Intro to Computers Curriculum

This curriculum seeks to equip students participating in Prepare's educational programs with basic computer skills. It is unique in that there is a corresponding Google Drive folder that can be downloaded and it includes both online and offline versions of activities to allow for instruction during power cuts and internet connectivity issues which are common for government schools. Upon completing this curriculum, students can use these skills to self-learn safely and effectively using the internet. In addition to creating and sharing this curriculum, Prepare provides laptops, projectors, and other technology materials to our schools and offers in-person and online training sessions for teachers and students.

Created by Prepare Curriculum Development Team

Curriculum Outline and Objectives

1. What is a computer?

Objectives:

1.1 Uses and advantages of computers

1.2 Types of Computers

1.3 Parts of a Computer

Introduction:

Online: Teachers, show students what computers can do. For example, ask a student what their favorite cartoon show is and pull it up on Youtube. Google image search for various items. Open documents and type "Hello students!" Also mention how computers can be used to help with school work. Ask students which subject is the toughest for them. Then search the web for video tutorials about that subject or topic. For example, if they do not understand Pythagorean Theorem in Math class, search for tutorials or worksheets on the internet. This is to show students how computers can be used as a self-learning tool to help them in inter, college, and in their jobs.

Offline: Watch the following video: Lesson 1 Intro (Offline) Video.mp4

Information:

Link to PPT: Click Here

Activity:

Online: Teachers, display the Quizlet on the projector to review the parts of a computer.

Parts of a Computer Quizlet : Click Here

Offline: Teachers, ask students what are the different ways to use a computer. See how many they can come up with and write them down on the board. Then on the board, make a list of what students know about computers and what they would like to learn (see below).

What do you know about computers?	What do you want to learn about computers?
- Student responses	- Student responses

Assessment:

Find a partner and create a poster on one sheet of paper (see example below). Pick one of the three objectives listed above and make an informative poster. Your poster should have written information and hand drawn pictures. Use this poster to teach your classmates about computers.

1.3 Parts of a Computer

Monitor

Central Processing Unit (CPU)

Keyboard

Mouse

This is a desktop computer. Computers have many parts as shown above. There are also lots of different parts inside of a computer. You can use the computer to learn about new and interesting things.
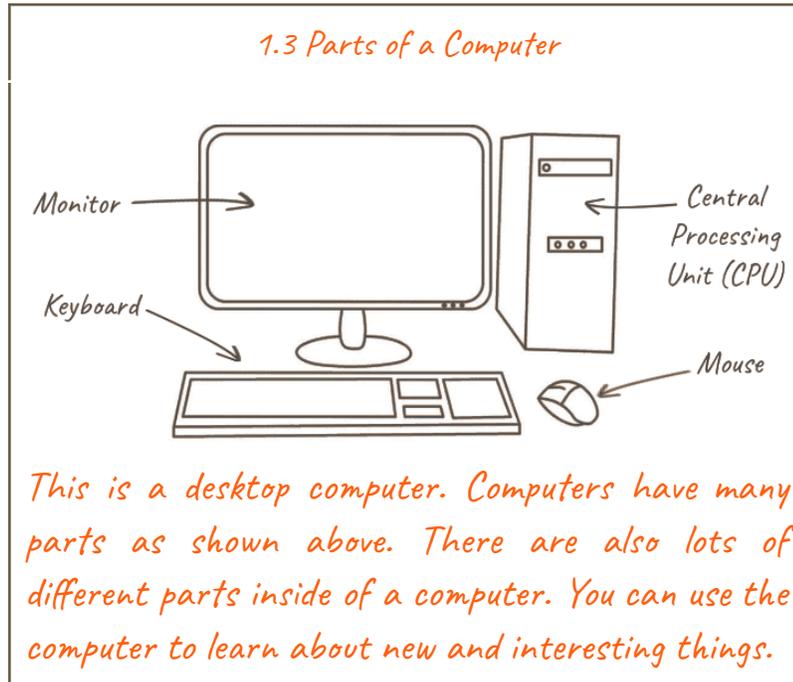
2. About Computers

Objectives:

2.1 Functions of a computer

2.2 What are input and output devices

2.3 What are hard copies and soft copies

Introduction:

Online: Watch the following video about Input and Output devices

Video Link: [Click Here](#)

Offline: Teachers, ask students to recall the different parts of a computer that we discussed in Lesson 1. Then explain the following definitions to them.

