



Overview

In this assignment, you'll explore how the Internet actually works, what happens behind the scenes when you type in a web address, and how information travels across a network. You'll create your own website and understand how billions of devices - including yours - are connected to share information around the world.

Assignment Preparation

Make a copy of this document to record your answers. Rename your copy of the document to **lastname_internet**, where **lastname** is your last name. You will **place all answers and screenshots** in this Google Document. The steps below will tell you what to put in your answer document - use the spaces provided to insert your answers accordingly.

Part 1: Digital Divide

DO THE FOLLOWING:

- Review the Khan Academy material on [The Digital Divide](#).
- Complete the following practice set:
 - Practice: [The Digital Divide](#)
- Take a screenshot of the results page including your username, the practice set title, and your score showing at least 3/4 to earn proficiency (see example).

The screenshot shows the Khan Academy interface. At the top, there's a navigation bar with 'Explore', a search bar, and a user profile for 'jwbarrett'. Below the navigation is a course sidebar for 'Computers and the Internet' under 'Lesson 10: The digital divide'. The main content area displays a practice exercise titled 'The digital divide' with a progress bar showing 'Proficient + 100%'. A red box highlights this section. To the right, another red box highlights the 'Exercise complete!' message and the score '4/4 correct'. The bottom right corner of the main content area has a 'Support Khan Academy' button.



[Insert screenshot here]

Part 2: Searching the Internet

You will often need to search online for information that you are interested in. It's important to understand how Internet search works in order to obtain relevant results

- ▶ Watch [What Is The Internet?](#) [3:44 min]
- ▶ Watch [The Internet - How Search Works](#) [5:12]

DO THE FOLLOWING:

- In 3-5 sentences, describe how search engines can be used to tailor a system to individual users (provide an example).

- Use Google search to find a video that is relevant to your final project topic on the impact of AI in your chosen area. Try to find a video that was published within the last two years. Provide the video link below:

Video Link:	
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Part 3: Create a Google Site

In this part of the assignment, you will create a simple web page using Google Sites.

- Read [Google's tutorial on Google Sites](#)
- See [example site](#) (your website layout should look similar to this)

Website Requirements:

DO THE FOLLOWING:

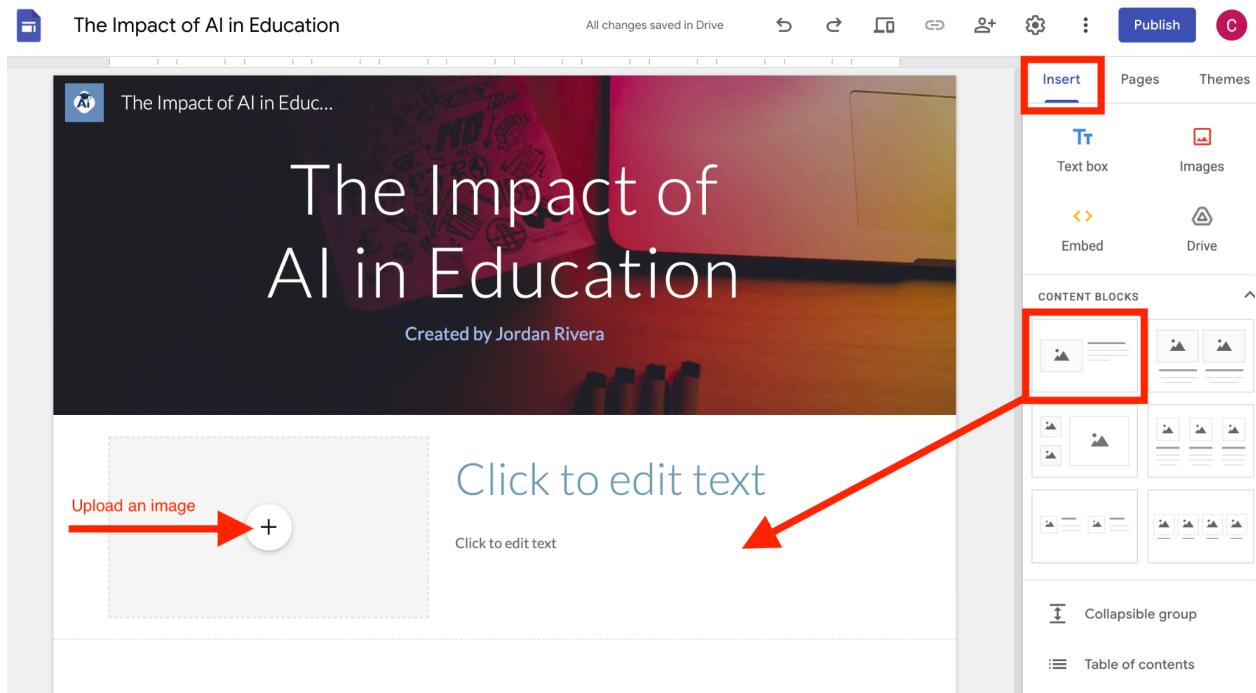
- Rename your site to your final project topic name (for example, "The Impact of AI in Education").
- Change the banner image from the default.
 - Click in the banner area and select the Image button  Image ▾
 - From the dropdown options, choose "Select".
 - Browse for and select the image that you would like to use for your banner.

