The language of explanation texts

Here, we have a Reason-Result relationship in which the reason part appears **after** the result part. The reason part of the relationship provides a **reason why** the writer thinks that the initial claim (that electricity is an important part of our daily lives) is justified.

Our **Focus** section is made up as follows:

RESULT: Electricity is a very important part of our daily lives.

REASON: It gives us the power that drives our electrical appliances,



Unit 3 Writing explanations

3.3 The language of explanation texts

The reason part of the Reason-Result relationship then enters into another textual relationship. This time it forms the statement part of a relationship of **Statement-Example(s)** in which the example is signaled by ‘such as’.

STATEMENT: It gives us the power that drives our electrical appliances,

EXAMPLE: such as light bulbs, heaters, televisions and computers.



Unit 3 Writing explanations

3.3 The language of explanation texts

The **Preview** part of the **Detail** section of the text begins with a textual relationship of **Means-Purpose**. Here, the purpose part of the relationship comes first and its presence is signaled by the infinitive form of the verb – ‘to understand’.

To understand what causes electricity, you need to learn something about atoms.

PURPOSE:	To understand what causes electricity,
MEANS:	you need to learn something about atoms.



Unit 3 Writing explanations

3.3 The language of explanation texts

We then move from a large (general) category - matter - to smaller (more specific) categories – elements and atoms. First, there is a statement about things in general (i.e., *Everything that exists is called 'matter'*). Next, there are more specific statements about elements and atoms. The textual relationship here is called General-Specific.

GENERAL: Everything that exists is called 'matter'.
SPECIFIC: Matter is made up of elements. There are over 118 different elements. Carbon and oxygen are both elements. Elements are made up of atoms.



Unit 3 Writing explanations

3.3 The language of explanation texts

Within the specific part of the General-Specific textual relationship, there is another textual relationship – a relationship of **Statement-Example(s)**:

STATEMENT: There are over 118 different elements.

EXAMPLE(S): Carbon and oxygen are both elements.



Unit 3 Writing explanations

3.3 The language of explanation texts

The main part of the Detail section of the text begins with a textual relationship of General-Specific. First, there is a general statement about what atoms are made of (i.e., small particles). Next, there are specific details of these small particles.

GENERAL: Atoms are made up of small particles.

SPECIFIC: The three main particles that atoms are made of are protons, neutrons and electrons. The nucleus (centre) of an atom is made up of protons and neutrons. Electrons spin round the nucleus. Electrons have a negative charge; protons have a positive charge; neutrons do not have any charge.



Unit 3 Writing explanations

3.3 The language of explanation texts

The next paragraph includes a number of different textual relationships. It begins with a textual relationship of **Simple Contrast** that involves contrasting what is *usually* true and what is *sometimes* true:

SIMPLE CONTRAST (Part 1): Atoms usually have the same number of protons and electrons,
SIMPLE CONTRAST (Part 2): but they can sometimes have more protons or more electrons.



Unit 3 Writing explanations

3.3 The language of explanation texts

The sentence involving the textual relationship of Simple Contrast then forms the first part of another textual relationship – Reason-Result. Here, the reason part of the relationship occurs before the result part and is signaled or signposted by the word ‘because’:

- RESULT:** Atoms usually have the same number of protons and electrons, but they can sometimes have more protons or more electrons.
- REASON:** This is **because** the electrons of some atoms are loosely attached and so these electrons can be lost to other atoms.



Unit 3 Writing explanations

3.3 The language of explanation texts

Inside the reason part of this Reason-Result relationship, there is another **Reason-Result** relationship. This time, the reason part of the relationship appears before the result part.

REASON: . . . the electrons of some atoms are loosely attached
RESULT: and so these electrons can be lost to other atoms.



Unit 3 Writing explanations

3.3 The language of explanation texts

Next, there is a textual relationship of **Condition-Consequence** in which the consequence part of the relationship comes before the condition part.

CONSEQUENCE:
CONDITION:

An atom becomes positively charged
if it loses an electron



Unit 3 Writing explanations

3.3 The language of explanation texts

The two parts of the Condition-Consequence relationship together form the first part of another textual relationship – a relationship of **Reason-Result** in which the result part appears first and the reason part is signaled by ‘because’.

RESULT: An atom becomes positively charged if it loses an electron

REASON: **because** it then has more positively charged protons than negatively charged electrons.