Input Devices	Devices used to send data or info to the CPU, Helps humans interact with and control computer
Output Devices	Devices that receive data or info from CPU, computers use the output devices to interact with the human
Hard Copy	Physical copy of information, not a computer file
Soft Copy	Information stored on a computer that can be shared and viewed on a computer

Information:

Lesson PPT: [Click Here](#)

Activity:

For each of the following objects, please explain whether it is an input device, output device, hard copy, or soft copy. Why do you think so?

- Projector
- Keyboard
- Mouse
- E-book
- Monitor
- Book
- Picture sent via Whatsapp
- Framed Photo

Activity Answers on Next Page

Projector is an OUTPUT DEVICE

Keyboard is an INPUT DEVICE

Mouse is an INPUT DEVICE

E-book is a SOFT COPY

Monitor is an OUTPUT DEVICE

Book is a HARD COPY

Picture sent via Whatsapp is a SOFT COPY

Framed photo is a HARD COPY

Assessment:

Complete the following chart:

Part Name	Input/Storage/ Processing/Output	What does it do?
Mouse		
Keyboard		
CPU		
Monitor		
Speakers		
Microphone		
Hard disk		

Assessment Answers on Next Page

Assessment Answers

Part Name	Input/Storage/ Processing/Output	What does it do?
Mouse	Input	The mouse can be moved around on a flat surface to control the movement of a cursor on the computer display screen.
Keyboard	Input	The keyboard allows the user to type letters, numbers, and symbols into the computer. Keyboard shortcuts can also be used to execute computer functions quickly.
CPU	Processing	A piece of hardware that enables your computer to interact with all of the applications and programs installed. A CPU interprets the program's instructions and creates the output that you interact with when you're using a computer.
Monitor	Output	A monitor is a display device like a TV screen, it displays information in pictorial or text form
Speakers	Output	An output hardware device that connects to a computer to generate sound.
Microphone	Input	Allows computer users to input audio into their computers, it translates sound vibrations in the air into electronic signals that your computer can understand.
Hard disk	Storage	Stores the operating system, applications, and data files such as documents, pictures and music that your computer uses. The rest of the components in your computer work together to show you the applications and files stored on your hard drive.

3. Getting Started

Objectives:

3.1 Turn on and shut down a computer

3.2 Google Search + URL bar

3.3 Types of Clicks

Introduction:

Online: Watch the following video.

> Video Link: [Starting Up and Shutting Down Computer](#)

> Video Link: [Internet Search](#)

*Please note the video explains how to turn on and shut down a desktop computer. However, you will mostly be using laptops so you will not have to turn on/off the monitor, CPU, UPS separately as shown in the video.

Offline: Teachers, explain the following to students.

How do you start a car? Turning a car key does not get the car rolling, it only turns on the engine which is the power supply of the car. Similarly, when you click the power button on a laptop, it closes a circuit which turns on the computer's power supply and provides power to all the parts of the computer.

Information

> Lesson PPT: 🟨 Getting Started

Activity:

Navigate to one of the following websites. (Type the name in URL bar)

> Preparestudentconnect.org

> khanacademy.org

> timeforkids.com

Explore the site. (Click on various buttons and links)

What happens when you left click?

What happens when you right click?

What happens when you hover?

