

## Lesson 3

### Viral or Valid: Researching the Influence of Social Media

 **Instructional Time:**  
50–90 minutes

### Objectives

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#### Students will:

- Frame their research focus by developing clear, specific research questions.
- Conduct initial research using credible sources, evaluating the quality and relevance of each source.
- Begin to synthesize research findings into themes to inform their project direction.
- Learn how problem framing helps ensure they are addressing the root cause rather than symptoms.

#### Skills for the Future

- Critical Thinking
- Problem Solving
- Digital Literacy
- Empathy

#### Project Word Wall

- Credible
- Perspective
- Synthesize
- Problem framing

### Resources

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#### General

- [Teacher Resource Guide](#)
- [Lesson 3 teacher presentation](#)
- [Student portfolio](#)
- Whiteboard
- Posterboard or digital board (such as [Padlet](#) or [Mentimeter](#))

#### Videos

- [Design Thinking Skills: Reframe the Problem](#) (3:25)

## Lesson Plan Summary: The Five Es

### Engage: Warm-Up Reflection [\(Go to section\)](#)

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1. Individual Reflection
  - What is one thing you already know about social media’s impact, and what is one question you have about it?
2. Team Discussion
3. Whole-Class Share-Out

### Explore: Research and Data Collection [\(Go to section\)](#)

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1. Learn to Frame Research Questions
  - This or That Questions:
    - What strategies help teens manage digital stress? (more specific)
    - How does social media affect mental health? (broad)
    - Do social media algorithms influence what people believe? (broad)
    - How do TikTok’s recommendation algorithms affect political opinions among teenagers? (more specific)
    - What role do beauty influencers play in shaping teen self-perception? (more specific)
    - Does influencer culture shape body image? (broad)
2. Whole-Class Debrief
3. Framing Your Own Questions
  - Generating Team Research Questions and Refining Questions
4. Begin Internet and Library Research
  - Evaluating Sources for Reliability and Bias: Think–Pair–Share
5. Research Synthesis and Team Reflection

### Explain: Team Discussion: Identifying Key Themes [\(Go to section\)](#)

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1. Watch Video
  - [Design Thinking Skills: Reframe the Problem](#) (3.25)
2. Team Share-Out
3. Whole-Class Discussion

## Elaborate: Problem Definition and Ideation Setup [\(Go to section\)](#)

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1. Developing Your Empathy Map
  - Identify the End-User
  - Define Their Goal
2. Mapping the Experience: Walking in Their Shoes
  - Empathy Map Quadrants
    - Seeing
    - Hearing
    - Saying
    - Doing
    - Thinking and Feeling
3. Refining and Validating Insights
  - Group Reflection and Discussion
  - Review Empathy Map
4. Drawing Meaningful Insights: Connecting to the Project
  - Identify Key Takeaways

## Evaluate: Exit Ticket Research Reflection [\(Go to section\)](#)

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### Exit Ticket

- Write down one key insight from today's research.
- What is one question you still have about social media's influence on mental health?
- What is your team's next step?

## Introduction

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Envision a world where your every thought, every opinion, and even your self-worth could be shaped by the scroll of your thumb. Social media has become a powerful force in our lives, influencing how we see ourselves, how we connect with others, and how we navigate the challenges of mental health. But how much of what we see is real? How do these digital spaces impact our identity and relationships? In today's lesson, you'll take on the role of a researcher, diving deep into credible sources, gathering data, and asking the right questions to uncover the truth about social media's effects. By the end, you'll be ready to shape your project with insights that could spark real change. Let's get started!

## Standards and Practices

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### Common Core Standards: Grades 9–10

- **RI.9–10.2:** Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped by details.
- **RI.9–10.7:** Analyze various accounts of a subject presented in different mediums (e.g., a person’s life story in both print and multimedia), determining which details are emphasized.
- **SL.9–10.1:** Initiate and participate effectively in a range of collaborative discussions, building on others’ ideas and expressing their own clearly.
- **W.9–10.2:** Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly.
- **W.9–10.8:** Gather relevant information from multiple authoritative sources, assessing credibility and accuracy.

### Common Core Standards: Grades 11–12

- **RI.11–12.1:** Cite strong and thorough textual evidence to support analysis of what the text says explicitly, and inferences drawn from it.
- **SL.11–12.1:** Initiate and participate effectively in a range of collaborative discussions, building on others’ ideas and expressing their own clearly.
- **W.11–12.7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- **W.11–12.8:** Gather relevant information from multiple authoritative sources, assessing credibility and accuracy.
- **L.11–12.6:** Acquire and use academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level.

