

# Thinking Critically About Technology

## Facilitation Guide

*Equip learners with the skills and knowledge they need to think critically about the technology they consume and use each day.*

### Overview

This module introduces learners to some of the issues surrounding the technologies we all use each day, including issues of representation in the technology sector, privacy issues, and others. In this module, learners will have the opportunity to discuss and explore many of these issues and will gain the skills and knowledge they need to better critically think about the different technologies they use.

For more information, be sure to watch Series 4 training videos from NYC Digital Safety.

### Outcomes

By the end of this module, participants will be able to:

- Describe ways to think critically about technology
- Name issues surrounding the development and use of technology
- Identify approaches for being a more thoughtful user of technology

### Format + Time Frame

This module provides an overview of some of the major issues surrounding the development and use of different consumer technologies and reviews different techniques that participants can use to think more critically about the technologies they use and consume each day.

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This module will take approximately 90 minutes to complete. While this module tackles some fairly complex and weighty issues, it can also be broken out and combined with other modules for different kinds of learning experiences. See more suggestions below.

### Materials

- Slide deck
- Facilitation guide
- Handout

### Lesson Plan

Activity	Materials	Time Needed
<b>Introduction and welcome</b> Greet learners and review the plan for this module.	Slides 1 and 2	2 minutes
<b>Defining digital literacy</b> Start by defining digital literacy and connecting the concept to critical thinking about technology. Pause here to make sure everyone understands the terms.	Slide 3	3 minutes
<b>Activity: Issues with tech</b> Divide participants into small groups Have them discuss the questions listed here about issues they see with technology. Bring everyone back together to share what they discussed in their groups. You might consider having a shared notes document where you can record everyone's observations and ideas.	Slide 4	15 minutes

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<p><b>Humans in tech / representation issues</b></p> <p>Lay the groundwork by emphasizing how tech is created and developed by humans and, as a result, reflects our biases.</p> <p>Review the content in the representation slide.</p>	<p>Slides 5 and 6</p>	<p>10 minutes</p>
<p><b>Activity: Representation issues discussion</b></p> <p>Break participants into small groups again; you can keep the same groups or mix them up into new groups.</p> <p>Have them brainstorm issues that they think result from lack of diverse representation in tech.</p> <p>If they feel comfortable, you can encourage them to share their own experiences, and you can also share your own personal examples.</p>	<p>Slide 7</p>	<p>10 minutes</p>
<p><b>Overview of issues of bias in tech</b></p> <p>Provide an overview of issues of bias in tech and review the examples listed here.</p> <p>You can bring in additional examples of your own and see if you learners have anything else to add.</p>	<p>Slides 8 through 10</p>	<p>10 minutes</p>
<p><b>Activity: Using Google image search</b></p> <p>Have participants work individually here.</p> <p>Have them run searches in Google Images. They can use the terms listed or use ones of their choosing.</p>	<p>Slide 11</p>	<p>10 minutes</p>

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<p>Have everyone come back together and discuss their observations.</p> <p>You might consider running some sample searches yourself after your learners have searched on their own to foster discussion.</p>		
<p><b>Issues in tech: Purpose and privacy</b></p> <p>Review the content on these slides regarding issues with the purpose of tech and potential privacy concerns with tech. Pause briefly here for any questions.</p>	Slides 12 and 13	7 minutes
<p><b>Pros and cons of technology</b></p> <p>Wrap up this section and review the content on the pros and cons of technology.</p>	Slide 14	5 minutes
<p><b>Questions to ask about technology</b></p> <p>Review the questions listed here and see if your learners have additional ones they'd like to add to the list.</p>	Slides 15 through 18	5 minutes
<p><b>Activity: Thinking critically about technology</b></p> <p>Get participants into pairs so they can discuss their ideas together.</p> <p>Have them follow the prompts here and reflect on the tools they use.</p> <p>Have them select a tool and work through some of the questions listed.</p> <p>You can either copy the questions from the slides into a handout or just display</p>	Slide 19	10 minutes

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them on the screen and let your learners write their own notes.		
<b>Wrap up, final tips, and final questions</b> Review the closing thoughts and share the suggested resources. See if anyone has any final questions.	Slides 20 through 24	5 minutes

### Considerations

Critical thinking about technology is an incredibly broad topic. While this module provides a number of talking points, examples, and discussion prompts, feel free to adapt and adjust the content as you like by bringing in your own examples or questions. Likewise, you might consider seeing how discussions go in this module and adjusting and adapting your content accordingly.

