Lesson 8

Beta Test Your Impact: Making Your Project Even Stronger

Instructional Time:
50–90 minutes

Objectives

Students will:

- Iterate on their prototype using the Product Development Checklist, ensuring alignment to their storyboard, problem statement, and audience goals.
- Apply systems thinking and collaborative planning to evaluate and prioritize design and content elements of their solution.
- Conduct a beta test using the Five-Act Interview method, gathering structured feedback from peers simulating real users.
- Analyze feedback using a sorting strategy to distinguish between quick fixes, deeper design questions, and low-priority items.
- Demonstrate transforming competencies by refining their prototype with the goal of increasing audience engagement, clarity, and potential real-world impact.
- Reflect on the role of iteration, feedback, and adaptability in the design process.

Skills for the Future

- Transformative Competencies

Project Word Wall

- Beta test
- Five-Act Interview

Resources

General

- Teacher Resource Guide
- Lesson 8 teacher presentation
- Student portfolio
- Whiteboard
- Posterboard or digital board (such as Padlet or Mentimeter)
- Design Thinking Anchor Chart
- Storyboards (Lesson 6)
- Peer feedback notes (Lesson 7)

Videos

- WWDC17: 60-Second Prototype | Apple (10:40)
- From ‘Sprint’: The Five-Act Interview (7:47)
- The Art of Failing Forward (3:33)

- Product Development Checklist
- Laptops/tablets and selected tools (Canva, TikTok, Adobe Express, Google Slides, etc.)
- Five-Act Interview Protocol
- Student prototypes (websites, videos, campaigns, etc.)
- Feedback from the Five-Act Interview process beta test

Lesson Plan Summary: The Five Es

Engage: From Idea to Impact: How the Pros Iterate (Go to section)

1. Watch Video
   - WWDC17: 60-Second Prototype | Apple (10:40)
   - Have students respond to prompts in student portfolios.

Explore: Deep Build: Bringing the Vision to Life (Go to section)

1. Before each build session begins, encourage students to:
   - Revisit their storyboard (Lesson 6) and peer feedback (Lesson 7).
   - Review their problem statements and audience personas.
   - Set a team goal for the session (e.g., “Today we’ll complete the intro section and begin our second segment.”)
2. Prototype Development Checklist and Guiding Questions
   - Encourage teams to use the checklist not as a linear to-do list, but as a systemic thinking guide—a way to step back, assess progress, and ensure that each part of the prototype aligns with their goals, audience needs, and original problem statement.
3. Product Development Tracking
   - At the end of each development session, have students:
     - Take a snapshot of their current prototype. This can be a screenshot, photo, or short screen recording.
     - Write a brief progress note in their student portfolios describing what they worked on during the session, decisions they made, and any challenges or breakthroughs.
   - This running documentation will serve as a visual and reflective timeline of their design process, highlighting their iterative thinking and growth from concept to creation.

Explain: Five-Act Interview Feedback From a Mock Audience (Go to section)

1. Watch Video
   - From 'Sprint': The Five-Act Interview (7:47)
2. Have teams prepare for beta testing using the Five-Act Interview process:
   - Designate roles: Presenter, Note-Taker, and Timekeeper.
   - Review the feedback form and instruct students to customize one or two questions that fit their project (optional).
   - Help students set up at stations or workspaces.
3. Mock Audience Rotation
   - Have students rotate in pairs to interact with at least two or three different teams' prototypes.
   - Use the Five-Act Interview process to answer key questions:
     - What is this prototype trying to accomplish?
     - Is the message clear and easy to follow?
     - What parts were most engaging or memorable?
     - What feedback would help the creators improve?
     - How might you respond if this solution appeared in your feed or inbox in the real world?
4. Debrief and Wrap-up (3–5 min.)
   - Have teams return to their stations and reflect as a group:
     - What patterns did you notice in the feedback?
     - Was anything surprising?
     - What feedback will you act on first?