### Next Generation Science Standards

- **HS-ETS1-3:** Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs.

### International Society for Technology in Education

- **Innovative Designer (4a, 4b, 4c, 4d):** Students use a variety of technologies within a design process to solve problems by creating new, useful, or imaginative solutions.

## Teacher Preparation

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### Preparation

[Differentiation Strategies for Grades 9–12](#)

## Adjusting Lesson Timing Based on Student Experience

If your students have limited experience with research or framing research questions, consider dividing this lesson into two or three class periods to allow more time for skill development and hands-on research practice. Breaking the lesson into smaller segments ensures that students fully understand how to craft strong research questions and gather credible sources before proceeding with their projects.

### Suggested Pacing Options:

- **Day 1:** Framing Strong Research Questions: Introduce broad vs. specific questions using the "This or That" activity, then guide teams in refining their own research questions.
- **Day 2:** Beginning Online and Library Research: Teach students how to evaluate sources and start gathering information.
- **Day 3 (Optional):** Research Workshop and Small Group Conferences: Provide additional time for students to refine their research focus, get feedback, and organize their findings.

**Tip:** If students are new to evaluating sources, consider reviewing the [CRAAP evaluation method](#) to help them assess credibility before beginning their research. This is an optional activity in Explore.

High school students bring diverse levels of experience with digital tools, iterative design, and peer feedback. Use the strategies at the end of this lesson plan to manage cognitive load, scaffold learning, and increase engagement during prototyping.

### Building on the Word Wall

- Before each lesson, review existing terms and challenge students to use them in class discussions.
- Encourage students to add relevant key terms from their research and discussions. See the project word wall terms at the end of the lesson for suggestions.
- Add new terms that are integrated into the lesson to your project word wall.

**Essential Question:** How does social media shape our mental health, and what strategies can we use to navigate its impact?

## Engage [\(Back to summary\)](#)

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### Warm-Up Reflection

**Teacher Script:** *Now that we've started to define our project focus, it's time to investigate the issues we want to address. Research helps us understand the problem more deeply, separate fact from fiction, and ensure our solutions are effective. Let's start by reflecting on what we already know about social media and mental health.*

### Activating Prior Knowledge

1. Individual Reflection (2 min.): Set a timer and provide students 2 minutes to respond to the prompt in their student portfolio:

What is one thing you already know about social media's impact, and what is one question you have about it?

2. Team Discussion (4 min.)

- Separate students into teams and instruct students to take turns sharing their responses.
  - Have the teams identify common themes or surprising insights.
3. Whole-Class Share-Out (4 min.)
- Invite a few students to share their key takeaways.
  - Record major themes on the board to guide further research.

## Explore [\(Back to summary\)](#)

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### Research and Data Collection

**Teacher Script:** *Effective research begins with asking the right questions and considering multiple perspectives. We will employ various methods to collect information, including reading credible sources, surveying our peers, and analyzing media content. But before we dive into research, we need to think critically about how the way we frame a research question impacts the kind of information we gather.*

*Today, we'll kick off with a decision-making activity called "This or That." Your task is to evaluate two types of research questions—one that is broad and one that is more specific—and decide which is more useful for conducting focused, meaningful research. This activity will help guide your team in crafting a well-defined research question for your own project.*

#### Learn to Frame Research Questions (10 min.)

1. Explain the Purpose (2 min.)
  - Inform students that:
    - Strong research questions help focus investigations and guide project development.
    - A well-crafted research question is clear, specific, and researchable—not too broad and not too narrow.
    - In this activity, teams will compare two research questions in three rounds, deciding which is more useful for conducting meaningful research.
2. Movement and Discussion (5 min.)
  - Display the first pair of questions on the slide.
  - Instruct students to move to the side of the room that represents their choice (either the broad or specific question).
  - Once students are in place, give them 1 minute to discuss their choice with the people near them.

#### Repeat for the next two rounds.

- “This or That” Questions
  - **Round 1:**
    - What strategies help teens manage digital stress? (more specific)

- How does social media affect mental health? (broad)
  - **Round 2:**
    - Do social media algorithms influence what people believe? (broad)
    - How do TikTok’s recommendation algorithms affect political opinions among teenagers? (more specific)
  - **Round 3:**
    - What role do beauty influencers play in shaping teen self-perception? (more specific)
    - Does influencer culture shape body image? (broad)
3. Whole-Class Debrief (3 min.)
- Call on a few students from each side to explain why they made their choices.
  - Guide a short discussion with prompts:
    - What makes a question too broad?
    - How does a more specific question help direct research?
    - Can a broad question ever be useful? If so, when?

