

Digital Footprints on the Internet

Participants Perspective

Today I learned how my internet use shapes my digital footprint **by** seeing how others interpret my interests based on a visual representation of my recent history.

Learning Goal

Raise awareness of your digital footprint: the combination of all of your internet history, generated content, likes, mentions and interests; information which is stored by our digital devices. Develop an understanding of how this might be used by companies or people to change your Internet experiences in both positive and negative ways. Think critically about how your footprint might bias the content that you see on the internet.

Logistics

- Suggested length: 1-2 hours
- Age range: Grade 4 and up

Part Number	Section Title	Group Size	Materials
Opening Hook	What does your computer know about you?	Whole Class	<ul style="list-style-type: none"> • Post it notes • Pens
Part 1	Our internet History collage	Individual	<ul style="list-style-type: none"> • Drawing & Collage supplies (Paper - 8.5" x 11" or larger) • Pencils, crayons, markers • Scissors • Glue sticks or tape • Pictures - newspapers/flyers/magazines, from personal sources or hand drawn
Part 2	The Pitch	Groups (small or large) OR Pairs	<ul style="list-style-type: none"> • Role cards (attached)
Part 3	Debrief Activity	Whole group	

Safety Considerations

- **Scissors:** Sharp edges of scissors can cut hands. Provide guidance to participants on safe scissor usage (i.e. holding blades closed, blades pointed away from the body, never running with scissors).

- **Personal Information:** Participants should be educated about the risks associated with sharing personal information online, and cautioned not to disclose identifying information, passwords, or other personal information.

Framework Connections

Toolsets	Skillsets	Mindsets
<p>Knowledge Developing an understanding of “digital footprints”, including history, images, interests, likes and other personal information.</p> <p>Understanding the personal, social and tertiary impacts that our choices, using digital technology, can lead to.</p>	<p>Digital Skills Awareness of digital footprints and mindfulness regarding the collection of private data.</p> <p>Analyzing digital footprint data to develop inferences regarding someone's interests.</p> <p>Awareness of personal information being used to develop targeted messages and information bias, affecting your digital experiences.</p>	<p>Digital Intelligence Digital citizenship: Ethical and responsible use of technology, both personally and towards others</p> <p>Digital safety: Being mindful of how online activity is visible and interpreted by others; protecting personal information and recognizing bias.</p>
<p>Resources Experience with Internet-ready devices (computers, tablets, etc.)</p> <p>Record of participants’ digital footprint, history online - History, images, interests, apps, games, likes, etc.</p>	<p>STEM Skills Interpreting information to develop Inferences - making deductions from digital footprint data.</p>	<p>Computational Thinking Develop a context based on the digital footprint. Use this context to develop inferences and make strategic recommendations.</p>
<p>Experiences Inferencing and Interpretation of another person's digital footprint to develop a profile of their personal interests</p> <p>Reflect on how this applies to self. Building critical thinking of choices we make on the internet</p>	<p>Essential Employability and Life Skills Strategic Thinking - applying inferences to make recommendations for items of interest.</p> <p>Critical analysis - Evaluation of information to identify bias</p>	<p>Digital Action Critically analyze information you are receiving.</p> <p>Mindful consumer of interactions on the internet</p> <p>Awareness of how the content you produce can be used to develop a context about you.</p> <p>Links to applications in big data. Recommendation algorithms.</p>

Nuts and Bolts

This activity is a good Icebreaker as it allows for participants to discuss and get to know other participants in a unique way. Participants need to be willing to share their creation with others, which may involve some risk taking and trust building.

Opening Hook - What does your computer know about you

- Pass out a post-it note to each participant. Have them draw a line down the center so that the post-it is split in two and write a 1 in the first section and a 2 in the other.
- Have the participants place a tally mark in the 1 section for each question that they answer “yes” to.
- Ask the following questions. “Do you think your computer (or phone/tablet) knows:
 - When your birthday is?
 - What your parents names are?
 - If you have pets?
 - What some of your hobbies are?
 - What your email address is?
 - Where you live?
 - Your favorite video game/app/website?
- Have the participants add up their tally and describe to someone near them how many tallies they had. This post it should now be kept somewhere safe until the end of the activity.