Elaborate: Revision Studio: Turning Feedback Into Impact (Go to section)

1. Making Meaning From Feedback
   - Have students review all their peer feedback.
   - Have students summarize two or three themes or insights in their student portfolios.
2. Feedback Sort Strategy
   - Explain the feedback sort strategy:
     - Quick Fix: Small edits or improvements that are easy to implement now.
     - Big Question: A complex issue that needs deeper team discussion or testing.
     - Not Yet Sure: Input that you're still processing or may address later.

3. Apply System Thinking
   - Have students reflect on how your prototype functions as a whole.
4. Practice Transforming Competencies
   - Introduce prompts for students to reflect on and act like social innovators.
5. Teams Document Final Revision Plan
   - Have students outline their final revision plan by identifying:
     - Three to five specific revisions they will make.
     - One design choice they are proud of and want to preserve.
     - One risk or bold move they are willing to test before final submission.

Evaluate: Exit Reflection: Resilience in the Creative Process (Go to section)

1. Watch Video
   - The Art of Failing Forward (3:33)
2. Video Reflection in Student Portfolio Prompts

Introduction

In this lesson, students continue to build and refine their prototypes through structured iteration and user-centered feedback. Using the Product Development Checklist, they will assess key components, such as content, messaging, and user experience, to ensure alignment with their storyboards, audiences, and original problem statements. Depending on project complexity, this build phase may extend over multiple class periods to support deeper development and real-time problem-solving. Students will then conduct a beta test using the Google Ventures Five-Act Interview process to simulate end-user feedback. Finally, they will enter a revision studio to apply systems thinking and transformative competencies, using peer insights to strengthen the clarity, cohesion, and impact of their solutions.

This lesson reinforces that strong design is a process, rooted in iteration, collaboration, and a deep understanding of user needs.

Standards and Practices

Common Core Standards: Grades 9–10

- **W.9–10.5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- **SL.9–10.1:** Initiate and participate effectively in a range of collaborative discussions.
- **SL.9–10.4:** Present information clearly, concisely, and logically such that listeners can follow the line of reasoning.

Common Core Standards: Grades 11–12

- **W.11–12.5:** Develop and strengthen writing through planning, revising, editing, rewriting, or trying a new approach, focusing on what is most significant for a specific purpose and audience.
- **SL.11–12.1:** Initiate and participate in a range of collaborative discussions with diverse partners.
- **W.11–12.6:** Use technology to produce, publish, and update individual or shared writing products in response to ongoing feedback.

Next Generation Science Standards

- **HS-ETS1-2:** Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
- **HS-ETS1-3:** Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, and aesthetics.
- **HS-ETS1-4:** Use a computer simulation to model the impact of proposed solutions to a complex problem.

International Society for Technology in Education

- **Empowered Learner:** Students build networks and customize their learning environments in ways that support the learning process.
- **Computational Thinker:** Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods.
- **Creative Communicator:** Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

Teacher Preparation

Preparation

Preparing for the Final Presentation (pre-work for Lesson 10): As students engage in beta testing their projects, now is the time to begin preparing for their final presentation. Collaborate with your students to clearly identify the *target audience* for their final product. This could be peers, school staff, community members, or professionals connected to their topic. Once the audience is defined, help students plan how they will present their work in a way that resonates with that group. Begin making arrangements to invite the chosen audience to the final presentation during Lesson 10.

Some students may prefer to record their presentations in advance and share them digitally (e.g., via a private YouTube link, Google Drive, or a class website). Others may schedule live sessions with younger students, school staff, school board members, or even external organizations.

To support logistics, consider offering dedicated time during class, after school, or in a quiet space on campus for students to record their presentations. Encourage students to tailor their delivery to the needs of their audience and to reflect on how the audience's reactions and feedback help them grow as communicators and creators.

Differentiation Strategies for Grades 9–12

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 do creators refine their ideas to better meet user needs, and how can feedback help us build stronger, more impactful solutions?