### Framing Your Own Research Questions (10 minutes)

1. Generating Team Research Questions
  - Now that teams understand the difference between broad and specific questions, have them generate three to four specific research questions for their project focus and record them in their student portfolios.
  - Encourage students to start with a broad topic, then refine it using who, what, when, where, why, or how to create a more actionable question.
2. Refining Questions
  - As teams develop their questions, have them evaluate the questions using the following guiding questions:
    - *Is this question too broad or too vague?*
    - *Can this question be answered with research rather than just opinion?*
    - *Will answering this question help develop our project?*
3. Wrap-Up
  - Remind students that strong research questions lead to strong insights.
  - Inform them that next, they will begin gathering credible sources to start answering their research questions.

### Begin Internet and Library Research

**Teacher Script:** *Now that we’ve framed our research questions, it’s time to begin gathering evidence. Strong research relies on diverse, credible sources, such as academic studies, expert opinions, and reputable*

*journalism. Today, we'll explore both digital sources and traditional library resources to build a solid foundation for our projects.*

**Note:** Students will only begin the research phase of the project during this time. They will need time outside of class to complete these tasks.

### **Evaluating Sources for Reliability and Bias: Think–Pair–Share**

1. Think: Individual Reflection (2 min.)

**Teacher Script:** *Take a moment to think about these questions on your own. Jot down your thoughts in your student portfolio or on a sticky note.*

- What makes a source reliable?
  - Think about who wrote it, what evidence they provide, and whether it's accurate and unbiased.
- How do we identify bias in a source?
  - Consider the language, whether it presents both sides, and if it includes credible sources.
- Why is it important to use multiple sources rather than just one?
  - Imagine if you only got information from one person. How do you know it's true?

2. Pair: Partner Discussion (3 min.)

**Teacher Script:** *Now that you have individually reflected about the reliability of sources, turn to a partner and compare your answers. Record your thoughts in your student portfolio or on your sticky notes.*

Have students discuss the following:

- What is one strategy to check if a source is reliable?
- Can you give an example of a biased source you've seen (e.g., a social media post, news article, or advertisement)?
- What would happen if you only relied on one source for research?

3. Share: Whole-Class Discussion (5 min.):

Have each pair share one key takeaway with the class.

- Guiding Questions:
  - What is one strategy to check if a source is reliable?
  - Can you give an example of loaded language that signals bias?
  - How does cross-checking information improve the quality of research?

4. Resource Option: Show a short video on how to evaluate sources (e.g., the [CRAAP evaluation method](#): Currency, Relevance, Authority, Accuracy, Purpose).

### **Conducting Internet Research (5 min.)**

Students will use their research questions to search for credible sources online.

### Suggested Research Sources

- Common Sense Media (digital citizenship and media literacy)
- Pew Research Center (Social media trends and generational data)
- American Psychological Association (APA) (mental health studies)
- Government reports from the CDC, WHO, or FTC (impact of social media on well-being)
- University research from Google Scholar, JSTOR, or EBSCOhost (academic studies)

#### 1. Student Task

- Each team selects one of their research questions and conducts a keyword search using one of the sources above. Students record key takeaways (summary of the source, main argument, and supporting evidence) in their student portfolios.
- Guiding prompts for internet research:
  - What is the main argument or takeaway from this source?
  - How does this source connect to our research question?
  - Does this source confirm or challenge our prior understanding?

### Conducting Library Research (5 min.; homework)

If students have library access, have them explore print and database resources. If they do not, they can use alternative research methods (e.g., database tutorials, librarian Q&A).

#### 1. Library/Database Research Task

- Have students use school or local library databases (Gale, ProQuest, EBSCOhost, etc.) to find one academic or news article.
- Have them compare information between library sources and online sources:
  - Does the article provide deeper analysis than online sources?
  - What kinds of experts or researchers are cited?
  - Is there a historical perspective that broadens our understanding?

#### 2. Research Synthesis and Team Reflection (last 2–3 min.)

- Have teams briefly discuss what they found and answer the following questions:
  - What patterns or themes are emerging in our research?
  - What gaps or unanswered questions remain?
  - Which sources were most helpful, and why?
  - Were the sources you used reliable? Why or why not?

#### 3. Wrap-Up

- Instruct each team to add at least one key finding and one remaining question to their student portfolios to guide future research.