Part 1: Our internet History collage

- As individuals, each participant will develop a visual history collage of 5 to 7 recent things they have done or seen on the internet. If they are struggling to think of things, ask them “What would you do if I gave you a tablet and 20 minutes of free time?”. *The development of this visual helps the participants start to think about what their digital footprint is and how the places on the internet might view them.* This collage or mosaic is developed on a sheet of paper and can include any number of printed, drawn or cut out images. Consider:
 - Recreate images you have looked at or have been taken of you
 - Write out key words from posts, blogs, tweets or stories you have viewed or liked
 - List a favorite website name or URLs
 - Recreate a screen from a game or apps that you have used - Suggest current popular titles: snapchat, fortnite, instagram
 - Any other bits of your digital footprint that tell what you have done online recently
- Note that *participants should only share what you are comfortable with. This creates an inclusive and safe environment, allowing participants to build trust and take more risks in the experiential learning environment.* Let participants know that others will be using this information to do the next part of the activity. The collages should be kept private for now, as guessing ownership will be included in the activity.
- Check in with each participant to make sure the level of detail they are including in their digital footprint is detailed enough to draw some inferences from. This will make the next portion of the activity run a lot smoother. There should be some obvious themes and interests visible on the page.
- Collect the papers from participants. Explain that *internet browsers and apps regularly collect this type of information to try to provide a better internet experience for their users. This information can be used to develop a profile of you and target media (movies, music, games, stories) or products for you.*

Part 2: The Pitch

Groups Modification - for Small groups or whole class:

- Have the participants get into small groups. Distribute the papers randomly so that each group has one per participant, also providing each group member a random role card (attached). Try to avoid groups from getting their own or friends from getting each others. Role cards have a number of roles for participants to choose from, such as a:
 - Salesperson selling a product, holiday or service (i.e. haircut)
 - Employer/boss suggesting a career or a type work for you
 - Someone trying to guess what words might be used in your password
 - Magazine promoting a news story, music, concert or movie
 - Hacker suggesting a fake website to visit
 - Game developer suggesting a video game
 - Someone claiming to be an old friend, identifying similar interests
- As a group pick a role from a role card and a digital footprint. *Critically reflect on the digital footprint of your classmate. Use the information to develop a profile or context of who this person is and what they might like.* Try to provide them with a targeted product/item/idea based on the role and some *reasoning of why they chose this item for this footprint.* Be *strategic* and consider picking something less obvious, that is an extension to what is on the page. After this is complete, try to guess which participant created this digital footprint.
- Repeat this process until you have reviewed all your groups digital footprints and created a product/service for them using a role. Try to use different roles.
- Groups then present their *analysis of the digital footprint* for the whole group. Sharing the digital footprint, the recommendations, *reasonings* and their guess as to the identity of the digital footprint creator

Pairs Modification- for Pairs or groups with < 4 Participants

- Distribute the papers such that each participant has someone else's digital footprint. One at a time, have the participants select roles until each has 2 roles (use attached role cards to help this process). Participants can take on the role of a:
 - Salesperson selling a product, holiday or service (i.e. haircut)
 - Employer/boss suggesting a career or a type work for you
 - Someone trying to guess what words might be used in your password
 - Magazine promoting a news story, music, concert or movie
 - Hacker suggesting a fake website to visit
 - Game developer suggesting a video game
 - Someone claiming to be an old friend, identifying similar interests
- Participants will *critically reflect on the digital footprint of their partner. Use the information to develop a profile or context of who this person is and what they might like.* Try to provide them with a targeted product/item/idea along with some *reasoning of why they chose this item for this footprint.* Be *strategic* and consider picking something less obvious, that is an extension to what is on the page.
- Once completed all participants share their *analysis of the digital footprint* with each other, including sharing their *recommendations and reasonings*

Closing activity (for all configurations - pairs, small groups or whole class)