Unit 3 Writing explanations

3.3 The language of explanation texts

The final sentence of this paragraph also contains textual relationships of **Condition-Consequence** and **Reason-Result**.

CONSEQUENCE: An atom becomes negatively charged
CONDITION: if it gains an electron

RESULT: An atom becomes negatively charged if it gains an electron

REASON: **because** it then has more negatively charged electrons than positively charged protons.



Unit 3 Writing explanations

3.3 The language of explanation texts

The next paragraph begins with a sentence that introduces readers to the fact that positively charged atoms and negatively charged atoms are not balanced. The fact that they are not balanced is a **result** of the fact that they do not have the same number of protons and electrons so, once again, we have a textual relationship of **Reason-Result**. Here, the result is signaled by ‘so’.

REASON: Positively charged and negatively charged atoms do not have the same number of protons and electrons

RESULT: so they are not balanced.



Unit 3 Writing explanations

3.3 The language of explanation texts

This is immediately followed by another textual relationship of Reason-Result in which, once again, the result is signaled by ‘so’.

REASON:	Atoms try to remain balanced
RESULT:	so negatively charged atoms try to lose an electron to another atom and positively charged atoms try to gain an electron from another atom.



Unit 3 Writing explanations

3.3 The language of explanation texts

In the final part of this paragraph, there are several more textual relationships, beginning with a relationship of **Reason-Result** in which the reason part of the relationship begins with ‘when’ which (along with ‘whenever’) often signals that a particular circumstance always leads to a particular result.

REASON:	When electrons pass from one atom to another,
RESULT:	an electric current is created.



Unit 3 Writing explanations

3.3 The language of explanation texts

This is followed by another textual relationship of Reason-Result in which the result part is signaled by 'so' and a textual relationship of **Statement-Example(s)** in which the example is signaled by the noun 'example'.

REASON: Electrical current passes through some things better than others

RESULT: and so these things are referred to as 'good conductors of electricity'.

STATEMENT: Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity'.

EXAMPLE: One **example** of a good conductor of electricity is a piece of copper wire.

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Unit 3 Writing explanations

3.3 The language of explanation texts

In the last section of the text – the Conclusion section – there is a final relationship of Reason-Result. The reason why readers might think about how electricity is created the next time they flick a switch is that they now know something about what happens.

REASON: Now you know that electricity is the energy that is created when free electrons are attracted to positive atoms.

RESULT: Next time you flick a switch to turn on an electrical appliance, you might think about what is happening.



Unit 3 Writing explanations

3.3 The language of explanation texts

The most common textual relationships in explanation texts are *Reason-Result*, *Means-Purpose*, *General-Specific* and *Statement-Example*; *Simple Contrast* and *Condition-Consequence*.



Unit 3 Writing explanations

3.3 The language of explanation texts

Another important feature of the language of explanation texts is the fact that the verbs are very often in the **simple present tense**. There are lots of simple present tense verbs in the text we have examined here. Here are a few examples:

Electricity **is** a very important part of our daily lives.

It **gives** us the power that drives our electrical appliances, such as light globes, heaters, televisions and computers.

Electrons **have** a negative charge; protons **have** a positive charge; neutrons **do not** have any charge.



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 2

Genre-based Writing



Unit 3 Writing explanations:



TASK 2

Read the paragraph below and underline the words that signal **reasons** or **results**. Check your answer by pressing **the red** button.

Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme. For example, you can click on the icon that starts up your computer's word processing programme. Now your computer knows what programme you want to use but it can't do anything useful because it doesn't have any data to work on. By using your keyboard, you can input data. Just type some text.



Unit 3 Writing explanations:



TASK 2

Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme. For example, you can click on the icon that starts up your computer's word processing programme. Now your computer knows what programme you want to use but it can't do anything useful because it doesn't have any data to work on. By using your keyboard, you can input data. Just type some text.

STATEMENT: Your computer needs to know which programme you want to use

RESULT: and so your next task is to select a programme.

STATEMENT: Now your computer knows what programme you want to use but it can't do anything useful

REASON: because it doesn't have any data to work on.



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 3

Genre-based Writing



Unit 3 Writing explanations:



TASK 3

Read the two paragraphs below and try to work out which words signal **purpose** (i.e., what the function of things is):

To understand how a personal computer works, you need to know about its hardware (the various bits of the computer) and its software (the programmes that it needs in order to do the things you want it to do).