Assessment:

Answer the following questions:

1. The left-click is also known as
    a. Single click
    b. Main click
    c. Default click
    d. Alternate click
2. What does triple-clicking on a block of text do?
    a. Highlight the word
    b. Highlight the sentence
    c. Nothing
    d. Highlights the entire paragraph
3. If you want to bring up a menu of additional options what type of click should you use?
    a. Triple click
    b. Main click
    c. Right click
    d. Left click
4. What is the keyboard shortcut for shutting down your computer?
    a. Ctrl + Z
    b. Ctrl + Alt + Del
    c. Ctrl + Shift + Del
    d. Win + Del
5. What is the first thing that happens when the power button on a computer is pressed?
    a. Log in screen appears
    b. Input components like keyboard, microphone, touchpad turn on
    c. Electric circuit is closed which turns on computer's power supply
    d. Computer makes startup sounds

Assessment Answers

1. A
2. D
3. C
4. B
5. C

4. Emails

Objectives:

4.1 How to compose an email, reformat text, add attachment, and send

4.2 How to navigate your inbox (different categories, starred, important)

4.3 General email tips (spam, trash, cc, bcc)

Introduction:

Online: Teachers, send yourself an email. While you do so, explain what you are doing using the following terms: subject line, compose mail, recipients, email address, inbox, sent mail. Once you send your email, navigate to the inbox and open it. Tell students that this is where they will see all the emails they receive. Then, go to the sent mail box to show students the email you just sent. This is where students can see all the emails they have sent.

Offline: Teachers explain the following to students.

How can you communicate with friends or family members when they are in different villages? You can write letters, send SMS, or make a phone call. Emails are also a great method of communicating over long distances. Unlike letters, SMS, and phone calls, you must have internet connection to send emails. E-mails are the primary mode of communication for those who work office jobs. You can attach videos, photos, documents, and links to emails making them a very versatile and efficient mode of communication.

Information:

Lesson PPT: [Click Here](#)

Activity:

Create an email address for yourself.

Assessment:

Send an email to your teacher about what you learned today.

5. Downloading, Sharing, Managing Files

Objectives:

5.1 What does it mean to "download" something?

5.2 Where can you find downloads on your laptop? How can you rename and move them?

5.3 Sharing files as an email attachment

5.4 Creating and organising files and folders

Introduction:

Offline: Teachers, explain the following to students.

File	A file is a container in a computer system for storing information.
Upload	Sending data or a file from your computer to somewhere on the Internet. Ex. If you've ever shared a photo you took on Facebook or another social media site, you've <u>uploaded</u> that photo.
Download	Downloading means receiving data or a file from the Internet on your computer. Ex. When you receive photos on Whatsapp or other messaging apps and save them to your phone, you are <u>downloading</u> them.
Folder	Just like a notebook is used to store different pages of notes, a folder stores a group of files. Organising your files into folders can make it easier to find the file you need when you need it.
File Explorer	File browser used to access, edit and manage data, files and other content stored on a computer.

Online: Watch the following video about files and folders.

Video Link: ▶ Windows Basics: Working with Files and Folders

Information:

Lesson PPT: <u>Click Here</u>

Activity:

Your teacher sent you an email titled "Lesson 5".

1. Download the "Lesson 5 Activity" file from her email.
2. Find the downloaded file on your laptop and rename it to "YourName_Lesson5Activity."
3. Now move this file to your Desktop.
4. Open the file in Word.
5. Complete the activity.
6. Save and download the file once you complete the activity.
7. Email your teacher your completed activity (send file as an email attachment).

Assessment:

Answer the following questions.

