

+++ TEACHING GUIDE +++

MODULE 4: THE INTERNET

Agenda:

1. Internet browsers (5 min)
2. Entering website addresses (5 min)
3. Searching and navigating (10 min)
4. Downloading pictures (15 min)
5. Creating an account (10 min)

[For students who are familiar with browsing the Internet, this lesson should be skipped. The only crucial section to cover is creating an account on the p5.js web editor (the exercise for this module). This can be done at the end of Module 3 or at the start of Module 5 before they do their first sketch. Most of the other info in this Module can be integrated into future sessions as they use the web editor and other online resources for p5.js.]

Internet browsers

[For simplicity, Internet Explorer is used in most screen shots. Other browsers can be used depending on the operating system and your personal preference.]

An Internet browser is an application that allows you to visit websites. There are many browsers available to use, and they all allow you to use the Internet. The default browser that comes pre-installed on all Windows computers is Internet Explorer.



Internet Explorer Icon

Some other common internet browsers are Chrome, Firefox, and Safari (the default browser for Mac computers).



Google Chrome



Firefox



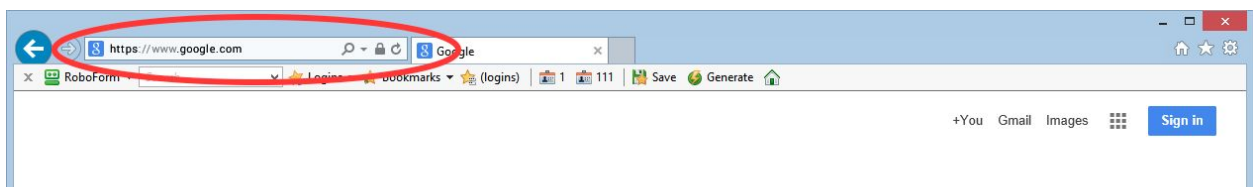
Safari

Open Internet Explorer by searching for it with the Start Menu. Click the Start Icon, then start typing “Internet” into the search bar. When you see the icon for Internet Explorer appear, left-click on it to open the application.

Entering website addresses

[The address bar varies a bit from browser to browser, so describe its position and look based on the browser you’ve chosen.]

Every webpage on the Internet has a unique name. This name is called an address (it is also sometimes called a URL). If you know the address of the website you want to go to, you can type that name into the “address bar” at the top of your browser. The address bar is the wide, white rectangle at the top of the browser window. You can click once on that text, and it should all become highlighted. You can then pressed Backspace to erase that text and type what you want.



In the address bar, type yahoo.com and press the Enter key. This will take you to the Yahoo! website, where you should see a list of news stories, weather, and other information.

Now type google.com in the address bar. This will take you to the Google homepage. Google is a website that allows you to search the internet. You’ll notice this website is very simple. You see the word Google and a box to type in right below it.

Searching and navigating

[For learners who are familiar with the basic of using a web browser, this is a good opportunity to go into more depth about search terms, and how to improve the results you get using different keywords, quotation marks, + and -, etc.]

Searching the internet is useful when you don't know the exact name or address of a website you want to visit. If you can't remember the address of a website, you can use Google or any other "search engine" to find the website. All you have to do is type the name of a website (without the .com or .org) and the search engine will find the website address for you.

Searching is also useful if you are looking for new information about a topic. Maybe you want to learn about a subject, but you don't know what websites have the information you need. You can use a search engine to find websites that have the information you seek.

It's very easy to search using the browser. In the address bar at the top, instead of typing a website address, just type a few words about what you are looking for then press Enter. For example, type "south african artists" in the address bar at the top and press Enter. The browser will display information about the words you search. You may see some photos of artists and their work, and you'll see a list of websites that have information about South African artists.

To visit one of the websites in the list, click on the blue text. The blue text is called a "link" or "hyperlink". Whenever you see blue text on a webpage, clicking on that text will 'link' you or take you to a new page.

Navigating

[For more advanced learners, introducing "browser history" may be appropriate. Showing the learners how they can access the most recently accessed web pages or even search through history can be useful.]

Not all browsers have a forward button. So skip that if using Firefox or similar.]

Let's say you clicked on a link and visited a new webpage. Once you look at that page, you discover it doesn't have the information you were looking for and you'd rather go back to the page you were visiting before you clicked the link. You can click the "back button" in the top left corner of the browser.

The back button is usually an icon of an arrow pointing to the left.

Try left clicking on a link you find on the search engine page. The click on the page button to return to the search results page.

The arrow next to the “back button” is the “forward button”, which is usually an arrow pointing to the right. (This button might not be there if you are using Firefox.) The browser automatically remember the webpages you visited and the order in which you visited them. So you can use the back button and forward button to return to the pages you’ve already seen.

