

Lesson 6

Designing the Blueprint: Choosing the Right Solution Format



Instructional Time:
50–90 minutes

Objectives

Students will:

- Collaboratively select a final solution format based on feasibility, engagement, and impact using structured comparison tools.
- Create a low-fidelity storyboard to visually map out the narrative structure, content, and audience interaction of their chosen solution.
- Give and receive peer feedback on their storyboard, identifying areas of strength and opportunities for improvement.
- Reflect on their planning process and articulate next steps to guide their transition into prototyping in the next lesson.

Skills for the Future

- Perseverance
- Reasoning

Project Word Wall

- Storyboarding
- User feedback
- Audience engagement
- Design constraints
- Call to action (CTA)

Resources

General

- [Teacher Resource Guide](#)
- [Lesson 6 teacher presentation](#)
- [Student portfolio](#)
- Whiteboard
- Posterboard or digital board (such as [Padlet](#) or [Mentimeter](#))

Videos

- Video 1: [The Iterative Design Process Explained](#) (3:48)

Lesson Plan Summary: The Five Es

Engage: Warm-up: The Power of Prototyping ([Go to section](#))

1. Watch Video
 - [The Iterative Design Process Explained \(3:48\)](#)
2. Whole-Class Discussion

Explore: Creative Format Exploration: Designing the Right Kind of Solution ([Go to section](#))

1. Inspire and Ideate
 - Present four to six real-world examples
2. Students Record Their Thoughts
 - Have students brainstorm strengths.
 - Have teams gather and answer creative alignment prompts in their student portfolios:
 - What are our team's creative strengths (e.g., video editing, writing, graphic design, coding, storytelling, or public speaking)?
 - What formats allow us to showcase those strengths?
 - What format would be most engaging to our audience?
 - What are we excited to build or try?
3. Format Fit Grid
 - Have students compare two to three possible solutions for their prototype.
 - Guiding Questions:
 - Who are we trying to reach?
 - How do people in this group typically engage with information?
 - What are we excited to make?
 - What can we realistically create in the time and tools we have?
 - Instruct teams to rate each category with a 1–3 scale (1 = low, 3 = high) and total the points to determine their strongest candidate.

Example:

Solution	Audience Reach	Engagement	Feasibility	Excitement	Total
Infographic	High	Medium	High	Medium	xx
Social Media Campaign	Medium	High	Medium	High	xx
Website	Low	Medium	Medium	Medium	xx

- Have students finalize their choices in their student portfolios. Explain: Explaining the Overarching Topic

Explain: Storyboarding: Mapping Out the Message [\(Go to section\)](#)

1. Storyboarding Step-by-Step

- Prompt: Why do creators storyboard before making the final version of a product or media piece?
- Show examples.

2. Storyboard Set-up

- Share the storyboard template with students.
- Have students work in teams to complete the template.

Elaborate: Peer Share and Storyboard Feedback [\(Go to section\)](#)

1. Peer Review Round

- Pair teams and have them share their storyboards.

3. Team Reflections

- Have teams make changes to their storyboards.

4. Have teams upload a JPEG of their storyboard to their student portfolios.

Evaluate: Student Portfolio Exit Ticket [\(Go to section\)](#)

1. Student Portfolio Exit Ticket

- Guiding prompts:
 - What is one thing your team did well during planning today?
 - What question do you still have about your prototype?
 - What will be your first step when you begin building in the next class?

Wrap-up: You've laid the foundation for a powerful solution. Next time, we'll bring your storyboard to life. Be ready to experiment, test, and refine because real design takes iteration!

Introduction

Bringing an idea to life requires creativity, strategic planning, and the right tools. Now that students have identified a problem and brainstormed solutions, it's time to develop the first draft of their team prototype. Whether designing a social media campaign, an infographic, a website, or an interactive tool, students will explore digital storytelling techniques, refine their messaging, and create compelling content to engage their target audience. By analyzing real-world examples, experimenting with design tools, and gathering peer feedback, students will take their first step in transforming their ideas into impactful solutions.

Standards and Practices

Common Core Standards: Grades 9–10

- **W.9–10.1:** Write arguments to support claims with reasoning and evidence.
- **SL.9–10.1:** Participate effectively in collaborative discussions.
- **W.9–10.4:** Produce clear and coherent writing appropriate for task, purpose, and audience.
- **SL.9–10.5:** Integrate digital media into presentations to enhance understanding.