1. What should you pay attention to when you are downloading something from the internet and why? Fill in the blanks with the correct term or explanation.
    ○ The _____ of the file because it may take up too much space on your hard drive
    ○ The source of the file because _____
    ○ The _____ of the file because you may not have the appropriate application to open it
    ○ The content of the file because _____
2. Which of the following can you do to a file after you download it. Select all correct answers.
    ○ Rename
    ○ Share
    ○ Edit
    ○ Delete
3. What does it mean to "download" a file? _____

    _____

4. Match the following types of media (a-e) to the correct file format (#1-5).

    | a. Video | 1. .mp3 | 1. _____ |
    | b. Photo | 2. .img | 2. _____ |

c. Powerpoint   3. .mp4   3. _____
        d. Word Document   4. .docx   4. _____
        e. Song (Sound File)   5. .ppt   5. _____

5. Which of the following statements is TRUE?

   a. You cannot download software from the internet

   b. You cannot rename or edit a file that you download from the web

   c. It is possible to accidentally download a computer virus from the web.

   d. Anything on the web can be downloaded.

<p style="text-align:center; color:orange;">Assessment Answers on the Next Page</p>

1. What should you pay attention to when you are downloading something from the internet and why? Fill in the blanks with the correct term or explanation.
   - The SIZE of the file because it may take up too much space on your hard drive
   - The source of the file because IT MAY BE UNSAFE TO DOWNLOAD (COMPUTER MAY GET VIRUS)
   - The FORMAT of the file because you may not have the appropriate application to open it
   - The content of the file because IT MAY BE UNSAFE, YOU SHOULD MAKE SURE IT IS WHAT YOU WANT TO DOWNLOAD (YOU CAN PREVIEW FILES BEFORE DOWNLOADING)
2. Which of the following can you do to a file after you download it. Select all correct answers. ALL ARE CORRECT.
   - Rename
   - Share
   - Edit
   - Delete
3. What does it mean to "download" a file? transferring data or a file from the Internet to your computer, it can now be accessed offline

4. Match the following types of media (a-e) to the correct file format (#1-5).

a. Video	1. .mp3	1. e
b. Photo	2. .img	2. b
c. Powerpoint	3. .mp4	3. a
d. Word Document	4. .docx	4. d
e. Song (Sound File)	5. .ppt	5. c

6. Which of the following statements is TRUE?
   a. You cannot download software from the internet
   b. You cannot rename or edit a file that you download from the web
   c. It is possible to accidentally download a computer virus from the web.
   d. Anything on the web can be downloaded.

6. Google Drive

Objectives:

7.1 Log into Google Drive

7.2 Share files using google drive (view, comment, and edit modes)

7.3 Navigating Google Drive (Shared with me, My drive, folders, etc.)

7.4 Uploading and Downloading from Google Drive

Introduction:

Online: Watch the following video

      Video Link (Telugu): [What is google drive?](#)

Offline: Teachers, show students the PREPARE Curriculum folder on Google Drive. Click on the various folders and documents to show students how useful Google Drive can be. Explain how we are able to have several people from anywhere in the world work together on one document. For example, the Prepare curriculum was created by volunteers in America. Google Drive is a cloud based storage solution and includes Google Docs, Google Slides, and Google Sheets which can be used as alternatives to MS Office.

Information:

      Lesson PPT: 🔲 Google Drive

Activity:

Create a Google Doc titled "Lesson 6 Activity - Your Name" and write down what you have learned about computers so far. Share it with a classmate. Ask them to share their Google Doc with you as well. Open your classmate's Google Doc and leave some comments on it.

Assessment:

Create a Google Slides and write about your favourite food, celebrity, subject, sports team, or any other sports team. When you are done, share it with a friend and ask them to share theirs with you. Open their Slides and learn about their favourite topic. Once you are both finished sharing,

create a new folder in Google Drive. Rename it to "Lesson 6 - Your Name". Move your Google Doc and your Google Slides into that folder and share the folder with your teacher.

7. Internet Safety

Objectives:

7.1 How to keep your computer safe

7..2 How to keep yourself safe on the internet (When is it okay to share personal information?)

7..3 Best practices to stay safe on the internet

Introduction:

Online: Watch the following video

Video Link : Internet Safety

Offline: Teachers, ask students what they would do in the following scenarios:

What would you do?		
A stranger starts talking to you on the street. They ask you what your name, phone number, and birth date is.	A stranger tells you that you have won a laptop. They ask you to follow them to come to their office to pick it up.	A stranger tells you they are a college admissions officer. They ask for your name, a photo, address, and phone number.

