



# Internet Explorers

Gr. 2-4 Activity Write Up

# Internet Explorers

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## Terms of Use

Prior to using this activity or parts thereof, you agree and understand that:

- It is your responsibility to review all aspects of this document and the associated activity write ups, and ensure safety measures are in place for the protection of all involved parties.
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## About Actua

Actua is Canada’s leading science, technology, engineering and mathematics (STEM) youth outreach network, representing a growing network of over 40 universities and colleges across the country. Each year 350,000 young Canadians in over 500 communities nationwide are inspired through hands-on educational workshops, camps and community outreach initiatives. Actua focuses on the engagement of underrepresented youth through specialised programs for Indigenous youth, girls and young women, at-risk youth and youth living in Northern and remote communities. For more information, please visit us online at [www.actua.ca](http://www.actua.ca) and on social media: [Twitter](#), [Facebook](#), [Instagram](#) and [YouTube](#)!



# Internet Explorers

## Activity Summary

Information is constantly available online. In this activity, participants will learn the steps necessary to determine fact from fake information (e.g., misinformation, disinformation, fake news), to better analyse bias and misinformation online. They will leave this activity with the tools and strategies needed to find reliable and credible sources while avoiding fake information in any setting.

*This activity is part of a series in the [cyber smart education suite](#) available in English and French. Explore [Actua's Cyber Smart Educator Handbook](#) to learn how you can bring cyber smart education into your teaching context.*

Developed by Actua, 2023.

Delivery Environment	Activity Duration	Intended Audience	Tech
In-Person	1 hour	Grades 2-4 (Ages 8-10)	<p>Certain activities will require a laptop/tablet. With modifications, it is possible to run this entire lesson in pairs/groups. <b>Facilitators should have access to a laptop, projector, speakers, and a screen or blank wall to project onto.</b></p> <ul style="list-style-type: none"><li>• Projector</li><li>• Speaker</li><li>• Screen/Blank Wall</li><li>• Laptops/Tablets</li></ul>



## Achievement Goals

### Learning Goals

Following this activity, participants will:

- **Identify and use** credible and reliable sources of information online and offline.
- **Understand** how misinformation is created as well as why it is often widely shared online.

### Success Criteria

Following this activity, participants can express:

- **I can define and explain** 'fact', 'misinformation', and 'fake news'.
- **I can distinguish** between reliable and unreliable sources of information.
- **I can explain** how misinformation is spread and ways to combat the spread of misinformation online.

TOOLSETS	SKILLSETS	MINDSETS
<p><b>Knowledge, resources, and experiences</b></p> <ul style="list-style-type: none"><li>• Misinformation</li><li>• Reliable and credible sources</li><li>• Machine learning</li></ul>	<p><b>Digital skills, STEM skills, &amp; essential employability and life skills</b></p> <ul style="list-style-type: none"><li>• Critical thinking</li><li>• Analysis</li><li>• Digital literacy</li><li>• Being safe &amp; responsible online</li><li>• Communicating online</li></ul>	<p><b>Digital intelligence, community action, and computational thinking</b></p> <ul style="list-style-type: none"><li>• Understanding your relation to technology</li><li>• Ethical AI</li><li>• Privacy management</li></ul>



## Logistics (Timing, Group Sizing, Materials)

Section Title	Time	Group Size	Materials
<b>Opening Hook</b>	5 minutes	<i>Whole Group</i>	<b>Facilitators</b> <ul style="list-style-type: none"> <li>Opening Hook Image (<i>Appendix C</i>)</li> </ul>
<b>Section 1: Online Ruse, Fake News</b>	15 minutes	<i>Small Groups (4-10 people)</i>	<b>Per group</b> <ul style="list-style-type: none"> <li>Game Card Deck (<i>Appendix C</i>)</li> </ul>
<b>Section 2: Inspect the Media</b>	30 minutes	<i>Whole Group; Small Groups</i>	<b>Facilitators</b> <ul style="list-style-type: none"> <li><a href="#">Internet Explorers Jeopardy Slide Deck</a></li> </ul>
<b>Reflection &amp; Debrief</b>	10 minutes	<i>Whole Group</i>	<ul style="list-style-type: none"> <li>N/A</li> </ul>



## Safety Considerations

Safety considerations have been provided below to support safety during this activity, however they are not necessarily comprehensive. It is important that you review the activity and your delivery environment to determine any additional safety considerations that you should be implementing for the delivery of these activities.