- Add your logo that you created in a previous assignment.
- Click the site name text on the top left area of the banner.
 - Under the Logo heading, select the “Upload” button.
 - Browse for and select your *logo* image from a previous assignment to insert it.
 - Close the settings window when you are finished.

Home Page Requirements:

DO THE FOLLOWING:

- Add your topic name as the page title (this will be your home page).
- Under the page title add “Created by *Your Name*”, where you use your own full name.
- Adjust the font size, color, and style as desired.
- Add your website image that you created in a previous assignment.
- Select a layout from the Content Blocks to add your AI generated website image from a previous assignment.
 - Add your elevator pitch from a previous assignment (see [example site](#)).



“Impact” Page:

- Add a new page called “Impact”
- Embed the video from your search results (from *Part 2: Searching the Internet*).
- Add some text describing the video's relevance to your project topic (see [example Impact page](#)).

Publish Your Google Site:

- Click the Publish button  to make your website publicly viewable.
- In the web address box, enter a name that combines your name and your topic.
 - In the example below, the student used a combination of their name (jrivera) and topic (AI in Education) to publish the site with URL:

<https://sites.google.com/view/jrivera-ai-in-education-1>

Publish to the web

Web address

https://sites.google.com/view/jrivera-ai-in-education-1  Full website URL

- Provide the URL of your Google site. Your Google site must have its privacy permission set so that your instructor can use the URL to view it.

Website Link:

Part 4: DNS, Storage, and Access

If you want a meaningful domain name for the Google Site that you created, you can buy one. For instance, Jordan Rivera, whose project is on the Impact of AI in Education, may want something like *jriveraeducation.org* for their website's domain name so that when people put in <http://jriveraeducation.org> their Google site would come up.

IP Addresses and DNS

▶ Watch [IP Addresses and DNS](#) [6:45]

DO THE FOLLOWING:

- Visit [GoDaddy's Domain Search](#) and find an available domain that is a combination of your name and your final project topic; it can be in the .com, .net, or .org domains (e.g. name = J. Rivera, topic = AI in Education, domain name = jriveraeducation.org). Keep trying until you find an *available* domain.
- Place in your answer document a screenshot showing that your domain is available and that you can purchase it (don't purchase it!)

	[Insert screenshot here]
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- Find the IP address of the server for your Google Site that you created in Step 3.
- To do this, visit <https://whatismyipaddress.com/hostname-ip> and paste the **domain name** of your google site into the IP lookup box

 Note: *Enter the domain name only, not the full URL*

Google Site Server IP Address:

- In a paragraph, explain how a DNS server would connect your new domain name to your Google Site. When someone types in your domain name, what does the DNS server do to display your website? Use the terminology and concepts from the video, and include your specific domain name and the Google Sites IP address in your explanation.

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Google Site Storage and Access

 Watch [The Internet - HTTP and HTML](#) [7:06 min]

- In a paragraph, explain how your Google Site is stored and how people access it through the Internet. Your description should include at least these terms from the video: HTTP, HTML, URL, server, and browser. Use specific examples from your own Google Site in your explanation.

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Website Accessibility

 Watch [Web Accessibility Perspectives](#) [7:36]

- Describe how your Google Site addresses at least two of the accessibility considerations mentioned in the video (50-100 words).

- Explain how web accessibility can help reduce equity deficits for users of the Internet - provide at least one example (50-100 words).

Part 5: Networks & Troubleshooting

DO THE FOLLOWING:

- Use <https://whatismyipaddress.com/> to find the IP Address for the computer that you are using.

What is your IP Address?	
Provide a 1-2 sentence description of what an IP Address is and why it's important.	

- Provide a screenshot showing the IP Address information for the computer that you're working on.

	[Insert screenshot here]
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- Watch [The Internet - Wires, Cables and Wifi](#) [6:40 min]

- Watch [The Internet - Packets and Routers](#) [6:25 min]

- The videos on how the internet works describe how data is transferred on a network.
- Identify at least two elements of a network and describe how they function and interact to transfer information.

	Network Elements	How do they function and interact to transfer information?
1		
2		

→ Troubleshooting Scenario:

- Your friend enters the URL for their favorite website into a new browser window, but the web page does not appear.

→ Why might the website not have appeared and how might you troubleshoot this issue?