In the above scenarios, students would likely not give their information, walk away from that person, or call for an adult because it is unsafe to share personal information with strangers. These scenarios are very similar to what can happen online.

For example, like scenario 2, it is common to receive text messages saying you have won something click on some link to retrieve your prize. However, when you click on this link your information can get stolen or your computer may get damaged.

Similar to scenario 1, unknown senders can also ask you for personal information which they can use to guess or reset your account passwords or make fake accounts with your name on them.

In scenario 3, you should ask for proof that they are a college admissions officer and ask other questions to verify their claims before sharing personal information. You should always check to make sure any requests for personal information are safe, even online.

In this lesson you will learn how to protect your personal information and keep your computers safe if you ever encounter these situations.

Information:

Lesson PPT: [Click Here](#)

Activity:

Teachers, ask students to come up with a list of rules you can follow to stay safe on the internet. Write them on the board and ask students to take notes. Below is an example list, you can add more.

Rules to Follow when Using Internet

1. Do not click on ads
2. Do not share personal information
3. Always use strong passwords

Assessment:

Answer the following questions:

1. How can you stay safe when you are online?
    a. Share your password with friends
    b. Download as many games as you can
    c. Only open e-mails and messages only from people you know
    d. Give out your address and phone number
2. What should you do if someone you do not know wants to chat with you?
    a. Send a message back to the stranger
    b. Call the stranger on the phone
    c. Block the stranger and tell an adult you trust
    d. Tell them to chat with your friend instead
3. Which of the following would make the best password?
    a. andhrapradesh
    b. Your name
    c. Your birthday
    d. 4ndhr@Pr@d3sh!
4. Which of the following is <u>NOT</u> a piece of personal information?
    a. The temperature outside
    b. Your home address

      c.   Your phone number

      d.   Your date of birth

5. How is a computer virus similar to a human virus such as COVID-19?

      a.   A computer virus can make you feel sick

      b.   A computer virus can be cured using medicine

      c.   A computer virus can spread to other computers

      d.   A computer virus is caused by leaving your computer outside in the cold

<div align="center">Assessment Answers on the Next Page</div>

Assessment Answers:

1. C. Only open e-mails and messages from people you know
2. C. Block the stranger and tell an adult you trust
3. D. 4ndhr@Pr@d3sh!
4. A. The temperature outside
5. C. A computer virus can spread to other computers

8. Online Etiquette and Cyberbullying

Objectives:

8.1 What is cyberbullying? What are some examples?

8.2 Why is cyberbullying harmful? How can you stop and/or prevent cyberbullying?

8.3 Rules to follow for online interactions

Introduction:

Online: Watch the following video.
    Link to Video: Rules for Staying Safe on the Internet
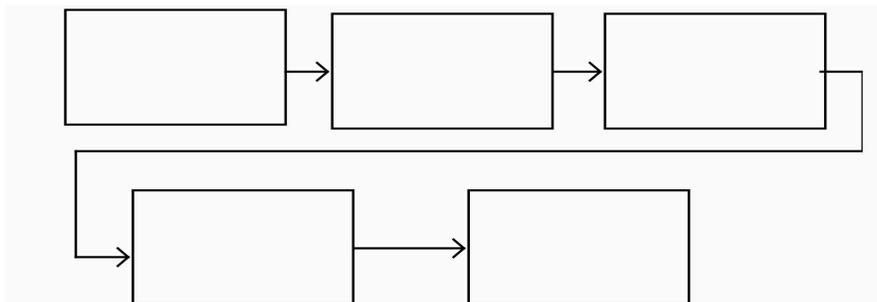**Offline:** Teachers, explain the following to students.
What is empathy? It is the ability to understand the feelings of another. When we are interacting with others we should always think about how our words or actions can affect someone else. Bullying is saying or doing something mean to someone else. Even though there is a computer screen separating you and someone else on the internet, you should still be empathetic and refrain from bullying.
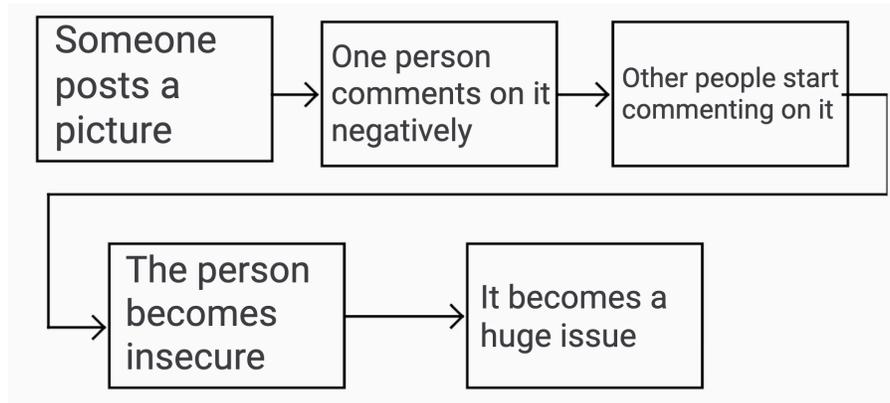
Information:

    Lesson PPT: Click Here

Activity:

Make a flowchart with an example of how cyberbullying can start and what it leads to.

Activity Example Answer on Next Page

Someone posts a picture	→	One person comments on it negatively	→	Other people start commenting on it

The person becomes insecure	→	It becomes a huge issue

Assessment

In the box next to the statements, write "do" (or) "don't". If you think the statement is a good idea, write "do". If it's not, write "don't".

STATEMENT	DO/DON'T
1. block the person leaving mean comments	
2. report the person you blocked	
3. stay positive in your own comments	
4. post very private things	
5. avoid controversial topics	
6. respond to angry messages with anger	
7. ignore messages from strangers	
8. save proof of cyberbullying	
9. reply to nasty messages from strangers	
10. post anything you want online	

Assessment Answers:

1. Do
2. Do
3. Do
4. Don't
5. Do
6. Don't
7. Do
8. Do
9. Don't
10. Don't

9. Misinformation

Objectives:

9.1 What is misinformation?

9.2 What are the consequences of misinformation?

9.3 How to distinguish between fact, fiction, rumour, and opinion

Introduction:

Online: Watch the following video about fake news

　　　Video Link (Telugu): [Click Here](#)

Offline: Look at the following images and tell if they are true or false and why you think so.

REAL NEWS RIGHT NOW

SCIENCE AND TECHNOLOGY

Louisiana Penitentiary to Become World's First Prison Staffed Entirely by Robots

OCTOBER 17, 2016 *by* **R. HOBBUS J.D.**

ANGOLA, La. – Inmates at the largest penitentiary in the United States are about to get a taste of what life in prison might be like one hundred years from now. Thanks to a Japanese robotics firm by the name of Evangelion Systems, the Angola maximum security

SPACE & PHYSICS

A NASA Probe Recently Found Alien Life on Venus : Report by NASA

Data from an old NASA mission to our sister planet may contain overlooked evidence for the gas phosphine, a potential biosignature

By Jonathan O'Callaghan on October 1, 2020

Introduction Answers on Next Page

All of these articles are fake news!

1. It has no date on it, schools were shut down for the first wave but not for Omicron. Recycling old news articles and broadcasts and changing the headlines is a common way to spread fake news.

2. The first clue is the headline, the headline says Louisiana has a prison that is run entirely by robots which is unbelievable. Second, the source website Real News Right Now does not seem like a trustworthy source for news because it ends in .com and has a suspicious name.