### Emotional Safety

The goal of this Cyber Smart project is to equip participants with the tools and knowledge to understand online behaviours and make safe decisions.

- Facilitators should understand that participants have different lived experiences and prior knowledge about cyber safety, cyber security and digital citizenship. This activity may involve or lead to discussions of sensitive topics, such as cyberbullying and other online risks. Facilitators should always keep the participants' emotional safety in mind in these discussions, and defer to training from their institution and training received for this project.
- Facilitators should focus on guiding discussions toward an appreciation for healthy and safe online behaviours, and empowering participants to make responsible, informed, and smart choices.

### Online Safety

Some components of this activity require the use of devices connected to the internet.

- Facilitators should review the provided videos and read/explore provided websites and materials to determine if they are suitable for their participants.
- Where applicable, facilitators should remind participants to stay on task and only use the links provided within this activity.
- Facilitators should also model and encourage appropriate online behaviour by all participants in the group (e.g., using chat boxes to answer and ask questions, using positive and encouraging language, using devices for the purpose of the task).



## Curriculum Links

This activity aligns with these components found in the [Canadian Computer Science Framework](#):

### **Cyber Security**

- Starting learners should be able to define cybersecurity and create safe passwords using effective criteria. Proficient learners should be able to describe common cyber attacks and identify malicious content, apply prevention practices and assess the role that people play in creating, preventing, and minimising the impacts of cyberattacks as well as consider how they affect people and society (p. 24).

### **Data: Data Governance**

- Starting learners should be able to identify ways that their digital or physical activity creates digital data and learn how to adjust privacy settings on commonly used digital tools. Proficient learners should be able to discover who owns the digital data they produce, as well as assess provincial, national and Indigenous data governance laws/agreements and be able to advocate for their data rights and the rights of others (p. 26).

### **Technology and Society: Ethics, Safety & the Law**

- Starting learners should be able to identify strategies to protect their personal data and identity online. Proficient learners should be able to define and apply basic copywriter principles, explain privacy concerns, and assess the effects of computer crime/hacking on self and society (p. 28).





## Activity Procedure

### To Do in Advance

Section Title	Preparation
<p><b>General</b></p>	<ul style="list-style-type: none"> <li>● <b>Think ahead and be ready to adapt:</b> <ul style="list-style-type: none"> <li>○ Determine your <b>delivery method</b> and leverage ideas from the delivery recommendations and adaptations sections.</li> <li>○ While <b>estimated times</b> are provided, it will be helpful to think about how much time you would like to spend on the activities and discussions.</li> <li>○ While <b>group sizes</b> (individual, pairs, groups) are suggested, many activities are flexible for your classroom.</li> </ul> </li> <li>● <b>Prepare for the content:</b> <ul style="list-style-type: none"> <li>○ Have <b>answers in mind</b> to share with participants for the various reflection questions asked.</li> <li>○ Examine the provided videos and read/explore the provided materials in <i>Appendix C</i> to determine if they are <b>suitable</b> for your participants.</li> </ul> </li> <li>● <b>Equipment:</b> <ul style="list-style-type: none"> <li>○ Ensure device, screen, and projector are set up.</li> <li>○ Prepare participant devices.</li> </ul> </li> </ul>
<p><b>Opening Hook</b></p>	<ul style="list-style-type: none"> <li>● N/A</li> </ul>
<p><b>Section 1: Online Ruse, Fake News</b></p>	<ul style="list-style-type: none"> <li>● Prepare the game deck (1 per group) and ensure the number of character cards match the number of participants in a group (1-3 Misinformers, depending on group size).</li> <li>● Depending on the age group, you may choose to write your own words on the provided cards.</li> </ul>



