

Use Cases and Best Practices

Welcome to Short Answer! This manual contains subject-specific use cases and best practices to aid implementation in the classroom.

Short Answer is standards-aligned and enables students to develop foundational literacy, writing, and analytical skills across subjects. Each subject page in this manual offers several standards from the Common Core (CC) or Next Generation Science Standards (NGSS) that Short Answer can help meet.

Content Areas:

- <u>Algebra</u>
- <u>Biology</u>
- <u>Business</u>
- <u>Calculus</u>
- <u>Career Readiness</u>
- <u>Chemistry</u>
- <u>Computer Science</u>
- Earth Science
- <u>Economics</u>
- English/Language Arts
- <u>Ethics</u>
- Family and Consumer Sciences

- Foreign Language
- <u>Geometry</u>
- <u>Neuroscience</u>
- <u>Physics</u>
- Pre-Algebra
- <u>Psychology</u>
- Social Emotional Learning
- Social Studies/Civics
- <u>Statistics</u>
- <u>Trigonometry</u>
- <u>U.S. History</u>
- World History
- <u>Writing</u>



Teaching Tips

To help foster a supportive environment for feedback, introduce the <u>importance of</u> <u>feedback</u> and <u>how to give empathetic feedback</u> with our mini-lessons.



The best questions are open-ended and ask students to justify opinions, analyze material, articulate a thought process, or evaluate a claim.

Avoid fact-based recall questions.



The best feedback criteria are positively oriented and relevant to learning objectives. Criteria can focus on both content knowledge and writing structure.

- Make students aware of the criteria so they know how to craft their response. Or, have students decide what appropriate criteria would be.
- Emphasize that students have to make a choice about assigning feedback. *Both* or *neither* aren't options!



The best discussion questions ask students to **verbalize their thought process** about the feedback they gave. For example: "93% you said Response 1 explained the concept of photosynthesis better. Can someone share what aspect of the response made you think that?"

- Have students **predict** what results will be.
- Focus discussion on the qualities of the **responses** rather than on the students who wrote the responses.

To promote students' metacognitive development:

- Encourage students to ask themselves questions during the activity:
 - "Does my response meet all the criteria?"
 - "How did giving feedback improve my understanding of the content?"
 - "How can I improve my response using the feedback I got?"
- Provide clear time signals throughout the activity.



To **incorporate feedback in the moment,** ask students to reflect on how they can improve their response after receiving feedback. You may want to take time to have them **revise** their responses, either in class or for homework.



Algebra

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Algebra lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments or solve problems about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Algebra use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Algebra

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational algebraic skills and crowdsource strategies for solving problems. Discussion can focus on addressing common mistakes and misconceptions.

Sample Questions

- Explain the process for multiplying two binomials.
- Without actually solving the problem, describe the steps you would take to solve the inequality: 2(x + 3) < x + 1
- Describe the process for solving this system of equations: 3x-4y = 2 and 9y-12x = 7.

Feedback criteria: efficient; easy to understand; accurate

Standards Alignment Examples

- Construct viable arguments and critique the reasoning of others. (CC, PRACTICE.MP3)
- Perform arithmetic operations on polynomials. (CC, HSA.APR.A.1)
- Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. (CC, HSA.REI.C.6)

COMING SOON: Solving Equations and Showing Work

Activity Time: 10-15 minutes

Have students solve a word problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

Sample Questions:

- Helen's cell phone company charges her a monthly rate of \$17.25 and \$0.35 a minute per call. The bill for *m* minutes is \$37.55. How many minutes did Helen spend on the phone? Explain your reasoning.
- Savannah has \$90 and Jen has \$60. Each week Savannah saves \$5 and Jen saves \$8. In how many weeks will they have the same amount? Show your work.

Feedback Criteria: efficient; creative approach; clear explanation of thought process; accurate

- Make sense of problems and persevere in solving them (CC, PRACTICE.MP1)
- Understand solving equations as a process of reasoning and explain the reasoning. (CC, HSA.REI.A.1)
- Create equations and inequalities in one variable and use them to solve problems. (CC, HSA.CED.A.1)



Biology

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Biology lesson plan from lectures to labs:

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Labs | Use Short Answer to bring feedback into the scientific process. Your students can create procedures for experiments, hypothesize results, and infer conclusions from data before bringing them to the class for analysis and debate. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Biology use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- Explain the role of DNA in human development.
- What role do mutations play in genetic variation?
- Why are some diseases more common in males?

Feedback Criteria: use of facts to support argument; detailed explanation; accurate

Standards Alignment Examples

- Write arguments focused on discipline-specific content. (CC, WHST.9-12.1)
- Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. (CC, RST.6-8.2)
- Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. (NGSS, HS-LS3-2)

Pre-Lecture Idea Generation

Activity Time: 10-15 minutes

Have students hypothesize about how biological processes work before formally introducing them. Students can work alone or in groups to form hypotheses and provide feedback on peers' explanations before discussing as a class.

Sample Questions:

- Describe how plants convert sunlight into energy.
- Outline the major steps of the cellular respiration process and explain which step you feel is the most crucial.
- What are two similarities between photosynthesis and cellular respiration?

Feedback Criteria: detailed explanation; creative similarities; accurate; educated guess

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. (*CC, WHST.6-8.2*)
- Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. (*CC*, *RST.11-12.9*)
- Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. (NGSS, MS-LS1-6)



Business

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Business lesson plan from foundational writing skills to entrepreneurial skill development.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Business use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material and gather opinions about material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- What are the most important important qualities a business manager should have and why?
- Describe the steps someone should take if they want to start a business.
- What makes someone a good leader in the business world?

Feedback Criteria: clear explanation; use of facts to support claims; originality

Standards Alignment Examples

- Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence. (CC, CCRA.W.1)
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)

Shark Tank Pitch Contest

Activity Time: 15-20 minutes

Have students write a unique pitch about a new venture they'd like to create. Use Short Answer to crowdsource feedback and engage the class in a lively discussion about what makes for a good sell.

Sample Questions:

- Write a 4-sentence pitch for a new service in the food industry.
- In 3 sentences, convince us why your new product is worth investing in.
- What qualities of a pitch make investors want to support the product?
- What qualities of a pitch make consumers want to buy and use the product?

Feedback Criteria: compelling; unique; innovative; creative; feasible

- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)
- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)



Calculus

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Calculus lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Calculus use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Calculus

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational calculus skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

Sample Questions

- Explain the difference between integrals and derivatives and how they are related.
- Describe how to determine whether a given function is continuous or not.
- In words, describe why the chain rule is used and how to use it.
- How are terms like *displacement*, *acceleration* and *velocity* related from a differentiation and integration perspective?

Feedback criteria: efficient; easy to understand; detailed procedure; accurate

Standards Alignment Examples

- Connecting differentiability and continuity (AP Calculus AB, Unit 2)
- The chain rule for differentiating composite functions (AP Calculus AB, Unit 3)
- Applying understandings of differentiation to problems involving motion (AP Calculus AB, Unit 4)

COMING SOON: Solving Equations and Showing Work

Activity Time: 10-15 minutes

Have students solve any calculus problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

Sample Questions:

- Calculate the volume of a solid with a base bounded by the circle $x^2 + y^2 = 9$ and square cross sections perpendicular to the y-axis. Explain your thought process.
- Without actually solving the problem, describe the steps you would take to solve the problem: "Vicky's art gallery has a profit function 25t² -10t + 34. What is her minimum profit, in thousands of dollars?"

Feedback Criteria: efficient; creative approach; clear explanation of thought process; accurate

- How to use the first derivative test, second derivative test, and candidates test (AP Calculus AB, Unit 5)
- Determining volume with cross-sections, the disc method, and the washer method (AP Calculus AB, Unit 8)



Career Readiness

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Career Readiness lesson plan from writing emails to interview preparation.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing Revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Career Readiness use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Career Readiness

Interview Preparation

Activity Time: 10-15 minutes

Use Short Answer to help students prepare for interviews. Students write responses to commonly asked questions and receive feedback from peers, discussing what makes for strong responses as a class.

Sample Questions

- What previous experiences make you a strong candidate for this position?
- What is your preferred style of communication and feedback?
- Why is this a place you can see yourself working for the next 5 years?

Feedback Criteria: compelling; unique; convincing; focused; concise

Standards Alignment Examples

- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)
- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)

Peer Feedback on Written Materials

Activity Time: 15-20 minutes

Have students write (or copy-and-paste) drafts of written materials such as bios, resumes, and emails for peer review. Students can discuss what qualities make for strong materials and revise their original work.

Sample Questions:

- Write a cold email to your dream job explaining who you are and why you're interested in the role.
- Write a thank you email to your interviewer.
- Write a 3-sentence biography of your experiences, interests, and goals.

Feedback Criteria: compelling; unique; informative; convincing; focused; concise

- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (CC, CCRA.W.5)
- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)



Chemistry

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your chemistry lesson plan from lectures to labs:

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Labs | Use Short Answer to bring feedback into the scientific process. Your students can create procedures for experiments, hypothesize results, and infer conclusions from data before bringing them to the class for analysis and debate. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |

See the following page for two detailed Chemistry use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Chemistry

Note: Short Answer doesn't support math equations yet, but works well when discussing generalized problem solving strategies and procedures.

Experimental Design

Activity Time: 5-10 minutes

Use Short Answer to have students create their own experimental procedure to response a scientific question and get feedback from peers on how the experiment would work.

Sample Questions

- Outline steps for an experiment to test the effect of concentration on the reaction rate of two chemicals.
- Precisely describe how you would gather data for determining the effect of temperature on the reaction rate of two chemicals.

Feedback Criteria: precision of procedure; ability to replicate experiment; validity of results

Standards Alignment Examples

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes. (CC, WHST.6-8.2)
- Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, etc.)(CC, RST.6-8.7)
- Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. (NGSS, HS-PS1-5)

Observing Experiments and Analyzing Data

Activity Time: 5-10 minutes

After demonstrating an experiment for the class, have students hypothesize why the phenomenon occurred or what the results of the experiment might mean.

Sample Questions:

- Why did the solution turn from colorless to pink after adding several drops of liquid?
- What causes different elements to emit varying colors of light in the flame test?

Feedback Criteria: uses observations to support claims; accurate hypothesis; clear explanation of reasoning

- Conduct short as well as more sustained research projects to response a question (including a self-generated question) or solve a problem; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (CC, WHST.11-12.7)
- Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (CC, RST.6-8.9)
- Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.(*NGSS*, *MS-PS1-2*)



Computer Science

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Computer Science lesson plan from problem solving skill foundations to code review.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Computer Science use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Computer Science

Note: Short Answer doesn't support code-friendly formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Before introducing a single line of code, use Short Answer to hone students' problem solving and logical thinking skills by asking how they would tackle problems.

Sample Questions

- Describe how you would find the smallest and largest number in an unsorted integer array.
- What steps would you use to reverse a string in place?
- How can you swap the numerical value of two variables without using a third placeholder variable?

Feedback criteria: efficient; accurate; feasible; creative

Standards Alignment Examples

- Compare and refine multiple algorithms for the same task and determine which is the most appropriate (*Computer Science Teachers Association, 1B-AP-08*)
- Use flowcharts and/or pseudocode to address complex problems as algorithms. (CSTA, 2-AP-10)
- Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. (CSTA, 2-AP-13)

COMING SOON: Coding Feedback

Activity Time: 10-15 minutes

Have students copy-and-paste code snippets or create original code in Short Answer, then give feedback to peers on how code can improve. Students can see how the same problem can be solved with different lines of code and discuss strategies for optimization.

Sample Questions:

- Write a function get_average that returns the average of all exam scores in the attached dataset.
- Insert your code to get the robot from A to B while picking up all objects in the path

Feedback Criteria: efficient; concise; desired result occurs; creative

- Create programs that include sequences, events, loops, and conditionals. (CSTA, 1B-AP-10)
- Compare and refine multiple algorithms for the same task and determine which is the most appropriate (*Computer Science Teachers Association*, 1B-AP-08)
- Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development. (CSTA, 1B-AP-16)



Earth Science

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Earth Science lesson plan from lectures to practicing scientific process skills:

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Labs | Use Short Answer to bring feedback into the scientific process. Your students can create procedures for experiments, hypothesize results, and infer conclusions from data before bringing them to the class for analysis and debate. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Earth Science use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Earth Science

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- What do the processes of evaporation, transpiration, and sublimation have in common? How are they different?
- Explain how a volcano forms.
- What do you think are the two most significant causes of climate change? Why? Propose an idea that can help reduce the impact from one of the causes.

Feedback Criteria: detailed explanation; accurate; use of claims to support argument

Standards Alignment Examples

- Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. (*NGSS*, *MS-ESS2-4*)
- Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. (NGSS, UC ESS2 1)
- HS-ESS2-1)
- Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. (NGSS, MS-ESS3-4)

Designing Experiments and Analyzing Data

Activity Time: 10-15 minutes

To practice experimental design skills, have students write procedures that answer a question about earth's systems and processes. Or, have them analyze data from experiments and infer what results mean.

Sample Questions:

- Write out the steps of an experiment that tests how the shape of an ice cube affects how fast it melts. What results do you expect?
- You are presented with two pieces of unidentified rock strata. What method would you use to determine which piece is from an earlier time than another?

Feedback Criteria: accurate hypothesis; precise experimental procedure, use of evidence to support inferences

- Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes (*NGSS*, *HS-ESS2-5*)
- Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history. (*NGSS*, *MS-ESS1-4*)



Economics

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Economics lesson plan from foundational writing skills to entrepreneurial skill development.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Economics use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material and gather opinions about material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- How would you explain Smith's "invisible hand" metaphor to someone who knows nothing about capitalism?
- Describe two major differences between classical and Keynesian economics.
- Compare regressive tax and progressive tax systems. Which do you think is more beneficial and why?

Feedback Criteria: clear explanation; use of facts to support claims; originality; accurate

Standards Alignment Examples

- Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence. (CC, CCRA.W.1)
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts). (CC, RH.6-8.6)

Exploring Scenarios

Activity Time: 15-20 minutes

Ро

se scenarios to the class and lead a discussion about different approaches and perspectives students take.

Sample Questions:

- Would you rather receive \$100 today or \$300 12 months from now? Why?
- You receive \$50 every month. What factors impact your decision to save, spend, or invest portions of that money?
- Emilie has \$1000 to put into the bank. She has two options: 5% interest compounded yearly, or 5% interest compounded monthly. Which option should she take and why?

Feedback Criteria: creative; feasible; use of evidence to support claims

- Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence. (CC, CCRA.W.1)
- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)
- Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context (*CC*, *HSF.IF.A.2*)



English/Language Arts

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your English lesson plan from foundational writing skills to literary analysis.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed English use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: English/Language Arts

Exploring Literary Themes

Activity Time: 5-10 minutes

Use Short Answer to have students analyze a passage and reflect on major themes before opening the floor to whole-class feedback and discussion.

Sample Questions

- After 5 chapters of *Beloved*, what themes do you see arising? Point to specific instances in the text when forming your response.
- Which characters in *Pride and Prejudice* most embody the theme of pride? Why do you think so?
- "All happy families are alike; each unhappy family is unhappy in its own way." What do you think Tolstoy wants to convey with his opening line of *Anna Karenina*?

Feedback Criteria: use of textual evidence to support argument; convincing point of view

Standards Alignment Examples

- Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text. (*CC*, *RL*.8.2)
- Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision. (CC, RL.8.3)
- Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. (CC, RL.11-12.1)

Peer-Driven Feedback on Written Work

Activity Time: 15-20 minutes

Have students begin developing their essay in class or copy-and-paste a portion of their writing assignment into Short Answer for in-depth peer review and opportunities for revision. The class can collaboratively determine what qualities make for strong writing and convincing arguments.

Sample Questions:

- Write a strong thesis statement that makes a unique argument about *Their Eyes Were Watching God.*
- Compare the two intro paragraphs in front of you. What qualities make one more compelling than the other?

Feedback Criteria: unique thesis; compelling hook; ability to back argument with evidence

- Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. (CC, W.8.1.A)
- With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (*CC*, *W.6.5*)



Ethics

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Ethics lesson plan from decision-making scenarios to reflections on community service

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Ethics use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Exploring Ethical Scenarios

Activity Time: 5-10 minutes

Use Short Answer to propose a scenario or moral dilemma and see how students would respond. Students compare peers' approaches and discuss as a class to explore nuanced ethical decision making.

Sample Questions

- A trolley is heading towards 5 people tied up, unable to move on the tracks. You stand next to a lever that would divert the trolley onto a track where 1 person is tied up, unable to move. Do you pull the lever? Why?
- Does your response to the trolley problem change if you are the one driving the trolley? Why?
- How would Immanuel Kant and John Stuart Mill act in the trolley problem?

Feedback Criteria: clear reasoning; well thought out; moral; ethical; creative

Standards Alignment Examples

- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)
- Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take. (CC, CCRA.R.9)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)

Service Participation and Reflection

Activity Time: 10-15 minutes

Use Short Answer to have students create guidelines for ethical service work or reflect on service work they've recently done. Discuss as a class what makes for successful, productive, and meaningful service work.

Sample Questions:

- What are important considerations to take in mind when entering a new community for the first time?
- What surprised you most about working on your project over the course of the year?
- If you could begin your service work over again, what would you differently? Why?

Feedback Criteria: strong details to explain reasoning; compelling; empathetic; ethical mindset

- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)



Family and Consumer Sciences (FCS)

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your FCS lesson plan from scenario exploration to nutrition and wellness.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of an essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



Sample Use Cases: Family and Consumer Sciences

Exploring Scenarios

Activity Time: 5-10 minutes

Use Short Answer to propose a scenario and see how students would respond. Students compare peers' solutions and discuss as a class to reach shared understanding.

Sample Questions

- How would you help two younger siblings resolve a conflict about sharing toys?
- What are ways we can help a family member deal with a stressful situation?
- A friend invites you over for dinner and cooks an unfamiliar food you're a bit hesitant to try. What would you say or do in this situation?

Feedback Criteria: creative solution; effective solution; logical; helpful

Standards Alignment Examples

- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences. (*CC, CCRA.W.3*)
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Assess how point of view or purpose shapes the content and style of a text. (CCRA.R.6)

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions:

- So far we've explored cuisines from India and France. What about these cuisines is similar, and what's different?
- What steps can individuals take to live in a more environmentally sustainable way? Why is it important to take these steps?
- What suggestions would you make to a family who wants to eat healthier foods on a limited budget?

Feedback Criteria: compelling; unique; convincing; accurate; helpful

- Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. (CC, CCRA.W.2)
- Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (CC, CCRA.W.4)
- Draw evidence from literary or informational texts to support analysis, reflection, and research. (CC, CCRA.W.9)



Foreign Language

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your foreign language lesson plan from foundational writing skills to literary analysis.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a foreign language writing assignment into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed languages use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Foreign Language

Peer-Driven Feedback on Written Work

Activity Time: 15-20 minutes

Have students write paragraphs in a different language for in-depth peer review and opportunities for revision. The class can collaboratively determine what qualities make for strong writing, focusing on both content and grammar. Of course, you can write your questions and feedback criteria in another language too!

Sample Questions:

- In Spanish, tell us a story about something exciting that happened this weekend.
- Using our French vocab words from this unit, describe going to your favorite restaurant and ordering your favorite food.

Feedback Criteria: correct grammar; strong vocab; correct syntax; compelling narrative

Standards Alignment Examples

- Communicate effectively in more than one language in order to function in a variety of situations and for multiple purposes. (World-Readiness Standards for Learning Languages)
- Learners interact and negotiate meaning in spoken, signed, or written conversations to share information, reactions, feelings, and opinions. (WRSLL)
- Learners use the language to investigate, explain, and reflect on the relationship between the practices and perspectives of the cultures studied. (WRSLL)

Developing Cultural Competency

Activity Time: 5-10 minutes

Use Short Answer to have students make connections between foreign cultures, explore the meaning of traditions and holidays, and develop cross-cultural understanding and appreciation. Students can respond to questions in the language of your choice.

Sample Questions

- Imagine you are in China for the Mid-Autumn Festival. What traditions are you participating in, what foods are you eating, and what are you celebrating?
- How is Parisian culture similar and different to your own? Explain your reasoning using examples.
- There is much debate about whether bullfighting should be continued as art and tradition, or banned for cruelty to animals. Which side of the debate do you agree with and why?

Feedback Criteria: strong details; use of facts to support claims; creative; unique

- Learners use the language to investigate, explain, and reflect on the relationship between the practices and perspectives of the cultures studied (*WRSLL*)
- Learners use the language to investigate, explain, and reflect on the concept of culture through comparisons of the cultures studied and their own. (WRSLL)



Geometry

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Geometry lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to solve problems and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Geometry use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Geometry

Note: Short Answer doesn't support equation or proof formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational geometry skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

Sample Questions

- Describe how to find the interior angle of a regular polygon with 4 sides. What about a regular polygon with *n* sides?
- Choose one triangle congruence theorem and explain how you apply it to determine whether two triangles are congruent.
- Explain how to write the area formula of a cylinder if the only information you have is that the height is 2 times the length of the diameter.

Feedback criteria: efficient; accurate; easy to understand; detailed procedure

Standards Alignment Examples

- Look for and express regularity in repeated reasoning. (CC, MATH.PRACTICE.MP8)
- Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions. (*CC*, *HSG*.*CO*.*B*.*8*)
- Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems (CC, HSG.GMD.A.3)

COMING SOON: Solving Proofs and Showing Work

Activity Time: 10-15 minutes

Have students solve any proof in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.))

Sample Questions:

- Given a triangle with $m \angle 3 = 90$, show that $m \angle 1$ and $m \angle 2$ are complementary.
- Prove that if two parallel lines are cut by a transversal, then the pairs of corresponding angles are congruent.

Feedback Criteria: efficient; accurate; creative approach; clear explanation of thought process

- Construct viable arguments and critique the reasoning of others. (CC, MATH.PRACTICE.MP3)
- Prove theorems about lines and angles. (CC, HSG.CO.C.9)
- Prove theorems about triangles. (CC, HSG.SRT.B.4)



Neuroscience

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Neuroscience lesson plan from lectures to designing experiments.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Labs | Use Short Answer to bring feedback into the scientific process. Your students can create procedures for experiments, hypothesize results, and infer conclusions from data before bringing them to the class for analysis and debate. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |

See the following page for two detailed Neuroscience use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Neuroscience

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- Explain the metaphor of the sensory homunculus and what it tell us about the brain.
- What are the differences between the central and peripheral nervous systems?
- Give an example of when it is appropriate to use a PET scan and when it is appropriate to use an fMRI. What do the two techniques tell us?

Feedback criteria: strong examples; detailed; accurate

Standards Alignment Examples

- Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. (*CC*, 11-12.9)
- Analyze the structure of the relationships among concepts in a text, including relationships among key terms (CC, RST.9-10.5)

Methods, Experimental Design, and Data Analysis

Activity Time: 15-20 minutes

Have students design experiments to response questions in neuroscience using methods talked about in class. Or, describe an experiment and have students hypothesize about what results may occur and what they indicate.

Sample Questions:

- Design an experiment testing the effect of excess extracellular potassium on action potentials.
- What effect do you expect excess extracellular potassium to have on the amplitude of action potentials?
- What scan would you use to diagnose epilepsy? Why is that the ideal method?

Feedback Criteria: detailed procedure; ethical mindset; support of inferences with results

- Conduct short as well as more sustained research projects to response a question (including a self-generated question) or solve a problem; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (*CC, WHST.11-12.7*)
- Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. (*CC, RST.11-12.9*)
- Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (CC, RST.6-8.9)



Physics

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Physics lesson plan from lectures to labs.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Labs | Use Short Answer to bring feedback into the scientific process. Your students can create procedures for experiments, hypothesize results, and infer conclusions from data before bringing them to the class for analysis and debate. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Physics use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Physics

Note: Short Answer doesn't support math equations yet, but works well when discussing generalized problem solving strategies and procedures.

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- Do our mass and/or weight change on the moon? Why or why not?
- Explain what happens to velocity when acceleration is constant.
- How can we determine if an object will float in a liquid?

Feedback Criteria: accurate hypothesis; clear explanation; examples support claims

Standards Alignment Examples

- Write arguments focused on discipline-specific content. (CC, WHST.9-12.1)
- Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. (CC, RST.11-12.7)
- Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. (CC, RST.6-8.2)

Observing Experiments and Analyzing Data

Activity Time: 5-10 minutes

After demonstrating an experiment for the class, have students hypothesize why the phenomenon occurred or what the results of the experiment might mean.

Sample Questions:

- What variables in the experiment might explain the pendulum's period?
- Explain why the number of paper clips attracted to the magnet differed based on the magnet's temperature.

Feedback Criteria: uses observations to support claims; accurate hypothesis; clear explanation of reasoning

- Conduct short as well as more sustained research projects to response a question (including a self-generated question) or solve a problem; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (CC, WHST.11-12.7)
- Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (CC, RST.6-8.9)
- Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration. (NGSS, HS-PS2-1)



Pre-Algebra

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Pre-Algebra lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems. and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Pre-Algebra use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Pre-Algebra

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational math skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

Sample Questions

- In words, describe the process for making the mixed number 5.75 an improper fraction.
- Explain your process for finding the prime factorization of 156.
- Without solving the problem, explain how you would find the area of a pie with a diameter of 8 inches.

Feedback criteria: efficient; easy to understand; descriptive; accurate

Standards Alignment Examples

- Construct viable arguments and critique the reasoning of others. (CC, PRACTICE.MP3)
- Know the formulas for the area and circumference of a circle and use them to solve problems (CC, 7.G.B.4)

COMING SOON: Solving Problems and Showing Work

Activity Time: 10-15 minutes

Have students solve any pre-algebra word problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

Sample Questions:

- Annika ran a 26 mile marathon in 3 hours and 20 minutes. How many feet per second did she run? Show your work and explain your thought process.
- GG has \$22 in her account and earns \$4 every week. Write a function that describes how much money GG will have after an unknown *t* weeks. Explain your reasoning.

Feedback Criteria: accurate result; efficient; creative approach; clear explanation of thought process

- Make sense of problems and persevere in solving them (CC, PRACTICE.MP1)
- Analyze proportional relationships and use them to solve real-world and mathematical problems. (CC, 7.RP.A.1)
- Construct a function to model a linear relationship between two quantities. (CC, 8.F.B.4)


Psychology

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Psychology lesson plan from lectures to research papers.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a research essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Psychology use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- What are the differences between Piaget and Vygotsky's theories of development?
- What do studies of identical twins tell us about nature vs. nurture? In your opinion, is there one that weighs more heavily than the other?
- Why did the behaviorism fall out of favor in comparison to other perspectives such as cognitive psychology?

Feedback criteria: support of argument with facts; accurate; strong examples

Standards Alignment Examples

- Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. (*CC*, 11-12.9)
- Analyze the structure of the relationships among concepts in a text, including relationships among key terms (CC, RST.9-10.5)

Discussing Experiments and Ethics

Activity Time: 15-20 minutes

Introduce real-life scenarios to have students hypothesize about what results indicate and how ethics were maintained in the experiment. Or, have students come up with their own experimental procedures for gathering data.

Sample Questions:

- What made the Milgram experiment unethical and harmful?
- How would you design a modern version of the Asch Conformity test to see whether the phenomenon is present in our school?

Feedback Criteria: detailed procedure; ethical mindset; support of inferences with results

- Conduct short as well as more sustained research projects to response a question (including a self-generated question) or solve a problem; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. (CC, WHST.11-12.7)
- Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic. (CC, RST.6-8.9)
- Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. (CC,. RST.9-10.9)



Social Emotional Learning (SEL)

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your SEL lesson plan from decision-making scenarios to practice with identifying emotions.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a writing assignment (e.g. personal reflection) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed SEL use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments. Also view our SEL-related lesson plans: <u>Empathetic Feedback</u> and <u>The Power of Peer Feedback</u>.

Developing Self-Management Skills and Coping Strategies with Scenarios Activity Time: 10-15 minutes

Pose scenarios that enable students to recognize common emotions and identify strategies to manage those emotions. Use peer feedback activities to crowdsource common or creative coping strategies while fostering empathy among the class.

Sample Questions

- Marithza is having trouble managing nerves and jitters before the big test. What strategies can Marithza use before walking into class to ease those feelings?
- Alex is terrified of flying and is about to get on a plane for the first time. What emotions, bodily sensations, and thoughts might Alex be having? What can he do to feel more at ease in the situation?
- How do you know when you are angry about something? What do you think, do, or feel in your body? Explain a strategy you can use to diffuse the intensity of your anger.

Feedback criteria: helpful; self-caring; empathetic; practical; brave

Standards Alignment Examples

- Self-Awareness: students understand their own emotions, thoughts, and values, and how they influence behavior across contexts. (CASEL)
- Self-Management: students can manage emotions, thoughts, and behaviors effectively in different situations to achieve goals. (CASEL)

Developing Social Awareness and Relationship Skills with Scenarios

Activity Time: 10-15 minutes

Pose scenarios that focus on CASEL's interpersonal social emotional skills and lead a discussion about different approaches students take to maintaining strong relationships.

Sample Questions:

- Tran notices her best friend Zoha has been avoiding her all day and giving mean looks, but isn't sure why. If you were Tran, how would you approach Zoha to find out what was going on? What would you say and do?
- You see Malika and Tonya tease a new student, Gabi, about what she eats for lunch every day. Malika is your close friend. How would you handle this situation?

Feedback Criteria: friendly; empathetic; practical; respectful; brave; caring

- Relationship skills: students can establish and maintain healthy and supportive relationships and effectively navigate settings with diverse individuals and groups. (CASEL)
- Social awareness: students understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts. (CASEL)



Social Studies/Civics

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Social Studies lesson plan from lectures to research papers.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a research essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Social Studies use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Social Studies/Civics

Mid-Lesson Content Review

Activity Time: 5-10 minutes

Use Short Answer to assess whether students understand new material. Results from the feedback activity inform whether content needs to be re-explained or if the class is ready to move on.

Sample Questions

- What strategies did suffrage leaders use to get women the right to vote?
- Describe the difference between a monarchy and dictatorship, providing an example of each.
- In your opinion, what role should governments play in addressing climate change?

Feedback criteria: analysis of textual evidence; support of argument with facts; historical accuracy

Standards Alignment Examples

- Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions. (*CC*, *RH.6-8.2*)
- Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources (*CC*, 11-12.9)
- Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information. (CC, RH.9-10.1)

Peer-Driven Feedback on Written Work

Activity Time: 15-20 minutes

Have students begin developing their research essay in class or copy-and-paste a portion of their writing assignment into Short Answer for in-depth peer review and opportunities for revision. The class can collaboratively determine what qualities make for strong writing and convincing arguments.

Sample Questions:

- Write a strong thesis statement that makes a unique argument about the impact of technology on education across the world.
- Compare the two body paragraphs in front of you, paying close attention to how they use primary sources to support claims.

Feedback Criteria: unique thesis; compelling hook; ability to back argument with evidence

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (*CC, WHST.6-8.2*)
- Analyze how a text uses structure to emphasize key points or advance an explanation or analysis. (CC, RH.9-10.5)
- Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence. (*CC*, *RH.11-12.6*)



Statistics

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Statistics lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve prolems and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Statistics use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Statistics

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational stats skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

Sample Questions

- Describe the visual difference between a graph where the mean is greater than the median and a graph where the mean is less than the median.
- What does having the mean age of a sample tell us about the mean age of the entire population?

Feedback criteria: easy to understand; descriptive; efficient; accurate

Standards Alignment Examples

- Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers). (*CC*, *HSS.ID.A.3*)
- Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. (CC, HSS.IC.B.4)

COMING SOON: Solving Problems and Showing Work

Activity Time: 10-15 minutes

Have students solve a word problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

Sample Questions:

- Without solving the problem, describe how you would find the probability of someone pulling, in order, a spade, a spade, and a diamond from a card deck.
- Evvie has a pile of 3 white socks and 2 black socks. What is the probability that the first two socks they pick are a matching pair? Show your work and explain your reasoning.

Feedback Criteria: efficient; creative approach; clear explanation of thought process; accurate result

- Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. (CC, HSS. CP.A.5)
- Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent. (*CC*, *HSS.CP.A.2*)



Trigonometry

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Trigonometry lesson plan from lectures to in-class practice.

| Bellringer | Get students engaged by using Short Answer to prompt written responses about what stands out from yesterday's class or to preview new material with a warm-up problem. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses, solve problems, and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Trigonometry use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: Trigonometry

Note: Short Answer doesn't support equation formatting yet, but works well when discussing generalized problem solving strategies and procedures.

Procedural Knowledge and Problem Solving

Activity Time: 5-10 minutes

Use Short Answer to nail down foundational algebraic skills and crowdsource strategies for solving problems, opening up discussion to address common mistakes and misconceptions.

Sample Questions

- Describe how you know if a trigonometric function is even or odd.
- Without actually solving the problem, describe the steps you would take to solve the problem: "Kelly is 5 feet, 5 inches tall and her shadow from the sun is currently ²/₃ her height. Find the sun's current angle of elevation to the nearest degree.

Feedback criteria: accurate; efficient; easy to understand; detailed procedure

Standards Alignment Examples

- Construct viable arguments and critique the reasoning of others. (CC, PRACTICE.MP3)
- Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. (CC, HSG.SRT.C.8)

COMING SOON: Solving Equations and Showing Work

Activity Time: 10-15 minutes

Have students solve any trigonometry word problem in Short Answer, then give feedback to peers on how their solution can improve. Bonus points for asking students to write how they solved the problem! (In the future, students will be able to upload a photo of their work.)

Sample Questions:

- In a right triangle, there is one right angle *b* and two complementary acute angles *e* and *n*. If cos(*e*) = 112/113, find sin(*n*). Explain your reasoning.
- Vinutha and Andrew stand on opposite sides of a 145-foot gorge. They can see Stephen at a 60° angle of depression in the gorge. How far are they each from Stephen? Show your work and explain reasoning.

Feedback Criteria: accurate result; efficient; creative approach; clear explanation of thought process

- Make sense of problems and persevere in solving them (CC, PRACTICE.MP1)
- Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems. (*CC*, *HSG.SRT.C.8*).
- Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. (*CC, HSG.SRT.B.5*)



U.S. History

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your History lesson plan from lectures to research papers.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a research essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed U.S. History use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: U.S. History

Conceptual Connections

Activity Time: 5-10 minutes

With the aid of primary and secondary sources, use Short Answer to have students connect knowledge from prior units to the current one and reflect on recurrent themes throughout U.S. history.

Sample Questions

- What are notable similarities and differences between the cultures of the Cherokee and Navajo tribes?
- What are the differences between W.E.B DuBois and Booker. T Washington's views on Black civil rights?
- How did the Monroe Doctrine break with previous precedent in American foreign policy?"

Feedback criteria: support of argument with facts; historical accuracy; creativity

Standards Alignment Examples

- Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions. (*CC*, *RH.6-8.2*)
- Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources (CC, 11-12.9)
- Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information. (CC, RH.9-10.1)

Peer-Driven Feedback on Written Work

Activity Time: 15-20 minutes

Have students develop their research essay in class or copy-and-paste a portion of their writing assignment into Short Answer for in-depth peer review and opportunities for revision. The class can collaboratively determine qualities of strong writing & convincing arguments.

Sample Questions:

- Write a thesis statement making an argument about whether John Brown was a "hero" or "terrorist." Provide two topic sentences that serve as justifying evidence.
- Compare the two body paragraphs in front of you, paying close attention to how they use historical evidence to support claims.

Feedback Criteria: unique thesis; compelling hook; ability to back argument with evidence

- Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (CC, WHST.6-8.2)
- Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence. (*CC*, *RH.11-12.6*)



World History

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your History lesson plan from lectures to research papers.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a research essay or writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed World History use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Sample Use Cases: World History

Conceptual Connections

Activity Time: 5-10 minutes

With the aid of primary and secondary sources, use Short Answer to have students connect knowledge from prior units to the current one and reflect on recurrent themes throughout ancient civilizations and historical movements.

Sample Questions

- We've talked about life in Ancient Greece and Ancient Egypt. Of the two, which would you rather live in and why?
- Explain at least two important ways that the Romans influenced the culture and history of Europe.
- Compare and contrast the Trans-Saharan and Silk Road trade networks.

Feedback criteria: support of argument with facts; historical accuracy; creativity

Standards Alignment Examples

- Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions. (CC, RH.6-8.2)
- Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources (CC, 11-12.9)
- Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information. (CC, RH.9-10.1)

Image Analysis

Activity Time: 5-10 minutes

Project a photo or piece of art on the screen. Have students analyze the photo with a specific lens and give feedback to peers about their interpretation. (Note: Short Answer will support image uploads soon!)

Sample Questions:

- In front of you is "Pizarro Seizing the Inca of Peru" by John Everett Millais. Do you think the artist has a positive or negative view of European colonization of the western hemisphere? Justify your response with evidence from the painting.
- Here is Raphael's "The School of Athens." Based on the painting, what kind of knowledge and education do you think was prioritized during this time?

Feedback Criteria: unique thesis; compelling hook; ability to back argument with evidence

- Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text. (CC, RH.9-10.2)
- Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem. (*CC*, *RH.11-12.7*)



Writing

In all Short Answer activities, your students **create** responses, **compare** peer responses and provide scaffolded feedback, then **converse** results as a class.

Short Answer gets your students the immediate feedback they need through social, engaging peer feedback activities and gets you deeper insight into what your students know.

Short Answer can be used at every stage of your Writing lesson plan from grammar and punctuation skills to vocabulary applications.

| Bellringer | Get students warmed up and engaged by using Short Answer to prompt written responses about what stands out from yesterday's class. |
|-------------------------|--|
| Check for understanding | Break up lectures with quick feedback activities that get students interacting with one another. Deepen understanding while getting a quicker, more accurate pulse of what they know on an individual level. |
| Guided practice | Group students together to write responses and give feedback to other groups, or provide a model response in Short Answer. |
| Independent practice | During Short Answer activities, encourage students to reflect on how their response matches up to the ones voted as the strongest by the class. Invite revision and iteration of responses as another in-class activity, exit ticket, or homework. |
| Writing revision | Have students copy-and-paste portions of a writing assignment (e.g. thesis, intro paragraph) into Short Answer. Then, conduct peer feedback activities to help students revise their work before final submission. |
| Exit Ticket | Complete a quick, one-round Short Answer activity to leave students thinking about the most important points of the day. |
| Homework | Have students complete writing assignments about core content and bring them in next class for peer feedback activities and discussion to deepen understanding. |



See the following page for two detailed Writing use cases with example questions, feedback criteria for students to evaluate responses with, and standards alignments.

Applying New Vocabulary

Activity Time: 5-10 minutes

Use Short Answer to have students create sentences with newly learned vocabulary words.

Sample Questions

- Use "inclement" in a sentence that describes the weather.
- How would you use "radiant" in a sentence?
- Write your definition of "bashful."

Feedback Criteria: appropriate use; creative; unique; descriptive

Standards Alignment Examples

- Read grade-level text with purpose and understanding. (CC, Foundational Skills)
- Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate. (CC, FS)
- Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression. (CC, FS)

Grammar and Syntax

Activity Time: 5-10 minutes

Have students input any short form writing into Short Answer while emphasizing attention to form and mechanics over content.

Sample Questions:

- What is one interesting thing that happened to you last weekend?
- Tell us about the most interesting thing you learned in class yesterday.

Feedback Criteria: correct punctuation; appropriate syntax; correct spelling; proper grammar, proper capitalization, subject/verb agreement, use of active voice (Note: these feedback criteria can be inserted into <u>any</u> Short Answer question to focus on both content and structure!)

Standards Alignment Examples

• Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. (CC, Foundational Skills)