## Explain [\(Back to summary\)](#)

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### Team Discussion: Identifying Key Themes

**Teacher Script:** *Before we create solutions, we must first define the right problem. Graphic designers and engineers use a process called “problem framing” to ensure they address the root cause rather than just the symptoms. Today, we’ll watch a video that explains how asking better questions leads to better solutions. As you watch, think about how this applies to our research on social media and mental health.*

1. Watch the video [Design Thinking Skills: Reframe the Problem \(3.25\)](#) and have students take notes on the key takeaways in their student portfolios, particularly:
  - How problem framing changes the way we approach solutions.
  - Examples of good and bad problem framing.
  - How this connects to their team’s research.
2. Team Share-Out (3 min.)
  - What was the most important takeaway from the video?
  - How does problem framing apply to the way we research social media’s impact?

### Connecting to the Video: Whole-Class Discussion (10 min.)

**Teacher Script:** *Now that we’ve explored our research findings, let’s apply what we learned from the video. How can we reframe our research questions to ensure we are solving the right problem?*

1. Discussion Prompts:
  - How can we refine our research focus based on what we learned?
  - What assumptions might we be making about social media’s impact?
  - How can asking better questions help us find stronger solutions?

## Elaborate [\(Back to summary\)](#)

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### Problem Definition and Ideation Setup

**Teacher Script:** *Before designing a solution, we must deeply understand the people affected by the problem. Today, we’ll create an Empathy Map—a tool that helps us see the world through our end-user’s perspective. This will help us design a project that truly meets their needs.*

### Developing Your Empathy Map (30 min.)

1. Defining the End-User and Goal: Set the Stage (2 min.)

In project teams, have students respond to the following questions to begin to develop their end-user profile.

#### Identify the End-User

- Who will be impacted by your project?

- What specific group, demographic, or persona represents your target audience?

### Define Their Goal

- What is this person trying to do, solve, or achieve?
  - Frame the response in terms of an observable behavior (e.g., “A high school student navigating social media while struggling with self-esteem”).

### Mapping the Experience: Walking in Their Shoes (15–20 min.)

1. Display or distribute the Empathy Map one-pager. You will find a copy in the Teacher Resource Guide. Students will work in their project teams to fill in each quadrant of the map in their student portfolio, thinking from the perspective of their end-user’s experience.
2. Have students work clockwise, starting at the top of the map with the external observations before moving into the internal thought process.

Empathy Map Quadrant	Guiding Prompts
<b>Seeing</b>	What does this person see in their daily life (e.g., social media posts, ads, peer interactions)?
<b>Hearing</b>	What do they hear from friends, family, influencers, or society? How does it influence them?
<b>Saying</b>	What do they say out loud about this issue? How do they express their thoughts or feelings?
<b>Doing</b>	What actions or behaviors do they take in response to their experience? How do they engage with social media?
<b>Thinking and Feeling</b>	What are their internal thoughts, worries, or motivations? What emotions drive their choices?

### Refining and Validating Insights: Group Reflection and Discussion (5 min.)

1. Have teams step back and review their empathy map. Ask them:
  - What new or surprising insights emerged?
  - Are there contradictions or disconnects between quadrants?
  - What assumptions are we making? How can we validate them?
2. Have students swap maps (digital or paper) with another team for quick feedback. Have them ask, “Does this feel like a real person’s experience?”

### Drawing Meaningful Insights: Connecting to the Project (5 min.)

**Teacher Script:** *The best solutions come from truly understanding people’s experiences. Your empathy map is a powerful tool that helps define who you are designing for and what they need. As you move forward in your project, keep your end-user’s perspective at the center of your work.*

1. Have students upload a JPEG of their team’s empathy map to their student portfolios. Then, have them respond to the following prompts:
  - What are two to three major insights about your end-user?

- How does this information shape your project direction?

**Next Steps:** Teams should identify gaps in knowledge by asking themselves, “What additional research is needed to refine our understanding?” They will use these insights in the next phase of defining the problem and brainstorming solutions.

## Evaluate [\(Back to summary\)](#)

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### Exit Ticket: Research Reflection

**Teacher Script:** *Before we wrap up, take a moment to reflect on what you learned today. Research is an ongoing process, and identifying gaps in knowledge helps us ask better questions.*

Exit Ticket Prompt (5 minutes):

1. Set a timer and have students respond to the prompts in their student portfolios:
  - Write down one key insight from today’s research.
  - What is one question you still have about social media’s influence on mental health?
  - What is your team’s next step?