Section Title	Preparation
	<ul style="list-style-type: none"> <li>Familiarise yourself with the game rules.</li> </ul>
<p><b>Section 2: Inspect the Media</b></p>	<ul style="list-style-type: none"> <li>Familiarise yourself with the <a href="#">Internet Explorers Jeopardy Slide Deck</a>.</li> </ul>

## Opening Hook

1. Display the images below (see *Appendix C*) and ask participants to vote on which they think is real and which is fake:



boredpanda. (2020). *30 Fake Viral Photos People Believed Were Real*. [https://www.boredpanda.com/fake-news-photos-viral-photoshop/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=organic](https://www.boredpanda.com/fake-news-photos-viral-photoshop/?utm_source=google&utm_medium=organic&utm_campaign=organic)



boredpanda. (2013). *Top 22 Unbelievable Places That You Have To Visit Before You Die*. [https://www.boredpanda.com/amazing-places/?utm\\_source=google&utm\\_medium=organic&utm\\_campaign=organic](https://www.boredpanda.com/amazing-places/?utm_source=google&utm_medium=organic&utm_campaign=organic)

2. Reveal the truth to participants (**left photo is fake, right photo is real**).
  - a. Both images look beautiful and real, but the reality is that media (e.g., videos, photos, etc.) can be edited/falsified/doctored. It can be hard to determine what is real and what is fake online or offline if we don't know what questions to ask or where to look.

## Section 1: Online Ruse, Fake News

1. In this game, participants will be trying to guess the hidden word by asking 'yes' and 'no' questions. If they can figure out the word without falling for deep fakes, they win!

- a. However, some players ('Misinformers') are trying to spread misinformation and want to stop participants from guessing the word.
  - b. The 'Web Browser' will know the hidden word and will help 'Digital Citizens' to guess the word by answering participants' questions using tokens.
2. Split participants into groups (groups can have a minimum of 4 participants and a maximum of 10 participants per group, based on class size and participant-support required). For example, a class of 30 could be split into 3 groups of 10 participants .
  3. Distribute to each group the prepared Game Card Deck and begin the game.
    - a. Game Deck (*Appendix C*) includes: double-sided tokens (yes, no, maybe, correct) character cards (Web Browser, Digital Citizen, Misinformer), and words. For a description of the game deck, see *Appendix C: Additional Resources*.

### Double Sided Tokens



Yes



No

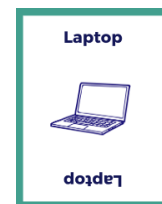


Maybe



Correct

### Character Cards



- b. Each group will have 1 'Web Browser' card, 1-3 'Misinformers' cards', and 4-8 'Digital Citizen cards', depending on group size.
  - i. Groups of 4-6 will have 1 Misinformers card, groups of 7-8 will have 2 Misinformers cards, and groups of 9-10 will have 3 Misinformers cards.

- c. Have group members sit in a circle with the Game Deck cards and tokens in the middle of the circle.
- d. Shuffle the character cards and distribute one to each player, face down.
- e. Have participants look at their card secretly.
- f. The participant with the 'Web Browser' card will reveal their card to the group and collect the tokens in front of them.
- g. The facilitator of the activity will then ask all groups to close their eyes, then ask the 'Web Browser' to open their eyes and choose one word card from the pile of word cards. Once they have chosen their card, they will put it face up in the middle of the group.
- h. The facilitator will then ask the 'Web Browser' to close their eyes.
- i. Next, the facilitator will ask the 'Misinformers' to open their eyes and look at the hidden word the 'Web Browser' has selected.
  - i. If there is more than one 'Misinformers', then the 'Misinformers' will also be instructed to look at each other so they know who their teammate is.
- j. The facilitator will then instruct the 'Misinformers' to close their eyes.
- k. The facilitator will collect each groups' word card so no one in the group can see it, then instruct everyone to open their eyes.
- l. 'Digital Citizens' work to figure out the hidden word.
  - i. All participants ('Digital Citizens' and 'Misinformers') ask the 'Web Browser' questions that require a 'yes' or 'no' answer (e.g., "Is it a place?", "Is it larger than a toaster?").
  - ii. The 'Web Browser' may not speak and must give a token ('yes', 'no', 'maybe', 'correct') to the participant who asked a question.
    - 1. Example: the hidden word is *computer*

