

What is the World Wide Web?

The **internet** is a global network of computers. The **World Wide Web** is the part of the **internet** that can be accessed through **websites**.

Websites consist of **webpages** which allow you to see information.

Websites are accessed using a **web browser**. A **browser** is a **program** designed to display the information held on a **website**. Every **website** has an address at which it can be found, a bit like a house address.

CSS (Cascading Style Sheets)

HTML defines the structure and content of your **web page** CSS defines the style and layout of **web pages** CSS can be used to change the style of a whole **website**, one **web page** or a single occurrence of an element, e.g.

```
<h1 style="text-align:center">
```

CSS Syntax

When adding CSS to a web page it is defined in the **head** between the `<style>` tags.



Example of styling a paragraph of text

```
p {  
  color: red;  
  text-align: center;  
  font-family: verdana;  
  font-size: 20px;  
}
```

Adding a table to a website

A **table** is an arrangement of data in **rows** and **columns**. The heading row will contain the data description.

student_ID	first_name	surname	group	age

```
<table>  
<tr> ( table row)  
  <th> studentID </th> ( table header)  
  <th> first_name </th>  
</tr>  
  
<tr> (tag is used again to create second  
row)  
  <td> Jill </td> (table data)  
  <td> Year 8 </td>  
</tr>
```

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Using HTML to create websites

All **web** pages on the **internet** are created using a language called **Hypertext Markup Language (HTML)**.

HTML describes:

- what information appears on a webpage
- how it appears on the page (formatting)

HTML can be written in specialist software, or in a simple text editor like Notepad++. As long as the document is saved with the file extension **‘.html’** it can be opened and viewed as a **webpage** from a **browser**. This example **HTML** code displays a message on a webpage:

```
<html>  
  <body>  
    <h1> Hello world! </h1>  
  </body>  
</html>
```

The code uses **tags** to describe the HTML elements added.

Tags you need to know:

<html> states that the document is a HTML document
<body> all the HTML elements should be in the body
<head> all the information about the webpage including the title and CSS styling should be between these tags
<h1> states that the following text appears as the **largest heading** (<h6> is the smallest heading)
<p> states that this is the beginning of a new paragraph

<a> adding a hyperlink to a webpage

```
<a href = "http://www.arsenal.com"> Arsenal </a>
```

href is the hypertext reference **hypertext link**

**** is the tag needed to add an image

Example:

```
<img src = "http://bbc.co.uk/image.jpg" width = "400"  
height = "240" >
```

Adding a list:

Use the tags for **ordered list** `` **unordered list** ``

Example of an ordered list: ``

```
  <li> Venom 2 </li>  
  <li> Free guy </li>  
</ol>
```

1. Venom 2
2. Free guy

The environmental impact of using digital devices

The use of digital technologies and devices have both positive and negative impacts on the environment.

Environmental Issues	
Positive	Negative
<ul style="list-style-type: none"> Industries such as manufacturing and agriculture are becoming more efficient Increase in renewable energy options. Electronic communication reduces the need to travel. 	<ul style="list-style-type: none"> Extraction of natural resources depletes them. Electronic components require precious metals Devices need large amounts of energy Large amounts of e-waste People want the latest devices, causing old devices to go to waste

Keyword: e-waste

E-waste is any waste created by electronic devices that have been thrown away (discarded) and waste and substances created in their manufacture (production)

Possible solutions for disposing of e-waste safely

Sustainability: Re-use, Reduce, Recycle

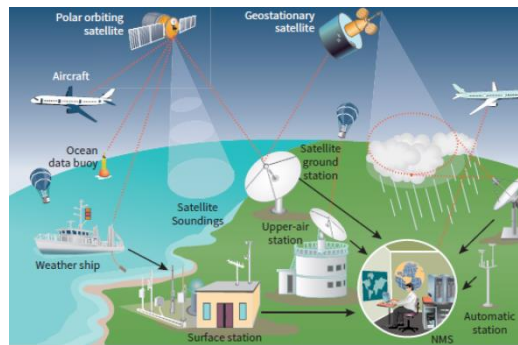
- ✓ both consumers and manufacturers change the way they think about digital devices (**reduce consumption**)
- ✓ use re-usable components, longer lifespan for the devices (**reuse and reduce**)
- ✓ passing legislation that prohibits the mishandling of e-waste and enforcing its **safe disposal and recycling**
- ✓ replace burning by using technology to safely recycle the materials



Fact: By 2030 it is estimated that 40% of total **energy consumption** due to use of digital devices. Servers in data centres account for 3%.



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Ethical Issues with using digital devices

Ethical versus Lawful

Ethics- a system of moral principles, often shown by doing things or acting in ways that individuals and society recognises as reflecting good values.

Lawful- abiding by the laws and rules of a particular country.

Artificial Intelligence is the act of computers replacing humans in analyzing and processing data and making decisions.

Benefits of AI

- Processes are sped up as computers can analyse large amounts of data much quicker than a human.
- AI can be used when a human is unavailable, such as using a symptom checker on the internet for a minor illness rather than booking and waiting for a doctor.
- Repetitive or time-consuming tasks can instead be completed by a computer



Self-driving cars

Pros:

- could reduce accidents, faster reaction times
- reduce road congestion, reduce pollution
- minimise unproductive, stressful drives

Cons:

- ethical issues (outcomes by premeditated decisions)
- If an accident is unavoidable, should they prioritise the safety of pedestrians or drivers? Hacking
- potential system failures, reliability
- job losses for professional drivers