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Grade 9 Section: -----------------

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Design & Technology
Revision Unit 1 & 2

Internet of Things	The **connection** via the **internet** of computing devices inside everyday objects, enabling them to send and receive data.
The internet	Is a world-wide system of computer networks and computers (www : world wide web)
URL / Domain Name	The **address of a website**, for **example www.moe.gov.ae.**
ISP	Each user makes use of an **internet service provider (ISP).** These are **companies** that **provide** the user with **access** to the **internet**. A monthly fee is usually charged for this service. Some examples in the UAE are *DU* and *Etisalat.*
IP Address	A **unique set of numbers** that **identifies** each computer on the internet for **example 94.207.143.228.**
DNS	Like an **address book** of websites.
HTML	**Stands for** *Hyper Text Mark-up Language.* It Is a basic programming language **for making webpages.** **HTML5** is the most **recent version** of HTML
Annotated	Writing **notes** around something.
Rendering	An automated process a computer does to **create or display** something.
Server	A **central powerful computer** that can have files or other media on it for others to access.
Mark-up language	A **computer language** that 'annotates text **inside angled brackets < >** , allowing it to have meaning to both people and computer.
hyperlink	A **link** to another website, location or file.
W3C	**Word wide web consortium** is **organization** that looks after the standards for HTML, CSS and JavaScript. **Partners** (Apple, Microsoft, IBM, Adobe)
CSS	**Stand for** *Cascading Style Sheet*, it is used for **format** HTML documents. It makes web pages look good, set **colors, fonts sizes**.

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JavaScript (JS)	is a popular programming language that can used with HTML to make web pages more **interactive** and **animated?** • Why we use it? 1- Open source 2- can be executed on most devices

The internet has changed industry: Travel Industry, Music Industry, Newspaper, Industry.

• *Internet browser is a program that gives user access to internet.*
Web browser requests the HTML from a server, understands it and renders it on the screen for the user.
Examples: google Chrome, Firefox, Safari, IE/Edge,UC browser and Opera.

The steps your computer goes through to access any website:
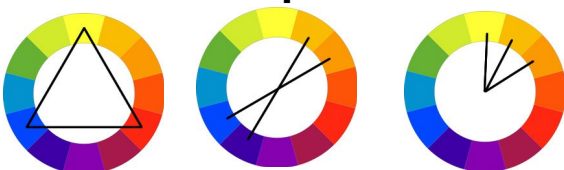
1. The user opens an internet browser.

2. User types the website into the browser.

3. The browser connects to the server.

4. DNS Server finds the IP address of the website typed.

5. The server responds and sends the web page.

6. The browser reads the HTML code to display the page.

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- **Contrast:** The use of **colors** in a website to make it **stand out**. Think of **opposites** such as black is a good contrast on a white background – it stands out.

- **Usability:** How **easy** something is **to use** or fit for purpose

- **Audience:** A group of **people** or person who are there to **interact** with **something.** In games we call them 'players'. Think of the audience as the users.

- **The** <u>basic principles</u> or **<u>(Design elements)</u> you need to follow when creating your website can be grouped into four main categories:**

| 1- Purpose | 2- Colors | 3- Layout | 4- Navigation |

- **(1)- Purpose:** you must **consider** your **audience** and your **goal.**

- **(2)- Colors:** <u>Color theory</u> contains a number of <u>**key levels.**</u> The most basic level is the interaction of colors in a design through complementation, contrast, and vibrancy.

- <u>**Complementation :**</u> this is how we see **colors in relation** to **other colors.**

- How **colours** are **seen next** to **other colours**

- <u>**Contrast :**</u> this is when the designer **divides different parts** of the **page** to **draw** the **user's attention.**

- <u>**Vibrancy**</u> : This is when you **express the emotion of your design**. **Brighter colors** lead the reader to **feel more energetic** as a result of your design. **Darker shades relax** the user, **allowing** their mind to **focus on other things**.

- **<u>Three common aspects are widely used for having a good color scheme:</u>**

  triadic, **compound** and **analogous**

  The <u>tools</u> **help you explore your own creativity but they keep within the rules that make appealing colour combinations:**
  1. Kuler
  2. Colour Scheme Designer 3 (Paletton).

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(3)- Layout: There are many **aspects of design** that come together to achieve good web design including 'layout'.

- **Whitespace:** is the **space between** different **sections** on a page.

- **Flow:** Flow in web design is the **way** the website **guides** the user **through a page.**

- **Alignment:** (position : left , right, center) helps create a good flow.

- **Length:** The YouTube website is a good example of a site with a short length. If you look on the right, you will notice the **scroll bar** is **large** this **means that the page is short**. The user should not have to scroll down for more than a couple of seconds. (shorter better).

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- **(4)- Navigation:** one of the main **ways** that will **determine** how **a user interacts** with a **site**. It gives the user awareness of where they are in the site's structure.

  - **Breadcrumbs tell a user where they are on a web site. Breadcrumbs** are especially needed for **more complex sites** that have multiple levels of navigation. The name comes from leaving a path behind from which you can follow back to your original location. So essentially, it shows the exact point of where you are, while giving you options to go back to other previous steps in the site's structure.

- **Primary navigation** stands for the **content that most** users are **interested in.**

- **Secondary navigation** is for **content** that is of **secondary interest** to the user.

- **Evaluation and usability:** There are **many reasons** why we need a website to have

  good usability:

1. **Easy to learn :** If a user can **understand the website content** and can use the website to **gain the information** that they **need.**

2. **Efficiency of use :** When it is **easy for the user to figure out** where to go and **understand** the website **navigation.**

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3. <u>**Memorability :**</u> You want **people to remember your site**. Your website must have unique features.

4. <u>**Error frequency and speed :**</u> the amount of **errors** in your website to **be low**. A low error frequency increases its usability.

5. <u>**Subjective satisfaction:**</u> Here you have to **think as a user**, **not a designer** and **ask your self-questions** such as:

• Is the website interesting and informative?

• If your website is selling a product, does it serve a customer?

• Does the website look good?

• Is it easy to navigate and search?

6. <u>**Navigation:**</u> **easy access** and structure to guide them to the information they want.