**Digital Citizen 1:** "Is it alive?"

**Web Browser:** gives a 'no' token

**Digital Citizen 2:** "Is it a piece of technology?"

**Web Browser:** gives a 'yes' token



**Digital Citizen 3:** “Can I find it in my home?”

**Web Browser:** gives a ‘yes’ token

**Digital Citizen 2:** “Is it a computer?”

**Web Browser:** gives the ‘correct’ token

Game ends

- iii. The yes/no/maybe tokens are limited, so ‘Digital Citizens’ have to guess the hidden word before the tokens run out.
- iv. The ‘Misinformers’ are trying to misdirect the ‘Digital Citizens’ away from the hidden word by asking questions that they know are not related to the word, in order to use up tokens.
  - 1. Example: the hidden word is *computer*

**Digital Citizen 1:** “Is it alive?”

**Web Browser:** gives a ‘no’ token

**Misinformer:** “Is it a place I can visit?”

**Web Browser:** gives a ‘no’ token

**Digital Citizen 2:** “Is it an object?”

**Web Browser:** gives a ‘yes’ token

**Misinformer:** “Can I wear it?”

**Web Browser:** gives a ‘maybe’ token

- v. When the ‘Digital Citizens’ guess the hidden word correctly, the ‘Web Browser’ gives out the ‘correct’ token and the game ends. The ‘Digital Citizens’ have successfully avoided any misleading information!
  - 1. The ‘Misinformers’ can reveal who they are to the group.
- vi. If the ‘Misinformers’ are able to prevent the ‘Digital Citizens’ from guessing the hidden word, the ‘Misinformers’ have caused the ‘Digital Citizens’ to fall for misleading information.





(this can be played by first to “buzz” or just by having each group tally their scores based on their correct answers).

**a.** Answers for the slides are as follows:

- i.** Category 1 \$200 - Fake
- ii.** Category 1 \$400 - Fake
- iii.** Category 1 \$600 - Fake
- iv.** Category 1 \$800 - Fake
- v.** Category 1 \$1000 - Real
- vi.** Category 2 \$200 - Fake
- vii.** Category 2 \$400 - Real
- viii.** Category 2 \$600 - Fake
- ix.** Category 2 \$800 - Fake
- x.** Category 2 \$1000 - Real
- xi.** Category 3 \$200 - Real
- xii.** Category 3 \$400 - Fake
- xiii.** Category 3 \$600 - Real
- xiv.** Category 3 \$800 - Fake (they take 2 years)
- xv.** Category 3 \$1000 - Real
- xvi.** Category 4 \$200 - Real
- xvii.** Category 4 \$400 - Real
- xviii.** Category 4 \$600 - Fake (they use dolphins)
- xix.** Category 4 \$800 - Real
- xx.** Category 4 \$1000 - Real
- xxi.** Category 5 \$200 - Fake
- xxii.** Category 5 \$400 - Fake
- xxiii.** Category 5 \$600 - Fake
- xxiv.** Category 5 \$800 - Real
- xxv.** Category 5 \$1000 - Fake
- xxvi.** Category 6 \$200 - Real
- xxvii.** Category 6 \$400 - Fake
- xxviii.** Category 6 \$600 - Fake
- xxix.** Category 6 \$800 - Real
- xxx.** Category 6 \$1000 - Fake



3. After each question, ask each group to discuss if the video is **“Fact or Fake? Why do you think this? Was it difficult to determine?”**.
  - a. Let participants ask questions about words they might not know. Consider even playing as a class if that is more appropriate for your group.
  - b. Answers for the slides are provided in the speaker notes of the presentation.

## Reflection & Debrief

1. Discuss the following questions with participants to help them reflect on themselves and their online experiences (these could be shared with the entire group/in small groups/written down):
  - a. “What is the impact of spreading information that isn’t correct? Why is it important to be careful of misinformation online?”
    - i. *Possible responses: people who do not know the right questions to ask will believe what is said; it is important to be careful of misinformation to find the most accurate information on a topic before forming an opinion.*
  - b. “What did you learn today that can help you with deciding what is real and what is fake?”
2. Discuss the different careers listed in *Appendix A: Career & Mentor Connections*.
3. Encourage participants to be a Cyber Smart Ambassador and share their learnings from this activity with their friends and family.