Since there are many different ways to run this module, you might want to really consider your plan and whether or not you need or want to make any adjustments to best suit your particular approach, whether that is embedding parts of this content into another module, splitting this module into separate modules, or running this module on its own.

### Options and Variations

This module is designed to be more conceptual in nature and can be paired with other, more hands-on modules for a richer learning experience. Additionally, this module could work well as part of a longer workshop series on various digital safety topics. The content here is designed to be flexible and you can either run this module as is, make it part of a series, or take portions of this module to use with another digital safety module of your choosing.

Note that this module contains numerous places for discussion, individual reflection, and/or small group activity. If you are looking to add more discussion elements or reflection opportunities to another digital safety workshop, you could consider utilizing the prompts from this module.

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This content here works best when introduced in a workshop setting where there can be a chance for questions and guided discussions. However, you can emphasize the themes and concepts included here if you are engaging with a patron one-on-one at a service point and if you are providing them with handouts and materials from other digital safety modules.

## Assessment

The following are some suggested assessment questions that you can use and adapt for your own purposes. These questions can help you assess various things, including knowledge retention, personal views and preferences, and concept application.

You might consider asking these as a pre or post test, or you can have learners answer these as part of an exit survey or a follow-up survey. Keep reading for suggested questions and an answer key with further details and explanations.

### Questions for Participants

What is digital literacy?

- A. A person's ability to code
- B. A person's ability to use a computer
- C. A person's ability to find, evaluate, and use different kinds of digital tools and technologies
- D. A person's ability to use the internet

Which of the following do you use? Select all that apply.

- A. A laptop
- B. A desktop computer
- C. A cell phone
- D. A smartwatch
- E. A smart home assistant (like Alexa)
- F. A tablet
- G. An e-reader (like a Kindle)

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H. Other (please describe)

What are some issues that you see with our current technology devices and with the internet?  
What concerns do you have or what topics do you think are important to consider?

[Free text response]

### Answer Key

What is digital literacy?

*Answer: C, a person's ability to find, evaluate, and use different kinds of digital tools and technologies*

Digital literacy is a broad skill set that involves being able to use different technologies and tools in different ways, and to think critically about those tools.

Which of the following do you use? Select all that apply.

*Answer: No correct answer, individual poll*

You might consider using this question as a pre-test question before this module to get a sense of what devices people use. This information can help you structure your discussions, for example.

What are some issues that you see with our current technology devices and with the Internet?  
What concerns do you have or what topics do you think are important to consider?

*Answer: Free text response*

You might consider using this as a pre-test question as well as a way to guide discussion during the module. This can be a good way to gain insight into what might have led someone to your workshop, what concerns they have, and/or what they might like to discuss further.

### Connections to Other Modules

This module connects to many other modules. The following suggestions provide opportunities for exploration, connection, and potential programming. However, feel free to explore and make connections between other modules not listed here as well!

This module in particular can connect with nearly every other module here, given the foundational and conceptual nature of the content included. While we have listed a few suggested ones, note that this module can really connect with all other modules.

1.1 Data Generation Online

1.2 Data Minimization

2.1 Algorithms

2.1 Targeted Advertising

2.2 Doxing

2.2 Data Brokers

4.1 Avoiding Social Engineering

4.3 Technology Mindfulness

These and other modules can be found at this project's website, [nycdigitalsafety.org](https://nycdigitalsafety.org).

### About This Project

These materials were released in October 2022 as part of NYC Digital Safety: Privacy & Security.

NYC Digital Safety: Privacy & Security is a partnership between New York City's three library systems — Brooklyn Public Library, The New York Public Library, and Queens Library — and



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METRO Library Council. With support from the New York City Office of Technology and Innovation, this project ensures that NYC residents can rely on public libraries for their questions about internet privacy and security.

Visit [nycdigitalsafety.org](https://nycdigitalsafety.org) for more information.