Personal computers have a keyboard for entering data, a monitor for displaying information, a storage device for saving data and a microprocessor, sometimes called a central processing unit (CPU), for doing all the calculations. These things are called 'hardware'. Personal computers can also have other types of hardware, such as a mouse, speakers and a printer. Computers also have programmes, that is, sets of instructions that direct the computer to do things. There are programmes for running the computer's hardware (operating systems) and programmes for doing other things, such as playing games, writing letters or keeping accounts (utility programmes).



Unit 3 Writing explanations:



TASK 3

To understand how a personal computer works, you need to know about its hardware (the various bits of the computer) and its software (the programmes that it needs in order to do the things you want it to do).

Personal computers have a keyboard for entering data, a monitor for displaying information, a storage device for saving data and a microprocessor, sometimes called a central processing unit (CPU), for doing all the calculations. These things are called 'hardware'.

Personal computers can also have other types of hardware, such as a mouse, speakers and a printer. Computers also have programmes, that is, sets of instructions that direct the computer to do things. There are programmes for running the computer's hardware (operating systems) and programmes for doing other things such as playing games, writing letters or keeping accounts (utility programmes).

Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 4

Genre-based Writing



Unit 3 Writing explanations:



TASK 4

Look at the paragraph below and try to identify the words that signal **WHAT YOU NEED TO DO** in order to achieve a particular goal, that is, the **MEANS** by which you achieve a particular result:

Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme. For example, you can click on the icon that starts up your computer's word processing programme. Now your computer knows what programme you want to use but it can't do anything useful because it doesn't have any data to work on. By using your keyboard, you can input data. Just type some text.



Unit 3 Writing explanations:



TASK 4

Look at the paragraph below and try to identify the words that signal **WHAT YOU NEED TO DO** in order to achieve a particular goal, that is, the **MEANS** by which you achieve a particular result:

Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme. For example, you can click on the icon that starts up your computer's word processing programme. Now your computer knows what programme you want to use but it can't do anything useful because it doesn't have any data to work on. By using your keyboard, you can input data. Just type some text.



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 5

Genre-based Writing



Unit 3 Writing explanations:



TASK 5



Look at the words in brackets in the sentences below. Can you work out what their function is?

Function	Words in brackets
	To understand how a personal computer works, you need to know about its hardware (the various bits of the computer) and its software (the programmes that it needs in order to do the things you want it to do).
	Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme.
	There are programmes for running the computer's hardware (operating systems) and programmes for doing other things such as playing games, writing letters or keeping accounts (utility programmes).

Unit 3 Writing explanations:



TASK 5

Function	Words in brackets
To explain what is meant by the words 'hardware' and 'software'.	To understand how a personal computer works, you need to know about its hardware (the various bits of the computer) and its software (the programmes that it needs in order to do the things you want it to do).
To explain what is meant by the word 'icon'	Your computer needs to know which programme you want to use and so your next task is to select a programme. By clicking on an icon (a symbol) or entering a command, you can select a programme.
To name 'programmes for running the computer's hardware' and 'programmes for doing other things'.	There are programmes for running the computer's hardware (operating systems) and programmes for doing other things such as playing games, writing letters or keeping accounts (utility programmes).

Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 6

Genre-based Writing



Unit 3 Writing explanations:



TASK 6

Look at the words in brackets in the sentences below. Can you work out what their function is?

Function	Words in brackets
	Personal computers can also have other types of hardware, [such as] a mouse, speakers and a printer. Computers also have programmes, [that is], sets of instructions that direct the computer to do things.



Unit 3 Writing explanations:



TASK 6

Look at the words in brackets in the sentences below. Can you work out what their function is?

Function	Words in brackets
'such as' introduces an EXAMPLE ; 'that is' introduces an EXPLANATION	Personal computers can also have other types of hardware, such as a mouse, speakers and a printer. Computers also have programmes, that is, sets of instructions that direct the computer to do things.



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

Task 7

Genre-based Writing



Unit 3 Writing explanations:



TASK 7

Your next task is to write an explanation text by yourself. Choose either

i) *How do earthquakes happen?*

OR

ii) *How do tsunamis occur?*

You can link to the websites listed below for useful information and then use the text template below to help you to structure your text.