## Delivery Recommendations

How might you deliver this content in different settings? Every activity has been designed for in-person delivery. Here, we provide recommendations for remote learning (online) or unplugged (no tech).

Remote (Online)	Unplugged (Low/No Tech)
<b>General</b>	
<ul style="list-style-type: none"> <li>• Encourage participants to unmute themselves or type in the chat based on what is easiest for them to communicate.</li> <li>• Leverage a tool where participants can all participate online during discussions (e.g., Mentimeter, Jamboard, etc).</li> <li>• Make note of any links that need to be shared and be prepared to share them in the chat.</li> <li>• Use polls or other group interactions to check in and keep up engagement.</li> </ul>	<ul style="list-style-type: none"> <li>• Leverage boards to do brain storms/write down participant responses.</li> </ul>
<b>Opening Hook</b>	
<ul style="list-style-type: none"> <li>• Activity can be done as-is online. Consider using polling features built into your online platform.</li> </ul>	<ul style="list-style-type: none"> <li>• Activity can be done as-is unplugged. Consider downloading and displaying the images on <i>Appendix C</i> using a projector, or printing out the images for groups to explore individually.</li> </ul>
<b>Section 1: Online Ruse, Fake News</b>	
<ul style="list-style-type: none"> <li>• Have a conversation on “fake news” or “misinformation”. Do participants know what that is?</li> </ul>	<ul style="list-style-type: none"> <li>• Activity can be done as-is unplugged.</li> </ul>



Remote (Online)	Unplugged (Low/No Tech)
<p>Can they define it?</p> <ul style="list-style-type: none"> <li>• Play this video <ul style="list-style-type: none"> <li>▶ What is fake news - explaine... (CBC Kids News, 2:19s).</li> </ul> </li> <li>• Play online pictionary (e.g., <a href="#">skribbl</a>) and add custom words that relate to the cyber smart activity. <ul style="list-style-type: none"> <li>○ Use the private room setting.</li> <li>○ For added difficulty, a student can be secretly assigned the 'Misinformer' role - their job is to draw the incorrect word to mislead the other participants.</li> </ul> </li> </ul>	
<b>Section 2: Inspect the Media</b>	
<ul style="list-style-type: none"> <li>• The Jeopardy game can be done individually rather than in groups. You can have participants choose a tile in the chat.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on the discussion questions.</li> <li>• Say the following statements outloud and have participants indicate if they think it is fake (for example, by raising an object, raising their hand, tapping their desk, moving to one side of the room). <b>The reality is that they all sound fake, but are true.</b> This is meant to further emphasise that you need to do your own research (or ask a parent, guardian or teacher) when reading things online to determine if they are</li> </ul>



Remote (Online)	Unplugged (Low/No Tech)
	<p>true or false):</p> <ul style="list-style-type: none"> <li>○ There are more tigers in captivity in the US than in the wild worldwide.</li> <li>○ Pineapples take about two years to grow.</li> <li>○ Cheetahs can't roar. They can only meow like house cats.</li> <li>○ Scientists who work with cockroaches often become allergic to pre-ground coffee.</li> <li>○ Around the world, many militaries have trained dolphins to perform dangerous tasks, like locate underwater mines.</li> <li>○ Humans have been alive closer to the time of the dinosaur Tyrannosaurus rex (T. rex), than the T. rex was to another dinosaur called the Stegosaurus.</li> <li>○ Nintendo was founded in 1889.</li> <li>○ Bananas are berries, but strawberries are not.</li> <li>○ Sharks came before trees.</li> <li>○ Cleopatra lived closer to the first iPhone than she did to the building of the pyramids of Giza.</li> </ul> <ul style="list-style-type: none"> <li>● Print out select doctored images from <a href="#">Bored Panda</a> and</li> </ul>



Remote (Online)	Unplugged (Low/No Tech)
	a selection of real, unedited images. Have participants determine which they think are real, and which are fake. Have them explain their thinking.
<b>Reflection &amp; Debrief</b>	
<ul style="list-style-type: none"> <li>Activity can be done as-is online. For brainstorming, consider doing a verbal discussion or use a collaborative tool (e.g., Jamboard, Google Doc, Mentimeter).</li> </ul>	<ul style="list-style-type: none"> <li>Activity can be done as-is unplugged.</li> </ul>

## Delivery Adaptations

How might you adapt the time, space, materials, group sizes, or instructions to make this activity more approachable or more challenging? **Modifications** are ways to make the activity more accessible, **extensions** are ways to make the activity last longer or more challenging.