Engage (5–7 minutes) (Back to summary)

From Idea to Impact: How the Pros Iterate

Teacher Script: *Before we dive into today's build session, let's see how real-world creators, like designers at Apple, approach prototyping and iteration. Pay attention to how feedback shapes what they build and how they respond to failure.*

1. Play the video *WWDC17: 60-Second Prototype | Apple* (10:40)

- Have students respond to these prompts in their student portfolios while they are watching the video:
  - What part of the design process stood out to you?
  - How did this designer adapt his solution based on testing or feedback?
  - What can we take from their process that we can use today?

2. Ask students, "What can we take from their process that we can use today?"

Use a Design Thinking Anchor Chart to visually show the iterative loop: *Prototype* → *Test* → *Refine* → *Repeat*, and highlight where students are now.

Explore (20–90 minutes) (Back to summary)

Deep Build: Bringing the Vision to Life

Before each build session begins, encourage students to:

- Revisit their storyboard (Lesson 6) and peer feedback (Lesson 7).
- Review their problem statements and audience personas.
- Set a team goal for the session (e.g., "Today we'll complete the intro section and begin our second segment.")

Tip: Students may want to ignore these steps if they are participating in multiple build sessions. Reiterate that it's critical to revisit their project objectives regularly to stay within the scope of their project.

Prototype Development Checklist and Guiding Questions

Distribute the Prototype Development Checklist (available in the Teacher Resource Guide) to each team at the start of any prototype-building session.

The Product Development Checklist supports students as creative problem-solvers and collaborative designers, helping them manage the multiple interdependent components of their solution: content, functionality, storytelling, and user experience. Team members will work on individual aspects of the project and learn to align their work with that of their teammates to build the project.

Encourage teams to use the checklist not as a linear to-do list, but as a systemic thinking guide—a way to step back, assess progress, and ensure that each part of the prototype aligns with their goals, audience needs, and original problem statement.

Teams should revisit this checklist throughout their build process to:

- Stay focused on their core message and call to action.
- Track design decisions and ensure visual and narrative consistency.
- Monitor team roles and progress.
- Surface obstacles early and adapt their approach.
- Prepare for effective beta testing and iteration.

By the end of the session, each team should briefly review the checklist together, identify areas of strength, and outline next steps for refinement.

Review the Prototype Development Checklist in the Teacher Resource Guide with students.

Product Development Tracking

To document their progress over time, students should capture the evolution of their solution throughout the build phase.

At the end of each development session, have students:

- Take a snapshot of their current prototype—this can be a screenshot, photo, or short screen recording.
- Write a brief progress note in their student portfolios describing what they worked on during the session, decisions they made, and any challenges or breakthroughs.

This running documentation will serve as a visual and reflective timeline of their design process, highlighting their iterative thinking and growth from concept to creation.

Explain (30–40 minutes) (Back to summary)

Five-Act Interview Feedback From a Mock Audience

Teacher Setup: Practicing Real-World Feedback Gathering

Teacher Note: This activity simulates how real-world designers, developers, and marketers collect feedback from end-users to improve their product or message. Shift students from a creator mindset to an audience-centered design mindset by framing feedback as a tool for improvement, not as criticism. Reinforce the value of iteration and encourage teams to approach this session as a form of user research.

Students should customize their feedback forms to reflect their project format and goals. For example, a social media campaign might focus on engagement and clarity, while a website prototype may prioritize navigation and content hierarchy.

Introduce the Five-Act Interview process from Google Ventures to structure this session and give students a practical approach to testing with users. Before the lesson begins, prepare student stations or workspaces for teams to be interviewed in small groups.

Teacher Script: *Today, you're going to step into the shoes of professional designers and product teams. Whether you're creating a video, website, campaign, or app, all creators—yes, even at Google or Apple—know that real feedback from real users is one of the most powerful tools for improvement.*

Before we begin, I want to emphasize something important: feedback isn't a critique of you, it's a gift that helps you create something more impactful. This session is about refining your idea by seeing how others experience it.