<http://scign.jpl.nasa.gov/learn/eq1.htm>

http://volcano.und.nodak.edu/vwdocs/vwlessons/lessons/Rolling_earth/Rolling_earth2.html

<http://news.bbc.co.uk/2/hi/science/nature/4126809.stm>

<http://news.bbc.co.uk/2/hi/asia-pacific/5194316.stm>

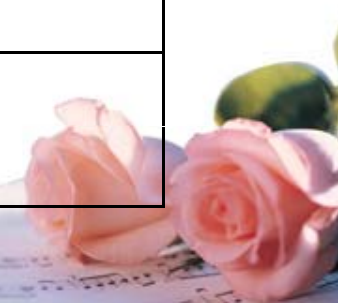


Unit 3 Writing explanations:



TASK 7

Student Number:	
Explanation text template	
Topic WHAT YOU ARE GOING TO EXPLAIN	
Focus MORE SPECIFIC INFORMATION about the topic	
Detail (PREVIEW) & DETAILS - (WHAT, HOW and, often, WHY)	
Conclusion SUMMARY AND (COMMENT)	



Student Number:

Explanation text template

Topic

WHAT YOU ARE
GOING TO
EXPLAIN

How do earthquakes happen?

Focus

MORE SPECIFIC
INFORMATION
about the topic

Earthquake is one of the most destructive events.

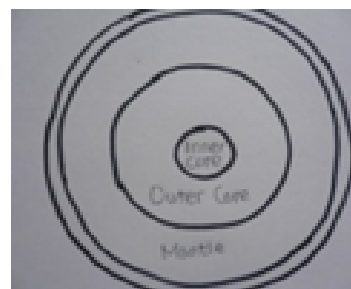
Detail

(PREVIEW)

&

DETAILS -
(WHAT, HOW
and, often,
WHY)

about the Earth.



Converge



Diverge



Collide



The Earth is made up of three major layers: a solid core which is at the centre of the Earth, the molten magma mantle which is a mobile semi-molten layer around the core, and the crust, the outer-shell of the Earth. The crust is broken up into 12 main plates floating on the mantle. Below the crust, radiation from the Earth's core heats the semi-molten mantle to temperatures of over 5000 degrees Celsius. An earthquake is a vibration travelling through the Earth's crust. If plates converge, one plate is drawn slowly beneath the other. If plates collide, rock layers are forced upwards. This creates mountains. If plates diverge, lava emerges from the mantle and then it becomes cool. New sections of crust are then formed. A fault occurs where the crust moves in different directions at the edges of plates leading to a build-up of connected energy which is then released. The release of this energy is called an earthquake. The

place where the earthquake begins is called the hypocentre. There are three waves of energy in an earthquake when it emits its power. The first is called primary, or P-waves, which people feel as a sudden jolt. The second is called secondary, or S-waves, which arrive after a few seconds and which people feel as side-to-side shaking. The last is called surface waves, which radiate outwards from the epicentre - the point on the surface directly above the hypocentre - and arrive after the main P and S waves. These are felt less intensely than the other two.↵

Conclusion↵

SUMMARY AND

(COMMENT)↵

Now you know earthquakes are the earth's natural means of releasing stress. When an earthquake occurs, you might be able to feel whether it is a primary wave or a secondary wave, or a surface wave.↵

Student Number:

Explanation text template

Topic
WHAT YOU ARE
GOING TO
EXPLAIN

How do tsunamis occur?

Focus
MORE
SPECIFIC
INFORMATION
about the topic

Tsunamis are enormous ocean waves that travel hundreds of miles at speeds near 500 mph – as fast as commercial jets. They can make a devastating impact on the coastal areas.

Detail
(PREVIEW)
&
DETAILS -
(WHAT, HOW
and, often,
WHY)

To understand how tsunamis occur, you need to learn something about earthquakes at sea.

A tsunami is caused by earthquakes at sea. When the plates that make up the Earth's surface suddenly push against each other, an earthquake occurs. A tsunami occurs when energy from an earthquake jolts the seabed upwards by several metres, displacing hundreds of cubic kilometres of water. This causes huge waves to move through the ocean, away from the earthquake's epicentre. The tsunami moves with speed in deep water. Although it slows down when it reaches shallow water near the coast, the waves become higher. The only sign that a tsunami is approaching may be the sudden retreat of coastal water. This was the case in Sri Lanka on 26 December, 2004 where a tsunami led to widespread destruction.