## Modifications

### GENERAL

- Ensure captions are on during videos played.
- Provide computer mice where laptops are in use.
- Use pairs/groups instead of having participants work individually.

### SECTION 1: ONLINE RUSE, FAKE NEWS

- Write your own words on the blank prompts to make them more appropriate for your grade levels/class needs.
- Instead of using tokens to answer questions, the 'Web Browser' can answer the questions out loud using only 'yes', 'no', 'maybe', or 'correct'.
- Instead of individual groups, this can be played as a whole group without the use of the game cards. Facilitator acts as the 'Web Browser' and secretly chooses 5 participants to be the 'Misinformers' and shares with them the word by writing it down and showing it to them as the other



participants have their eyes closed. 'Digital Citizens' then try to guess the word by asking 'yes' or 'no' questions to the facilitator, but have a limit of 20 questions.

## SECTION 2: INSPECT THE MEDIA

- Let participants ask questions about words they might not know. Consider even playing as a class if that is more age-appropriate for your group.

### Extensions

#### GENERAL

- Discuss Deepfakes and Artificial Intelligence by exploring the following video:
  - [Deepfake Videos Are Getting Terrifyingly Real](#) (NOVA PBS Official, 3:35s).
- Introduce “opinions”
  - Introduce a conversation on opinions: “What is the difference between fact and opinion?”
    - Possible response: A fact is something that can be proven or disproven by doing research, while an opinion is something based on personal beliefs or feelings - it cannot be proven.
    - Different people hold different opinions based on their lived experiences and perspectives. It is important to be respectful of different opinions, even if they do not match your own.
  - Read the following fact and opinion outloud and ask participants to decide if they think the statement is a fact or an opinion (tell them the answers after they guess):
    - There are less women in STEM than men (fact).
    - Python is the greatest programming language to exist (opinion).
      - Let participants know that opinions should always be encouraged and at the same time should be respectful of all identities. That is how we grow and learn.  
Research often originates from people's opinions.
    - Depending on the time, ask participants to also think of one fact and one opinion about the topic of STEM.



## SECTION 1: ONLINE RUSE FAKE NEWS

- Have participants try and guess the word in a limited time (e.g., 5 minutes), by adding in a timer to the game.
- Add in a new character, 'Fact Checker' (one per group).
  - They will act like a 'Digital Citizen', but will know the 'real' word and help the 'Digital Citizens' to guess the word.
  - The 'Fact Checker' can ask the 'Web Browser' relevant questions to help get the 'Digital Citizens' to guess the word.
  - If the 'Digital Citizens' guess the word correctly before all the tokens are used up, the 'Misinformers' can try to "steal the win" by guessing which participant is the 'Fact Checker'. A strategy to do this is to see which player has the most 'yes' tokens in front of them.

## REFLECTION & DEBRIEF

- Participants can create a [Canva Poster](https://www.canva.com/posters/templates/campaign/) to share strategies with their friends and families on what cyber smart steps we can take when interacting with new users online. Share this link with them <https://www.canva.com/posters/templates/campaign/>. It will be helpful to explore Canva to get an idea of how to use this resource yourself.
  - Quickly show them how to create a new project and the different editing features they can use. If helpful, choose a suitable Canva template rather than have them find one themselves/have them draw it out.
  - Participants can draw their creations on paper rather than on Canva.
  - If time permits, have participants share their work.