We're going to use a method called the Five-Act Interview. It's a user testing process from Google Ventures that helps teams gather structured feedback from users. Here's how it works:

- *The process begins with a friendly welcome to break the ice and help the viewer feel comfortable.*
- *Then, you ask context questions—open-ended questions about the user's experiences or habits related to your topic.*
- *Next, introduce the prototype by explaining what your audience is about to see, but avoid leading them.*
- *Then, assign tasks and observe. Let your audience interact with your prototype while you watch and take notes.*
- *Finally, you wrap up and debrief by asking follow-up questions to clarify what worked, what didn't, and how they felt.*

Let's take a few minutes to watch a real example from Google Ventures so you can see this approach in action.

1. Watch the video From 'Sprint': The Five-Act Interview (7:47).

2. Have teams prepare for beta testing, using the Five-Act Interview process (2–3 min.):

- Designate roles: Presenter, Note-Taker, and Timekeeper. For students who don't have an assigned role, have them observe and respond to the questions in Act 5: Debrief and Wrap-Up of the Five-Act Interview Protocol document. (See below)
- Review the Five-Act Interview Feedback Protocol and instruct students to customize one or two questions that fit their project (optional).
- Help students set up at stations or workspaces.

Tip: If students have access to a video recorder (e.g., mobile phones, class video camera, etc.), encourage them to film their feedback session so that they can review it together.

3. Mock Audience Rotation (10–12 min. total, depending on class size):

- Have students choose another team to present to. They will exchange roles so that each team has an opportunity to present and provide feedback.
- Instruct team members who are not assigned roles and are observing the process to use the Five-Act Interview Feedback Protocol document to record their observations and responses to the questions located in the Debrief and Wrap-Up section of the feedback protocol:
    - What is this prototype trying to accomplish?
    - Is the message clear and easy to follow?
    - What parts were most engaging or memorable?
    - What feedback would help the creators improve?
    - How might you respond if this solution appeared in your feed/inbox/in the real world?

4. Debrief and Wrap-up (3–5 min.):

- Have teams return to their stations and reflect as a group:
  - What patterns did you notice in the feedback?
  - Was anything surprising?
  - What feedback will you act on first?

Elaborate (15–20 minutes) (Back to summary)

Revision Studio: Turning Feedback Into Impact

Teacher Script: *Feedback is only powerful if we do something with it. Today, you'll step into the mindset of professional creators—not just to fix what's broken, but to strengthen what's working and create something that can genuinely make an impact. This is where Systems Thinking and Transforming Competencies come in.*

In this "revision studio," you'll think like innovators. You'll look at how the pieces of your solution—your content, visuals, message, platform, and call to action—work together as a system. You'll reflect on how your prototype creates value, responds to real-world needs, and empowers your audience. And you'll decide what to improve, what to rethink, and how to move forward with purpose.

Outline the revision process:

1. **Make Meaning From Feedback:**

- Students will review all peer feedback as a team.
- Students will summarize two or three themes or insights that surfaced across the feedback sessions in their student portfolios.

2. **Feedback Sort Strategy:**
   Students will use the "Feedback Sort" method to prioritize revisions:

- **Quick Fix:** Small edits or improvements that are easy to implement now.
- **Big Question:** A complex issue that needs deeper team discussion or testing.
- **Not Yet Sure:** Input that they're still processing or may address later.

Tip: Students can use color-coded sticky notes or a digital board to visually organize feedback into categories.

3. **Apply Systems Thinking:**
   Students will use these questions to reflect on how your prototype functions as a whole:

- How do the parts of our project (story, visuals, tone, and delivery) work together to influence our audience?
- Where are the weak links in our system? Is anything misaligned or creating friction?
- Are we still addressing the problem we set out to solve in a meaningful way?

4. **Practice Transforming Competencies:**
   Prompt students to reflect and act like social innovators:

- What new value are we creating for our users or audience?

- Are there any tensions or dilemmas in our message or format that we need to resolve?
- How will we take responsibility for the impact our solution has on our audience or the world?

5. Have teams document their final revision plan in their student portfolios by identifying:

- Three to five specific revisions they will make.
- One design choice they are proud of and want to preserve.
- One risk or bold move they are willing to test before final submission.