- As a whole group, come together to reflect on the outcomes of the activity. This should help to *show the trends in the effectiveness of targeted content*:
 - How well did someone pick something you would like knowing only your digital footprint? Did this surprise you?
 - What are some cases where this type of targeted content is a good thing?
 - *Informing me of things I like but might not know about.*
 - What are some cases where this type of targeted content is a bad thing?
 - *Suggesting things I don't like, sharing with people I don't know the things that I like, preventing me from making my own choices (not showing me all the options).*
 - While you chose to put the 5-7 items on your collage, apps and internet browsers may share everything.
 - Does it make you feel different knowing that all your digital footprint information is available?
 - Would you feel safe sharing your digital footprint with a complete stranger?
 - Are we easily identifiable by the things we do on the internet?
- Close the activity by recapping that all of our activities online, be it playing games, using an app or browsing the web, can be used to collect information about you. *Participants should think critically about their actions on the web and know that someone might use this information to sell them a product or suggest a new game or even access try to gain access to a password.*
- Re-visit the tally post-it from the beginning of the session. Ask the same questions again and have the participants complete a tally in are "2". Did the number change? Why or why not? Have them discuss with participants close to them.

Modifications and Extensions

Ways to make this activity more approachable:

- Have participants work with a friend, swapping footprints with each other.
- Ask participants to list at least 2 apps or websites that they use regularly to make interests more obvious or increase the number of items on the collage to 10
- Have participants print images or screenshots of their favorite web spaces.
- For participants where scissor use may be challenging, have images pre-cut or assist in building the collage.
- For cases where internet access may be a barrier:
 - Provide 10-15 minutes of free time for the participants to use the internet before the activity, OR
 - Ask "What would you do on the internet if I gave you a tablet and 20 minutes of free time?", OR
 - Allow them to use non digital examples to show interests, such as playing with Lego or riding my bike

Ways to make this activity more challenging:

- Have participants take on an additional role from their role card.

- Participants take on a role for their own footprint first, then compare their perception of their own digital footprint to that of the person who analyzes theirs.

Assessment and Evaluation

- Were the connections in the toolsets/skillsets/mindsets table successfully made? This can be identified from the group discussion or have participants answer the following 2 questions for themselves (either written or through self reflection):
 - Knowing that a digital history or digital footprint information is collected about you whenever they go online, does this make you more careful about what you might look up when on the internet?
 - What are some good and bad ways that your information might be used to change what you see on the internet?

Credits, Kudos, Shoutouts

- Google's [Be internet Awesome](#)
- vpnMentor - [The Ultimate Parent Guide for Protecting Your Child on the Internet](#)

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 activity and ensure safety measures are in place for the protection of all involved parties.
- Any safety precautions contained in the "Safety Considerations" section of this write-up are not intended as a complete list or to replace your own safety review process.
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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 university and college based members. Each year 250,000 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 specialized 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 and on social media: [Twitter](#), [Facebook](#), [Instagram](#) and [YouTube](#)!

<p><small>/code:makers_ actua Google™</small></p> <p>Role Card C- Pick 1: Salesperson selling a product, holiday or service (i.e. haircut).</p> <p>OR</p> <p>Employer/boss suggesting a career or a type work for you.</p> <p>OR</p> <p>Someone trying to guess what words might be used in your password.</p>	<p><small>/code:makers_ actua Google™</small></p> <p>Role Card C- Pick 1: Salesperson selling a product, holiday or service (i.e. haircut).</p> <p>OR</p> <p>Employer/boss suggesting a career or a type work for you.</p> <p>OR</p> <p>Someone trying to guess what words might be used in your password.</p>	<p><small>/code:makers_ actua Google™</small></p> <p>Role Card C- Pick 1: Salesperson selling a product, holiday or service (i.e. haircut).</p> <p>OR</p> <p>Employer/boss suggesting a career or a type work for you.</p> <p>OR</p> <p>Someone trying to guess what words might be used in your password.</p>
<p>*Note-Role card C is best suited for older participants and should be omitted when working with younger participants.</p>		
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