## References & Gratitude

- Above the Noise. (2019, June 5). *Deepfakes: Can You Spot a Phony Video?* [Video file]. <https://www.youtube.com/watch?v=Ro8b69VeL9U>
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## Appendices

### Appendix A: Career & Mentor Connections

#### ROYAL CANADIAN MOUNTED POLICE: CYBERCRIME INTELLIGENCE ANALYST

- A cybercrime intelligence analyst specialises in cybercrime (criminal activities carried out by means of computers or the internet), and uses that knowledge to develop strategies to identify criminal trends and patterns. They use this information to design strategic intelligence products, and provide expert advice on complex criminal investigations.

#### CYBER SECURITY PROFESSIONAL (INFORMATION SECURITY PROFESSIONAL)

- A cyber security professional identifies threats (e.g., computer viruses or data breaches), and vulnerabilities (e.g., missing authorization or dangerous file types) in various systems and softwares. They apply their knowledge to design security measures and implement solutions to defend against cybercrime, such as hacking (unauthorised access to an account or computer system) and malware (software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system). These measures come in the form of technology and organizational processes.

#### SECURITY SOFTWARE DEVELOPER

- A security software developer designs and integrates security software tools (e.g., computer programs), develops internet-connected systems (e.g., hardware, software and data), and tests vulnerabilities (a flaw or weakness in a computer system) in their designs.

#### RESEARCHER

- A researcher can specialise in different areas of study, such as Science, Computer Science and Math. They conduct their own research, collect and analyse data in order to solve problems or explore issues. Researchers also review relevant, credible, and reliable sources related to their own research.



## CONTENT DEVELOPER

- A content developer researches, collects, edits, and develops content for different organisations depending on the project they are assigned to. They must ensure that the sources they are reviewing are reliable and credible.

## FACT CHECKER

- A fact checker looks into facts and information to verify and improve the quality of information in the media or published materials.

## Appendix B: Background Information

### MISINFORMATION AND DISINFORMATION

#### ***Misinformation is “false information spread, regardless of intent to mislead”***

(Dictionary.com, n.d., para. 4). This could involve:

- Sharing details that you misheard or misremembered.
- Unknowingly telling family you heard something on TV that isn't true.
- Unknowingly sharing a post on social media that has incorrect information.

#### ***Disinformation is “deliberately misleading or biased information”***

(Dictionary.com, n.d., para. 12). You can define “bias” for this age group as the favouring of some ideas or people over others **in a way that is not fair.**

This could be:

- Manipulated narrative or facts
- Propaganda (***propaganda definition:*** information, especially of a biased or misleading nature, used to promote or publicize a particular political cause or point of view)

***Fake News “is false or misleading information presented as news”.*** This is often created to be widely shared or distributed for the purpose of generating revenue, or promoting or discrediting a public figure, political movement, company, etc. (Wikipedia, 2023). This could involve:

- False news stories
- Altered videos
- Manipulated pictures



The Walden University Library describes the negative impacts of Fake News ([Walden University Library](#), n.d.):

- Frustrating and a waste of time: Users deserve accurate information, so finding biased and false information is frustrating and time consuming.
- Dangerous: the spread of lies and deceit can create hostility.
- Sharing/supporting fake news can damage your reputation and diminish your credibility.
- Creates general mistrust in all news and media sources.

### **STRATEGIES TO USE WHEN READING INFORMATION ONLINE**

According to a media literacy tool developed by News Media Canada, there are 4 simple questions that users should ask themselves before consuming information that they found online. [Business Wire](#) (2019) lists the 4 questions created by Fake News Online (SPOT) with additional details:

- **S**: Is this a credible **S**ource? Check the source of the article.
- **P**: Is the **P**erspective biased? Think critically and look for varying viewpoints on an issue.
- **O**: Are **O**ther sources reporting the same story? Be your own fact-checker and verify the validity of the story.
- **T**: Is the story **T**imely? Check the date the story was published - sometimes, stories use old information to take advantage of a timely occurrence.”