Evaluate (10–12 minutes) (Back to summary)

Exit Reflection: Resilience in the Creative Process

Teacher Script: *Even the best creators struggle. What sets them apart is how they respond to mistakes and keep going. Let's hear how creatives use setbacks as fuel for innovation.*

1. Watch the video The Art of Failing Forward (3:33).

2. Have students respond to the reflection prompts in their student portfolios:

- What's one creative risk you took during this project?
- What's one mistake or challenge you encountered, and how did you respond?
- How has your mindset about failure changed during this project?

Teacher Script: *Iteration is messy, but powerful. You've worked hard to build something meaningful. As we head into our final stretch, remember: the goal isn't perfection—it's progress with purpose.*

Project Word Wall

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

- **Beta Test:** Testing a prototype with real users to identify strengths and areas for improvement before final release.
- **Five-Act Interview:** A structured user testing method that guides how to observe and gather feedback during prototype interaction.

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.

- **Transformative Competencies:** Competencies to transform the society and shape one's future to address the growing need to be innovative, responsible, and aware, including abilities to create new value, resolving and reconciling tensions and dilemmas, and taking responsibility

Differentiation Strategies for Grades 9–12 (Back to top)

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: Learning to Value Feedback and Make Simple Revisions

Cognitive Focus: Understanding how feedback improves design and audience impact.
Objective: Help students build a positive mindset around iteration and strengthen their ability to make targeted, beginner-level improvements.

- **Feedback Framing Mini-Lesson:** Discuss how professional creators use feedback. Reinforce that suggestions are about the project, not the person.
- **Feedback Sentence Starters:** Provide structured sentence stems (e.g., *"I noticed...," "I wondered...," "What if you tried..."*) to help students give and receive feedback constructively.
- **Revision Choice Board:** Offer a visual menu of "Quick Fix" examples (e.g., improve contrast, clarify CTA, shorten intro).
- **Mini Debrief:** After peer testing, have students complete a "3-2-1" reflection: *3 things they learned, 2 suggestions to try, 1 part they're keeping.*

Grade 10: Building Structured Revision Plans With Audience in Mind

Cognitive Focus: Applying feedback through planning and revision.
Objective: Support students in organizing feedback and making revision decisions that align with their users' needs.

- **Feedback Sort Template:** Provide a graphic organizer to sort feedback into categories: *Quick Fix, Big Question, Not Yet Sure*.
- **Peer Coach Role:** Assign a team member the job of helping others identify feedback patterns and propose logical revisions.
- **Checkpoints Checklist:** Provide a timeline or checklist that helps students track progress through multiple revisions.
- **Audience Reminder Cards:** Have teams post a profile or empathy map of their target audience near their workspace as a visual anchor during edits.

Grade 11: Designing for Complex Systems and Testing for Impact

Cognitive Focus: Synthesizing feedback and using systems thinking to align every element.
Objective: Push students to revise for cohesion, narrative flow, and system-level impact on the user.

- **Systems Alignment Map:** Have students diagram how the parts of their prototype (e.g., visuals, tone, format, message) work together to meet user needs.
- **Mock Pitch Rehearsals:** Have teams present their project briefly to another group for high-level feedback (e.g., "What works across the whole?").
- **Prioritization Rubric:** Guide teams to weigh each potential revision *by impact, difficulty, and alignment* to project goals.

- **Bold Move Brainstorm:** Encourage risk-taking by having teams identify one high-impact, creative idea to test in revision.

Grade 12: Leading User Research and Refining for Real-World Use

Cognitive Focus: Practicing leadership in user testing and refining for public-facing audiences.
Objective: Challenge students to own the revision process, evaluate ethical/user implications, and prepare for authentic sharing or launch.

- **End-User Interview Debrief:** Have students reflect on how user feedback could shape real product decisions (e.g., ethics, access, or messaging).
- **Transformation Tracker:** Have students identify how their solution evolved across prototyping stages and how feedback shaped each shift.
- **Self-Directed Revision Studio:** Allow students to schedule their own team time for revision with teacher checkpoints at milestones.
- **Professional Prep Reflection:** Ask students, *"If this were going live tomorrow, what changes would you make, and why?"*