Common Core Standards: Grades 11–12

- **RI.11–12.7:** Evaluate multiple sources of information to address a question or problem.
- **W.11–12.6:** Use technology to produce, publish, and collaborate on writing.
- **W.11–12.1:** Write arguments to support claims using valid reasoning and evidence.
- **SL.11–12.1:** Engage effectively in collaborative discussions.

Next Generation Science Standards

- **HS-ETS1-1:** Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions.
- **HS-ETS1-3:** Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs.
- **HS-ETS1-4:** Use a computer simulation to model the impact of proposed solutions to a complex problem.

International Society for Technology in Education

- **Computational Thinker:** Students develop and employ strategies for understanding and solving problems using computational thinking.
- **Global Collaborator (7a, 7b, 7c, 7d):** Students use digital tools to broaden perspectives and enrich learning by collaborating with others.
- **Innovative Designer (4a, 4b, 4c, 4d):** Students use a variety of technologies within a design process to identify and solve problems.

Teacher Preparation

Preparation

[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 can we use our creativity, collaboration, and audience awareness to design a solution format that transforms our ideas into meaningful change?

[Engage \(5 minutes\)](#) [\(Back to summary\)](#)

Warm-up: The Power of Prototyping

Teacher Script: *Before we dive into today’s lesson, let’s think about the last time you used a product, app, or tool that just worked really well. Perhaps it was your phone, a favorite website, or even a school supply, such as a mechanical pencil. Do you think the very first version of that product was perfect? Probably not! Great designs are the result of many iterations—small improvements based on testing and feedback. Today, we’re going to explore how iteration helps us refine ideas and create stronger prototypes. To start, we’ll watch a short video on how designers test and improve their ideas over time.*

1. Play Video: [The Iterative Design Process Explained](#) (3:48)
 - While watching the video, have students respond to these prompts in their student portfolios:
 - Why is prototyping important in the design process?
 - Can you think of an example in your own life when iteration helped improve a project or idea?
2. Whole-Class Discussion (2 min.): Record student responses on chart paper, whiteboard, or digital board:
 - How do companies and creators use iteration to improve their projects?
 - How can we apply these ideas to our own work?

Explore (15 minutes) [\(Back to summary\)](#)

Creative Format Exploration: Designing the Right Kind of Solution

Teacher Script: Now that you've developed a clear problem statement and thought about who your audience is, it's time to start imagining what kind of solution you want to create. This decision is a big deal. Your solution isn't just a school project; it's your chance to make an impact. Whether you're into coding, storytelling, design, activism, or communication, there are many creative ways to bring your message to life. So, let's explore some options together.

Instructions for Teachers and Students

Inspire and Ideate (5–6 min.)

1. Present four to six real-world examples (visuals or short videos work well). These could include:
 - A student-led TikTok mental health campaign (e.g., TikTok [#MentalHealthAction](#))
 - A podcast series about misinformation ([Girl & the Gov Podcast: "Identifying Misinformation & Disinformation"](#))
 - An infographic on cyberbullying statistics ([Teen Social Media Infographic from Common Sense Media](#))
 - A game that simulates social media decision-making ([Get Bad News](#))
 - A zine or PSA that uses storytelling to spark change (e.g., [Seize the Awkward](#))
2. As students view the examples, have them jot down their thoughts in their student portfolios:
 - Which formats do I find inspiring or interesting?
 - What kinds of projects do I enjoy working on?
 - What tools or media do I feel confident using?

Brainstorm From Your Strengths (5 min.)

3. Have teams gather and answer these creative alignment prompts in their student portfolios:
 - What are our team's creative strengths (e.g., video editing, writing, graphic design, coding, storytelling, or public speaking)?
 - What formats allow us to showcase those strengths?
 - What format would be most engaging to our audience?
 - What are we excited to build or try?

4. Encourage teams to list three possible formats and then circle or highlight the one they feel best fits.
 - Empower student teams to weigh multiple options before selecting the format for their solution, using evidence from their problem statement, target audience, and personal interests. This approach builds critical thinking, inclusive collaboration, and metacognitive skills.
 - Each team will use a Format Fit Grid (provided in the student portfolio) to compare two to three possible solutions for their prototype. Have students evaluate each solution based on their research and user feedback using the following criteria (examples are listed below): audience reach, engagement, feasibility, and excitement.
 - Teams should rate each category with a 1–3 scale (1 = low, 3 = high) and total the points to determine their strongest candidate.

Solution	Audience Reach	Engagement	Feasibility	Excitement	Total
Infographic	High (3)	Medium (2)	High (3)	Medium (2)	10
Social Media Campaign	Medium (2)	High (3)	Medium (2)	High (3)	10
Website	Low (1)	Medium (2)	Medium (2)	Medium (2)	7

- Guiding questions:
 - Who are we trying to reach?
 - How do people in this group typically engage with information?
 - What are we excited to make?
 - What can we realistically create in the time and tools we have?

Consensus and Commitment (3–4 minutes)

5. When students are finished evaluating, have them discuss:
 - Which format scored the highest, and why?
 - Are they accepting any trade-offs by choosing this format?
 - What strengths do we bring to this format as a team?
6. Have students finalize their choice and document it in their student portfolios:
 - “Our team chose to create a _____ because it allows us to reach [audience] with [message] in a way that is [engaging/creative/feasible]. I’m excited about this format because _____. One challenge I think we might face is _____.”

Explain (15 minutes) [\(Back to summary\)](#)

Storyboarding: Mapping Out the Message

Teacher Script: Now that you’ve selected the format for your solution, it’s time to plan how it will come to life. One powerful way to do this is through storyboarding. A storyboard is like a blueprint—it lets us plan how our message will unfold before we start creating. Whether you’re designing a website, PSA, campaign, or game, your storyboard will help your team clarify your message, your visuals, and your call to action.

Storyboarding Step-by-Step

1. Intro to Storyboarding (3 min.):

- Ask students, “Why do creators storyboard before making the final version of a product or media piece?”
- Show one to two examples of storyboards (visuals or short videos work well). These could include:
 - Storyboard Ideas, Examples, and Techniques Explained: [studiobinder](#)
 - StoryboardThat: [PSA Examples](#)
 - Social Interactions: Storyboards and Wireflows for Team Refresh: [Medium](#)
 - How to Write an Infographic Story in 5 Simple Steps: [ColumnFive](#)

2. Storyboard Setup (10 min.):

- Share the printed or digital storyboard template with students.
- Remind students that these are sketches and notes, not polished work. Students should focus on:
 - What is the main message in each panel or section?
 - What visuals and text will appear?
 - What action do you want the viewer to take?

3. Storyboard Start (have students work in teams):

- Encourage students to create rough sketches and notes to represent the sequence of their message.
- Remind students that strong storyboards show how the audience moves through the experience, not just what’s on each screen.

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

Peer Share and Storyboard Feedback

Teacher Script: *Designers often workshop their ideas before they commit to building them. Let’s get some fresh eyes on your storyboard so you can strengthen your message before moving into creation.*

1. Peer Review Round (5 min.):

- Pair teams and have them share their storyboards.
- Instruct reviewers to use the guiding questions on the Printed Storyboard Peer Feedback to give warm, cool, and constructive feedback:
 - Is the message clear and consistent throughout?
 - Do the visuals match the tone and purpose?
 - Is the sequence logical and engaging?
 - Is there a clear call to action?

2. Team Reflection (3 min.):

- Have each team return to their own work and highlight one or two changes they plan to make based on peer feedback.

3. Portfolio Check-In (2 min.):

- Ask students to upload an image of their team storyboard to their individual student portfolios. Have each student complete the following sentences in their portfolio:
 - “One strength of our storyboard is…”
 - “One change we plan to make is…”

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

Teacher Script: *Designers often workshop their ideas before they commit to building them. Let’s get some fresh eyes on your storyboard so you can strengthen your message before moving into creation.*

Teacher Script: *Your team has made great progress today—from choosing a solution format to planning your design with a storyboard. Before we wrap up, take a moment to reflect on your process and think ahead to the next step: building your prototype.*

1. Student Portfolio Exit Ticket (3 min.):

- What is one thing your team did well during planning today?
- What question do you still have about your prototype?
- What will be your first step when you begin building in the next class?

Teacher Script: *You’ve laid the foundation for a powerful solution. Next time, we’ll bring your storyboard to life. Be ready to experiment, test, and refine because real design takes iteration!*

Project Word Wall

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

- **Prototype:** An early model of a product that simulates its design and functionality. Prototypes are created to test concepts, gather feedback, and iterate on the design before the final product is developed.
- **Storyboarding:** A visual planning process that breaks down information into individual panels or shots, similar to a comic book, to outline the narrative and visual flow of a project. It helps ensure that the message is clear and impactful before creating the first version.
- **User Feedback:** Information provided by users about their experience with a product or service, used to identify areas for improvement, validate design decisions, and enhance usability.
- **Audience Engagement:** The extent to which an audience interacts with a product, service, or content, reflecting their level of interest and participation.
- **Design Constraints:** Limitations or restrictions in the design process, such as budget, materials, technology, or regulations, that influence the development of a product or solution.

- **Call to Action (CTA):** An element in a web page that solicits an action from the user, often in the form of clickable buttons like “Buy this now!” or “Learn more...”.

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.

- **Perseverance:** Overcoming obstacles and challenges by maintaining focus in the face of negative emotions, pursuing alternative routes to goal achievement, and persisting until the task is complete.
- **Reasoning:** Logic-based thinking processes of an inductive or deductive nature that are used to draw evidence-based conclusions from data, facts, or premises.

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: Exploring Format Possibilities Through Personal Strengths

Cognitive Focus: Identifying personal creative strengths and applying them to team-based solution design.

Objective: Help students discover how their interests and skills can influence the format they choose for their solution.

Objective: Help students develop foundational discussion skills and introduce PBL and design thinking in a way that feels accessible and engaging.

- **Self-Awareness Warm-up:** Have students reflect individually on their personal strengths and creative preferences (e.g., Do you love writing? Are you good at editing videos?).
- **Low-Stakes Format Sorting:** Provide four to six potential solution formats on cards. In small groups, students sort and rank them by confidence level, interest, and perceived impact.
- **Visual Brainstorm:** Create a mind map or collage-style vision board to help visualize what their project could look like.
- **Storyboarding Support:** Offer simplified storyboard templates with icons and example boxes pre-filled for guidance.

Grade 10: Aligning Format With Purpose and Audience

Cognitive Focus: Making evidence-based decisions by connecting format choice to project goals and intended audience.

Objective: Support students in using a structured process to select a format that aligns with the problem they’re addressing.

- **Format Analysis Carousel:** Have students rotate through example projects (e.g., infographics, PSAs, animations, etc.), analyzing how well each meets a sample audience’s needs.

- **Format Fit Grid:** Guide students in comparing possible formats using the Format Fit Grid. Provide sentence stems to help them articulate reasoning (e.g., “We chose this because…”).
- **Storyboard Drafting With Scaffolds:** Provide teams with a storyboard with sentence starters and pre-set panels to help them think through narrative flow.

Grade 11: Designing for Engagement and Impact

Cognitive Focus: Analyzing design trade-offs and stakeholder perspectives to inform project planning.

Objective: Push students to evaluate not just what’s possible, but what’s most meaningful and effective for their intended audience.

- **Design Trade-Offs Activity:** Have students consider accessibility, cost, platform, and audience access when selecting a format.
- **Target Audience Persona:** Have students create a profile of a “user” from their target audience and use it to test and revise storyboard flow.
- **Storyboard Critique Roundtables:** Instruct teams to swap storyboards and use a checklist to evaluate clarity, relevance, and creative storytelling.

Grade 12: Storytelling for Social Change

Cognitive Focus: Strategically using media formats to shape perceptions and influence behavior.

Objective: Prepare students to craft professional, purpose-driven narratives that are emotionally and intellectually compelling.

- **Media Landscape Analysis:** Examine how different media formats shape public narratives (e.g., Instagram campaigns vs. longform podcasts).
- **Creative Pitch Decks:** Have teams create a three-slide “pitch deck” explaining their format choice, target audience, and planned storyboard sequence.
- **Independent Planning Time:** Have students begin translating their storyboard into a digital layout, setting up next steps for prototyping in Lesson 7.