Conclusion
SUMMARY AND
(COMMENT)

Now you know how tsunamis occur, namely, earthquakes at sea which release energy jolting the seabed upwards. You should be aware of their devastating impact on the coastal areas.

Student Number:

Explanation text template

Topic
WHAT YOU ARE
GOING TO
EXPLAIN

How do tsunamis occur?

Focus
MORE
SPECIFIC
INFORMATION
about the topic

Tsunamis are enormous ocean waves that travel hundreds of miles at speeds near 500 mph – as fast as commercial jets. They can make a devastating impact on the coastal areas.

Detail
(PREVIEW)
&
DETAILS -
(WHAT, HOW
and, often,
WHY)

To understand how tsunamis occur, you need to learn something about earthquakes at sea.

A tsunami is caused by earthquakes at sea. When the plates that make up the Earth's surface suddenly push against each other, an earthquake occurs. A tsunami occurs when energy from an earthquake jolts the seabed upwards by several metres, displacing hundreds of cubic kilometres of water. This causes huge waves to move through the ocean, away from the earthquake's epicentre. The tsunami moves with speed in deep water. Although it slows down when it reaches shallow water near the coast, the waves become higher. The only sign that a tsunami is approaching may be the sudden retreat of coastal water. This was the case in Sri Lanka on 26 December, 2004 where a tsunami led to widespread destruction.

Conclusion
SUMMARY AND
(COMMENT)

Now you know how tsunamis occur, namely, earthquakes at sea which release energy jolting the seabed upwards. You should be aware of their devastating impact on the coastal areas.

Unit 3 Writing explanations

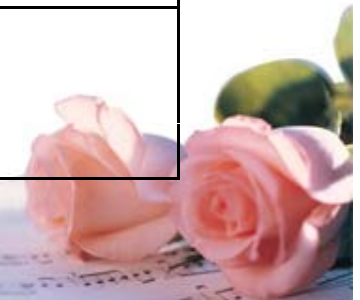
3.4 Final comment and review

We have now examined both instruction texts and explanation texts. There are a number of differences between the two that you will be able to see clearly if you compare the text template at the end of Unit 2 with the text template that follows. You should remember, however, that the features of the language of explanation texts that are listed at the end of the text template are typical of explanation texts. This does not mean that they always occur or that other features of language do not occur.



Unit 3 Writing explanations:

Explanation text template	
Topic WHAT YOU ARE GOING TO EXPLAIN	
Focus MORE SPECIFIC INFORMATION about the topic	
Detail (PREVIEW) & DETAILS - (WHAT, HOW and, often, WHY)	
Conclusion SUMMARY AND (COMMENT)	



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common language functions:

Definitions (including labels)

e.g., Everything that exists is called 'matter'.

Examples

e.g., One example of a good conductor of electricity is a piece of copper wire.



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common textual relationship:

Reason-Result

e.g., . . . the electrons of some atoms are loosely attached (REASON) and so these electrons can be lost to other atoms (RESULT).

Means-Purpose

e.g., **To understand** what causes electricity (PURPOSE), you need to learn something about atoms (MEANS)



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common textual relationship:

General-Specific

e.g., Atoms are made up of small particles (GENERAL). The three main particles that atoms are made of are protons, neutrons and electrons. The nucleus (centre) of an atom is made up of protons and neutrons. Electrons spin round the nucleus. Electrons have a negative charge; protons have a positive charge; neutrons do not have any charge (SPECIFIC).



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common textual relationship:

Statement-Example

e.g., Electrical current passes through some things better than others and so these things are referred to as 'good conductors of electricity' (STATEMENT). One example of a good conductor of electricity is a piece of copper wire (EXAMPLE).



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common textual relationship:

Simple Contrast

e.g., Atoms usually have the same number of protons and electrons (PART 1), but they can sometimes have more protons or more electrons (PART 2).

Condition-Consequence

e.g., An atom becomes positively charged (CONSEQUENCE) if it loses an electron (CONDITION).



Unit 3 Writing explanations

3.4 Final comment and review

Language of the text

Common grammatical forms:

Verbs in simple present tense form

e.g., Electricity **is** a very important part of our daily lives.

It **gives** us the power that drives our electrical appliances . . .



Unit 3 Writing explanations:

Explaining HOW and WHY things happen

The End

Genre-based Writing