## **Appendix C: Additional Resources**

### **OPENING HOOK**

Image(s)

- Opening Hook Image (*see below*)

### **SECTION 1: ONLINE RUSE, FAKE NEWS**

Material(s)

- Game Card Deck (*see below*)
- Game Card Descriptions (*see below*)

### **SECTION 2: INSPECT THE MEDIA**

Activity Slide Deck(s)

- [Internet Explorers Jeopardy Slide Deck](#)



## Internet Explorers - Opening Hook Images

# Which is real? Which is fake? Let's vote



## Internet Explorers - Game Card Descriptions

Card Type	Example	Description
<b>Tokens</b>	Yes No Maybe Correct	Used by the Web Browser to answer questions regarding the hidden word. Once all tokens are used up or a Digital Citizen has correctly guessed the hidden word, the game is over.  Tokens are double-sided.
<b>Character Cards</b>	Web Browser (1)	Player who selects the hidden word. Uses tokens to answer questions to help guide Digital Citizens to the hidden word.
	Digital Citizen (3-7)	Player whose goal is to guess the hidden word by asking yes/no questions.
	Misinformer (1-3)	Player whose goal is to prevent the Digital Citizens from guessing the hidden word. They are asking yes/no questions that are unrelated to the hidden word, in order to use up tokens.
	Fact Checker (1)	Part of the game extension. Player who knows the hidden word and is trying to help the Digital Citizens arrive at the hidden word by asking helpful yes/no questions, without being identified by the Misinformers.

Card Type	Example	Description
<b>Word Cards</b>	Password Internet Website Laptop Social Media Phone USB Newspaper Book	Hidden words, one is selected by the Web Browser for players to try and guess.



## Internet Explorers - Game Card Deck









**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



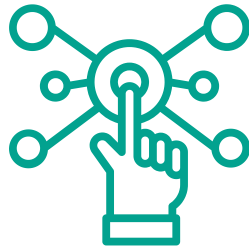
**Character  
Card**



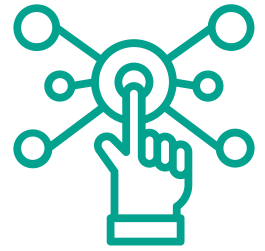
**Web  
Browser**



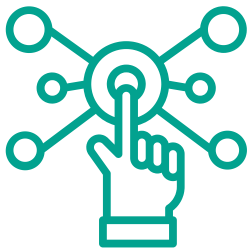
**Digital  
Citizen**



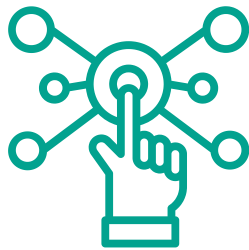
**Digital  
Citizen**



**Digital  
Citizen**



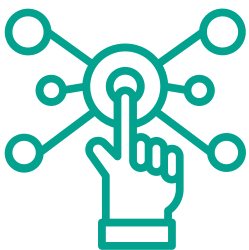
**Digital  
Citizen**



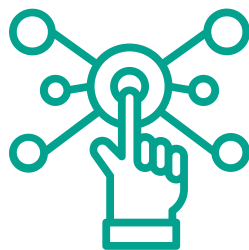
**Digital  
Citizen**



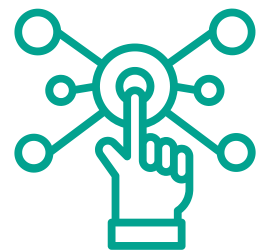
**Digital  
Citizen**



**Digital  
Citizen**



**Digital  
Citizen**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
Card**



**Character  
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**Character  
Card**



**Character  
Card**





**Misinformer**



**Misinformer**



**Misinformer**



**Fact  
Checker**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



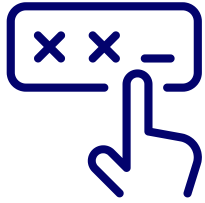
**Word Card**



**Word Card**



**Password**



**Password**

**Internet**



**Internet**

**Website**



**Website**

**Laptop**



**Laptop**

**Social Media**



**Social Media**

**Phone**



**Phone**

**USB**



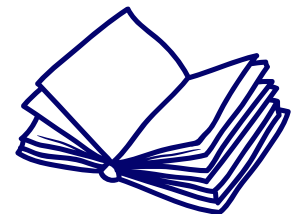
**USB**

**Newspaper**



**Newspaper**

**Book**



**Book**

**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



**Word Card**