Whenever you are done collecting information from you search, you can start a new search by left clicking on the address bar and pressing the “Backspace” button on the keyboard to erase all the text in the bar. Now type some more words you want to search and press Enter to start the process again.

Scrolling

[This is a key concept for navigating the Internet. Most browsers have eliminated the traditional scroll bar with clickable arrow keys on the right side. So make sure all learners are comfortable using the mouse wheel or arrow keys to move up and down a page.]

Websites often have more information or content than can fit on your screen. When this happens, you’ll need to “scroll down” to the rest of the page. “Scrolling” simply means to move up or down on a page. If you are using a mouse, there is usually a small wheel between the left and right mouse buttons. When you are on a long webpage, use a finger to roll the wheel on your mouse toward you or away from you to scroll down or up on a page.

If you aren’t using a mouse, or your mouse doesn’t have a scroll wheel, you can always use the up and down arrow keys on the keyboard to move up and down on a page.

Downloading pictures

[The instructions for this section are specifically about downloading an image from Google Images search results.

A more general instruction of right-clicking to download any image they see on a web page may be more useful.

This info is not strictly necessary for this module’s exercise, so it can be skipped if you are short on time.]

Imagine that you are looking at some website and you see a picture that you want to save so you can review it later. Perhaps you want to use it as a model for a drawing you are making. Instead of visiting that website every time you want to see the picture, you can “download” the picture to your computer. “Downloading” means you save it to your computer so you can use it later without the Internet.

Downloading a picture is a fairly easy process. First you need to find a picture you want to download. Go to google.com in your Internet browser. In the address bar, type the name of an animal you like, then press Enter. (For example, type “giraffe” and press Enter.) This will give you search results for your animal.

Now near the top of the page, look for the word “Images.” Left-click on the word Images, and the search results will now display many images of your animal. Look through these images until you find one you like. Left-click on the picture you want to save. It will become larger and you should see a few buttons to the right of picture. Click on the button “View Image”.

Clicking that button should show your a full-sized version of the image. Now use the right mouse button to right-click on the image. When the menu appears look for the option that says “Save Image As...” and left-click on that option.

That will open a box that allows you to choose the location on your computer where you want to save the image. You can also give the image a different name if you want. Navigate to the folder you created for yourself on the desktop. Once you’ve selected your folder, save the image in that folder.

You now have a copy of that picture in that folder you can open whenever you like and you don’t have to use the Internet to find it again.

Creating an account

[If using the p5.js web editor (recommended), have learners create an account for their exercise. Otherwise, if you want to make a class blog and have them share their sketches there, have them create an account on Tumblr or a similar service to learn about uploading and sharing work on the Internet.]

Many websites allow you to create an account and “log-in” to the site. Creating an account allows the site to remember information about you and allows you to share things on the website.

A common website for this is Facebook. To use Facebook, and many sites like it, you must create a username and password. The username and password are unique to you, so no one can take your account and pretend to be you on the website. Users can connect with friends, share updates and photos, and stay up-to-date on news.

Another common example of a website where you create an account is an e-mail service. If you create an account on a website like Google Mail or Yahoo Mail, it allows you to have a unique e-mail address (like yourname@gmail.com) so you can send and receive private messages with your friends, family, or anyone else.

For this course, you will create an account on a website called the p5.js web editor. Once you create this account, you will be able to write code, make interactive drawings, and save your work online, so you can access it and work on your drawings from any computer with the internet.

In today's exercise you'll create an account on the p5.js web editor site.

Exercise: Creating an account on editor.p5js.org

[If the learners have their own email address, allow them to use that. Otherwise create a class email address with gmail and have each of them add a unique '+' to the email address. For example: "ourcodingclass+rebecca@gmail.com"

This should allow each of them to have a unique log in without having to create their own email address just for the course. Using one password for the whole class is fine, but unique passwords are obviously better. Use your discretion about how to handle log-ins depending on the learners' comfort.

Finally, as of the time of writing, only the alpha version of the p5 web editor is available. Once it is launched publicly, the URL will simply be <http://editor.p5js.org>

In this module's exercise, you'll create an individual account on the website we'll use to learn how to code and create drawings. First, open a web browser, and enter the following address into the address bar at the top:

alpha.editor.p5js.org

When the website appears, you should see grey text in the top right corner of the page that says "Log in or Sign up". Move your mouse over the words "Sign up" and left-click.

Now you'll be on a page with several boxes where you can enter text.

First you create a **username**: for this, you can type your first and last name as one word.

Next you enter an **email address**: if you have your own email address already, use that. If not enter `uthandocoding+[your first name]@gmail.com`

Then enter a **password**: `uthando123`

Finally, type that password again exactly the same.

You've now created an account!

Enter the website address into your browser again. Now you should see grey text in the top right corner that says "Hello, [your username]!"

You must remember your username and password because you will use them to log in to the web editor every time you want to work on your projects.