**Teacher Script:** *In the next lesson, we’ll refine our ideas and begin brainstorming solutions. Keep thinking about how we can turn research into real challenges!*

## Project Word Wall

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### Project Word Wall

Introduce key vocabulary to establish a strong foundation for discussion and research. Have students define and discuss the following:

- **Credible:** Important when evaluating sources for reliability.
- **Perspective:** Used when considering multiple viewpoints on social media’s impact.
- **Synthesize:** Critical in combining information from various sources to form conclusions.
- **Problem Framing:** The process of clearly defining and understanding a problem before attempting to solve it.

### Integrate Skills for the Future

Prior to each lesson, add the durable skills students will develop and encourage reflection on how they apply these skills in their project work.

- **Digital Literacy:** The ability to find, evaluate, create, and communicate information using digital technologies, such as computers, smartphones, and the internet. It includes skills like critically assessing online sources, understanding digital privacy and security, using digital tools effectively, and engaging responsibly in online communities.

- **Problem Solving:** The process of identifying a challenge or issue, analyzing its causes, and developing effective solutions to address it. It involves a series of steps that help individuals or groups understand a problem, explore possible solutions, and implement a plan to resolve the issue.
- **Empathy:** Vicarious experience of another person’s feelings, emotions, and perspectives.

## Differentiation Strategies for Grades 9–12 [\(Back to top\)](#)

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Students across high school grades have varying levels of experience with **research**, **data analysis**, and **user-centered inquiry**. Use the following strategies to adjust cognitive load, scaffold learning, and encourage deeper engagement.

### Grade 9: Building Research Foundations

**Cognitive Focus:** Understanding how to ask researchable questions and gather credible information.

**Objective:** Help students develop foundational research skills by formulating strong questions and identifying credible sources.

- **Activating Prior Knowledge:** Students brainstorm what they already know and what they want to learn about social media and its impact on mental health.
- **Developing Research Questions:** Use question templates to refine broad topics into specific, researchable inquiries.
- **Conducting Guided Research:** Students explore curated sources and take structured notes.
- **Empathy Mapping:** Teams analyze a high school student’s experience with social media to identify patterns.
- **Reflection and Next Steps:** Exit ticket summarizing key insights and remaining questions.

### Grade 10: Strengthening Inquiry and Analysis

**Cognitive Focus:** Evaluating sources, identifying bias, and synthesizing data.

**Objective:** Develop students’ ability to critically assess information and use diverse research methods.

- **Real-World Context:** Students analyze a news clip or case study on social media’s impact.
- **Comparing and Evaluating Sources:** Use a Venn diagram to assess credibility, bias, and reliability.
- **Expanding Research Methods:** Teams create surveys and analyze preliminary trends.
- **Deepening Empathy Mapping:** Challenge assumptions by exploring contradictions in social media behavior.
- **Synthesizing Research Findings:** Teams summarize patterns, challenges, and next steps for further research.

### Grade 11: Critical Analysis and Independent Research

**Cognitive Focus:** Deepening critical thinking through source evaluation, synthesis, and framing a clear research focus.

**Objective:** Encourage students to conduct independent research, synthesize findings into themes, and develop a defensible research focus.

- **Source Analysis and Credibility Check:** Students independently identify sources and evaluate for credibility, bias, and authority, discussing how these factors influence the conclusions they draw.
- **Theme Identification:** Students group their research findings into emerging themes, looking for connections, contradictions, and gaps.
- **Framing the Problem:** After reviewing their initial research, students draft a preliminary problem statement and evaluate if their focus is too broad, too narrow, or missing critical perspectives.
- **Critical Synthesis Discussion:** In small groups, students share their research and emerging themes, offering peer feedback on how to refine or broaden their focus.
- **Justifying Research Focus:** Students write a brief reflection explaining why their chosen focus matters, supported with evidence from their initial research.

### Grade 12: Independent Inquiry and Real-World Application

**Cognitive Focus:** Applying research skills to analyze current digital challenges and propose solutions.

**Objective:** Guide students in conducting original research, evaluating digital influence, and designing meaningful solutions.

- **Connecting Research to Current Events:** Students examine recent social media policies or mental health advocacy efforts.
- **Conducting Original Data Collection:** Surveys, interviews, and real-time trend analysis.
- **Creating a Media Impact Report:** Teams evaluate how algorithms, influencers, and advertising shape behavior.
- **Solution Design Through Empathy Mapping:** Students develop ideas for improving digital well-being.
- **Presenting Research and Next Steps:** A proposal outlining key findings, research gaps, and potential solutions.