3. Drinking hand sanitizer seems harmful to health. A "miracle cure" that prevents COVID and kills germs also seems too good to be true. Although this image says WHO approved this cure, it is not published on the WHO website so it may be a false claim.

4. The article title in the URL does not match with the headline, this means someone changed the headline before sharing this screenshot. Although scientificamerican.com is a reliable source for science news, this image has been altered to be fake.

Information:

Lesson PPT: Click Here

Activity:

Complete the following chart.

Term	Definition	Example
source		
bias		
rumour		
fact		
fiction		
opinion		
propaganda		

Term	Definition	Example
source	a person, organization, website, or media from which you receive information, or the creator of information	unreliable sources: Whatsapp, Wikipedia, Zee News
bias	a tendency to prefer one person or thing over another, and to favor that person or thing.	YSR party leader says TDP party leaders stealing money from the poor
rumour	a story that is not confirmed but is being discussed	Someone in your town gets very rich very quickly, people are saying that he must be a thief to make this much money so quickly
fact	Information that can be proven true using evidence	The world wastes about 1 billion metric tons of food each year.
fiction	something told or written that is not fact, a made-up story.	YSR party leader says TDP party leaders stealing money from the poor
opinion	Something a person believes to be true but cannot be proven, other people may disagree or agree with it, it is not a fact	Mangos are the best, most delicious fruit
propaganda	information used to promote a political cause or point of view	BJP leaders sponsor ads on TV saying Modi is reincarnation of Rama

Assessment:

Answer the following questions:

1. What are the 3 questions you should ask to decide whether a source is believable?

    1. _____
    2. _____
    3. _____

2. What is the main difference between misinformation and disinformation?
   a. Misinformation is a fact that is hard to believe and disinformation is fiction
   b. Misinformation is good information that is not proven and disinformation is bad information that is not proven
   c. Misinformation and disinformation are the same
   d. Misinformation and disinformation are both incorrect information but disinformation is spread on purpose to mislead the public
3. True or false: Anything posted on any news website is fact.
4. Which of the following domains are most reliable? Select all correct answers.
   ○ .com
   ○ .edu
   ○ .gov
   ○ .net
5. What is one example of fake news? What effect can it have?

_____
_____
_____

1. What are the 3 questions you should ask to decide whether a source is believable?
     1. **Who** made it?
     2. **Why** did they make it?
     3. **When** did they make it?
2. What is the main difference between misinformation and disinformation?
     d. Misinformation and disinformation are both incorrect information but disinformation is spread on purpose to mislead the public
3. True or **FALSE**: Anything posted on any news website is fact.
4. Which of the following domains are most reliable? Select all correct answers.
     - ~~.com~~
     - .edu
     - .gov
     - ~~.net~~
5. What is one example of fake news? What effect can it have?

   Example answer, students may have different answers:

   Fake news: Whatsapp forward saying drinking hand sanitizer can cure and prevent COVID.

   Effect: People will die or get very sick because they will drink hand sanitizer to cure and prevent COVID. People will not get vaccinated and instead drink hand sanitizer.

10. Conducting and Presenting Research

Objectives:

10.1 Finding reliable sources of information

10.2 Different types of sources and their advantages

10.3 Presenting Research with MS Powerpoint and Google Slides

Introduction:

Online: Watch the following video

      Video Link: Click Here

Offline: Teachers, present the following powerpoint about Dogs created by Deekshitha Kandikattu from ZPHS Movva. This lesson will teach students how to research a topic using the internet and present it using tools like MS Powerpoint or Google Slides.

      Link to Deekshitha's PPT: Click Here

Information:

      Lesson PPT: Click Here

Activity:

Pick a topic and begin researching it. You will work on creating a presentation using MS PPT or Google Slides. When you are done, share or email your presentation with your teacher. They will use the projector to display your PPT or Slides. Then, you will present your topic to the class.

Assessment:

Answer the following questions: