

# Research and Collaboration

## USING TOOLS

### Prior to Instruction

Program student AAC devices with the words, “inquiry” and “research” from Worksheet 4 that are needed for participating in the activity. Additionally, program a Yes/ No response option for communicating information about inquiry and research. Sample words and definitions include:

- Inquire / To wonder or want to know about something.
- Research / To gather data, information, and facts to advance knowledge.

### Core Vocabulary and Concepts

The focus skills word has an asterisk:

- Inquire\*
- Research
- Report

### Anchor Instruction for All Students

Prior to beginning instruction, review the target words briefly (inquire, research, report) and review the concept of “research.” Point to the words on Worksheet 4 and read the definitions. Say, **Today we will be learning about questions/inquiry and the research you would conduct to solve the question. We will match the questions/inquiry to the research and then place them in a graphic organizer. Are you ready to learn more?**



### Learning Objectives

- Students will identify inquiry questions and match with the appropriate research response.

### Materials

- Student Worksheet 3: Science Newsletter (one per student and one for the teacher)
- Student Worksheet 4: Research and Collaborate (one per student and one for the teacher)
- Inquiry and Research Graphic Organizer
- Inquiry Cards
- Research Picture Cards

	LEVEL 1	LEVEL 2	LEVEL 3
<b>INTRODUCE</b>	<p><b>Show me our Newsletter.</b> Place Student Worksheet 3 in front of the student and wait for students to indicate the text at the top of the page. Prompt as needed. <b>Yes! This is our Newsletter. Let's learn more about inquiry and research!</b> Point to the pictures and words on Worksheet 4. <b>I'll read you these words.</b> Read the words and point to each picture. <b>Let's play a game.</b></p>	<p><b>Show me some of the things we learned in our Newsletter.</b> Place Student Worksheet 3 in front of each student and wait for students to point to the highlighted words or questions. Prompt as needed. <b>Yes, great work talking about inquiry and research. Let's investigate.</b> Point to the pictures and words of on Worksheet 4. <b>I'll read you these words.</b> Read the words and point to each. <b>Let's play a game about inquiry and research.</b></p>	<p><b>What did we learn in our Newsletter?</b> Wait for students to recall words, concepts, or answers to questions from the Newsletter. Prompt as needed. <b>Yes! Great work remembering what we've learned. Let's learn some more about inquiry and research. Remember, there are four stages.</b> Point to the pictures and words on Worksheet 4. <b>Let's read you these words.</b> Point to each word and pause for students to read along with you. <b>Let's play a game about inquiry and research.</b></p>

### Researching and Collaborating with Model-Lead-Test

This instruction is leveled for three types of support needs. All instruction is delivered in a model-lead-test format. During the “test” phase of instruction, provide immediate prompting and error correction as needed. If students cannot respond independently after four seconds, deliver the prompt. This instruction is designed to teach students to use their Student Worksheet 4 to follow the steps of the activity as independently as possible. Model the think-aloud strategy in the model phase to show students how follow the steps of Inquiry and research game. Next, guide them to tell you how to follow steps while you model the game. Finally, give each student an opportunity to independently go through the game.

**Materials:** Student Worksheet 4: Research and Collaborate, Inquiry and research graphic organizer

	LEVEL 1	LEVEL 2	LEVEL 3
<b>MODEL</b>	<p><b>My turn. I'm going to play the game. First, I will look at the questions.</b> Model touching the question, Which are the most comfortable shoes I own. <b>I pick this question. What research could I do to answer this inquiry?</b> Model going through the response options to determine the answer. Model finding an answer. Model gluing the matching cards on the graphic organizer. <b>Here is the answer. I did it!</b></p>	<p><b>My turn. I'm going to play the game. First, I will look at the questions.</b> Model touching the question, Which are the most comfortable shoes I own. <b>I pick this question. What research could I do to answer this inquiry? Remember, research is to gather data, information, and facts to advance knowledge.</b> Model going through the response options to determine the answer. Model finding an answer. Model gluing the matching cards on the graphic organizer. <b>Here is the answer. I did it!</b></p>	<p><b>My turn. I'm going to play the game. First, I will look at the questions.</b> Model touching the question, Which are the most comfortable shoes I own. <b>I pick this question. What research could I do to answer this inquiry? Remember, research is to gather data, information, and facts to advance knowledge. What data, information, and facts can I gather to answer my question?</b> Model going through the response options to determine the answer. Model finding an answer. Model gluing the matching cards on the graphic organizer. <b>Here is the answer. I did it!</b></p>
<b>LEAD</b>	<p><b>Let's work together. First, let's find an inquiry question. Should we pick this question or this question?</b> Model touching two inquiry questions. <b>Great! We picked this question</b> (hold response option up). <b>What research could we conduct to answer this inquiry?</b> Model looking for the possible answer based on the definitions. Help students identify the answer. Model gluing the matching cards on the graphic organizer. <b>Nice job finding the answer.</b></p>	<p><b>Let's work together. First, let's find an inquiry question. Should we pick this question or this question?</b> Model touching two inquiry questions. <b>Great! We picked this question</b> (hold response option up). <b>What research could we conduct to answer this inquiry? Remember, research is to gather data, information, and facts to advance knowledge.</b> Model looking for the possible answer based on the definitions. Help students identify the answer. Model gluing the matching cards on the graphic organizer. <b>Nice job finding the answer.</b></p>	<p><b>Let's work together. First, let's find an inquiry question. Should we pick this question or this question?</b> Model touching two inquiry questions. <b>Great! We picked this question</b> (hold response option up). <b>What research could we conduct to answer this inquiry? Remember, research is to gather data, information, and facts to advance knowledge. What data, information, and facts can I gather to answer my inquiry question?</b> Model looking for the possible answer based on the definitions. Help students identify the answer. Model gluing the matching cards on the graphic organizer. <b>Nice job finding the answer.</b></p>

	LEVEL 1	LEVEL 2	LEVEL 3
TEST	<p><b>Your turn. Play our game!</b> When students have finished the test phase, prompt them to record their results on their Student Worksheet 4. Help them record their work in the box labeled “What is an question you have? What research would you conduct to answer the question?” Use drawings, words, or cut and paste the pictures from the worksheet.</p>	<p><b>Your turn. Show me how you play our game!</b> When students have finished the test phase, prompt them to record their results on their Student Worksheet 4. Help them record their work in the box labeled “What is an question you have? What research would you conduct to answer the question?” Encourage them to write or draw their response or use the “inquiry and research options” as reference.</p>	<p><b>Your turn. Show me how you play our inquiry and research game!</b> When students have finished the test phase, prompt them to record their results on their Student Worksheet 4. Help them record their work in the box labeled “What is an question you have? What research would you conduct to answer the question?” Encourage them to write or draw their response or use the “inquiry and research options” as reference.</p>
<b>Note:</b> To be used during the Test phase as needed.			
PROMPTING AND ERROR CORRECTION	<p><i>Prompt for next steps as needed.</i> When asked about a card, if the student does not respond after 4 seconds, say, <b>Here is where the card goes.</b> Wait for the student to respond. If correct, deliver specific verbal praise. <i>If the student makes an error,</i> say, <b>No,</b> and model the correct response or step in the game.</p>	<p><i>Prompt for next steps as needed.</i> When asked about a card, if the student does not respond after 4 seconds, say, <b>Here is where the card goes.</b> Explain why it goes in that spot. Wait for the student to respond. If correct, deliver specific verbal praise. <i>If the student makes an error,</i> say, <b>No,</b> and model the correct response or step in the game.</p>	<p><i>Prompt for next steps as needed.</i> When asked about a card, if the student does not respond after 4 seconds, say, <b>Here is where the card goes.</b> Explain why it goes in that spot. Remind them of the definitions as needed. Wait for the student to respond. If correct, deliver specific verbal praise. <i>If the student makes an error,</i> say, <b>No,</b> and model the correct response or step in the game.</p>
REINFORCE	<p><b>Great work matching the cards.</b></p>	<p><b>Great! You showed us about inquiry and research!</b></p>	<p><b>Great! You showed us about inquiry and research!</b></p>



**Instructional Tip!** For students who have difficulty with fine motor skills or vocal speech, record the “inquiry” and “research” response options in an AAC device so the student can activate the response options as needed.

### Generalization and Extension Activities

To promote generalization, consider opportunities to vary the types of images you use (both the content of the images and the format of the images) and look for opportunities to incorporate real-life materials or examples. Encourage students to think of other ways to do research to answer questions.

### Measuring Student Learning

Using the event recording data sheet, collect data on student-specific responses during the activity. You will use this data sheet every time a lesson incorporates the skill of identifying cause and effect. Track progress of the skill over time.

### Independent, Technology-Delivered Instruction

enCORE provides additional instruction and practice on the target skills and concepts addressed in this Unit. Both teacher-led and independent student lessons that automatically adapt to differentiate across learning levels are key components of enCORE:

- enCORE automatically selects and assigns these lessons to your students based on their learning level and the Unit you are currently teaching
- or, to view and select any of these lessons at any time – go to the Curriculum tab in your enCORE teacher dashboard.

# Presenting and Communicating

## WRITING AND SHARING WHAT WE KNOW

### Prior to Instruction

Program student AAC devices with target vocabulary words (inquire, research, report) and images or pictures (with the definition programmed). Be sure to include the responses your student will need to communicate with others. Include the template and the words specific to the cards your students selected and recorded on their worksheets in Segment 1 of this lesson as well as Worksheet 3. Sample words include:

- Newsletter words, like “facts,” “data” “inquire,” and “research.”
- Response option words, like “conduct a study.”
- Yes/No response options for answering the presentation checklist

### Core Vocabulary and Concepts

The focus skills word has an asterisk:

- Inquire\*
- Research
- Report

### Anchor Instruction for All Students

Prior to beginning instruction, show students video clips or pictures of people talking to other people. Vary the examples to show some formal speeches, friends talking in a small group, and presenters who use graphics or supports to communicate information (like PowerPoint presentations or charts). Ask them to think about all the ways we can tell other people our feelings and ideas.

### Differentiated Systematic and Explicit Instruction

Follow the instructional steps below. Adapt the steps or language, as needed, to account for student-specific needs. After each step, provide specific verbal feedback for correct responses and participation.



### Learning Objectives

- Students will write about what they learned.
- Students will communicate what they learned to others.

### Materials

- Complete versions of Student Worksheet 4: Research and Collaboration from Segment 1 (one per student and one for the teacher)
- Student Worksheet 5: Present and Communicate (one per student and one for the teacher)

## Writing What We Know

	LEVEL 1	LEVEL 2	LEVEL 3
<b>INTRODUCE</b>	<p><b>Let’s write. Look at the Newsletter. Who learns from research and reports information?</b> Limit the response option by covering some of the distractor choices if needed. Help each student point to or indicate the response they identified and recorded on their worksheet. <b>Great! What is the process of gathering data, information, and facts to advance knowledge?</b> Point to the question 2 response cards on the Newsletter worksheet. <b>What do you report out to others?</b> Again, limit response options as needed and help students find “Results.” <b>Great work! You are ready to write more about inquiry and research!</b></p>	<p><b>Let’s write about what we have learned. Look at the Newsletter. Who learns from research and reports information?</b> Limit the response option by covering some of the distractor choices if needed. Help each student point to or indicate the response they identified and recorded on their worksheet. <b>Great! What is the process of gathering data, information, and facts to advance knowledge?</b> Point to the question 2 response cards on the Newsletter worksheet. <b>What do you report out to others?</b> Again, limit response options as needed and help students find “Results.” <b>Great work! You are ready to write more about Inquiry and research.</b></p>	<p><b>Let’s write about what we’ve learned in science. Look at the Newsletter. Who learns from research and reports information?</b> Limit the response option by covering some of the distractor choices if needed. Help each student point to or indicate the response they identified and recorded on their worksheet. <b>Great! What is the process of gathering data, information, and facts to advance knowledge?</b> Point to the question 2 response cards on the Newsletter worksheet. <b>What do you report out to others?</b> Again, limit response options as needed and help students find “Results.” <b>Great work! You are ready to write more about Inquiry and research and the four stages.</b></p>

## Writing What We Know with Model-Test

This instruction is leveled for three types of support needs. All instruction is delivered in a model-test format (note, there is no “lead” phase for this instruction). During the “test” phase of instruction, provide immediate prompting and error correction as needed. If students cannot respond independently after 4 seconds, deliver the prompt. This instruction is designed to teach students to use their Student Newsletter to complete the writing task on Worksheet 5. Model the think-aloud strategy in the model phase to show students how to reference Worksheet 3 to complete the writing task. Students can write in the blanks or paste the response options from Worksheet 3 directly on their writing template.

Materials: Student Worksheet 3: Newsletter, Student Worksheet 5: Present and Communicate

	LEVEL 1	LEVEL 2	LEVEL 3
<b>MODEL</b>	<p><b>My turn. My sentence is “When conducting research, you gather _____ to advance knowledge.”</b> How can I find out what to write? I’ll glue “data” right here because I remember this was what I learned from our Newsletter. Model finding the response options from the research worksheet or response cards below and gluing it in sentence 1 on the writing template on Worksheet 5. <b>Next, I’ll write “_____ includes observing and collecting data.”</b> Glue the words in the second box on Worksheet 5. <b>Last, I will fill in our summary sentence. “Scientists learn from research and _____ information.” I remember this from our Newsletter. I’ll look back at the Newsletter to help. I’ll fill in with the missing words.</b> Model filling in the correct answer in the third box. <b>I did it!</b></p>	<p><b>My turn. My sentence is “When conducting research, you gather _____ to advance knowledge.”</b> How can I find out what to write? I’ll glue “data” right here because I remember this was what I learned from our Newsletter. Model finding the response options from the research worksheet or response cards below and writing it in sentence 1 on the writing template on Worksheet 5. <b>Next, I’ll write “_____ includes observing and collecting data.” I’m going to look at the response options to see if it can help me fill in this writing response.</b> Write the word in the second box on Worksheet 5. <b>Last, I will fill in our summary sentence. “Scientists learn from research and _____ information.” I remember this from our Newsletter. I’ll look back at the Newsletter to help. I’ll fill in with the missing words.</b> Model filling in the correct answer in the third box. <b>I did it!</b></p>	<p><b>My turn. My sentence is “When conducting research, you gather _____ to advance knowledge.”</b> How can I find out what to write? I’ll glue “data” right here because I remember this was what I learned from our Newsletter. <b>I can use my Newsletter and research activity to help me write my words.</b> Model finding the response options from the Research activity worksheet or response cards below and writing it in sentence 1 on the writing template on Worksheet 5. <b>Next, I’ll write “_____ includes observing and collecting data.” I can also look response options to see if it can help me fill in this writing response.</b> Write the word in the second box on Worksheet 5. <b>“Scientists learn from research and _____ information.” I remember this from our Newsletter. I’ll look back at the Newsletter to help. I’ll fill in with the missing words.</b> Model filling in the correct answer in the third box. <b>I did it!</b></p>



	LEVEL 1	LEVEL 2	LEVEL 3
TEST	<p><b>Your turn. “When conducting research, you gather _____ to advance knowledge.” Glue your responses here.</b> Point to the space where students should glue their responses on Worksheet 5 and wait for students to select and glue and circle the correct response. Assist with gluing as needed.</p> <p><b>“_____ includes observing and collecting data.” Glue your way words here.</b> Point to the space in the second part of the template on Worksheet 5 and wait for students to select and glue the correct response. Assist with gluing as needed. <b>To summarize, scientists learn from research and _____ information.</b> Point to the pictures for response options in the third part of the template on Worksheet 5. Assist with gluing as needed.</p>	<p><b>Your turn. “When conducting research, you gather _____ to advance knowledge.” Write your responses here.</b> Point to the space where students should write their responses on Worksheet 5 and wait for students to select and write the correct response. Assist with writing as needed.</p> <p><b>“_____ includes observing and collecting data.” Write your way words here.</b> Point to the space in the second part of the template on Worksheet 5 and wait for students to select and write the correct response. Assist with writing as needed. <b>To summarize, scientists learn from research and _____ information.</b> Point to the pictures for response options in the third part of the template on Worksheet 5. Assist with writing as needed.</p>	<p><b>Your turn. Write about inquiry and research.</b> Point to the writing template on Worksheet 5 and wait for students to write the correct responses.</p>

	LEVEL 1	LEVEL 2	LEVEL 3
	<b>Note:</b> To be used during the Test phase as needed.		
<b>PROMPTING AND ERROR CORRECTION</b>	<p>For each section of the writing worksheet, if the student does not respond after 4 seconds, say, <b>Let’s write like this.</b> Model picking the correct response and placing it on the correct blank on Worksheet 5. After a few moments, set the response option to the side of the blank on Worksheet 5 and say, <b>Your turn to write.</b> Wait for the student to respond. If correct, deliver specific verbal praise.</p> <p>If the student makes an error, say, <b>No</b>, and touch the correct response option. Try to catch errors before incorrect responses are glued to Worksheet 5.</p>	<p>For each section of the writing worksheet, if the student does not respond after 4 seconds, say, <b>Let’s write like this.</b> Model picking the correct response and writing it on a blank copy of Worksheet 5. <b>Your turn to write.</b> Wait for the student to respond. If correct, deliver specific verbal praise.</p> <p>If the student makes an error, say, <b>No</b>, point to the correct response on Worksheet 5, and model writing that response on a blank copy of Worksheet 5.</p>	<p>For each section of the writing worksheet, if the student does not respond after 4 seconds, say, <b>Let’s write like this.</b> Model picking the correct response and writing it on a blank copy of Worksheet 5. <b>Your turn to write.</b> Wait for the student to respond. If correct, deliver specific verbal praise.</p> <p>If the student makes an error, say, <b>No</b>, point to the correct response on Worksheet 5, and model writing that response on a blank copy of Worksheet 5.</p>
<b>REINFORCE</b>	<b>You did it!</b>	<b>You did it! You wrote about inquiry and research!</b>	<b>You did it! You wrote about inquiry and research!</b>



**Instructional Tips!**

- For students who have difficulty with fine motor skills, help students use a sponge with glue and provide guidance positioning the responses as needed. Add the outline of a box or a yellow dot to the worksheet to provide a target for glued items. Be careful to allow for independence in selecting the response options.
- For students who have difficulty with multi-step directions, apply model-test procedures to each step of the writing template (instead of all at once). Consider using a light-colored bingo stamper for students who need support circling responses.

Sharing What We Know

	LEVEL 1	LEVEL 2	LEVEL 3
INTRODUCE	<p><b>We wrote about Inquiry and research! Let’s share what we wrote! How do you share ideas and information with other people?</b> Help students indicate their preferred mode of communication by gesturing to and/or saying <b>I speak with my voice OR I speak with my device.</b> Adjust this statement to phase describe each student’s primary mode of communication.</p> <p><b>Before we start, let’s make sure we can say all of our important words.</b> Be sure the student can activate or say all three components of the presentation.</p>	<p><b>We wrote about Inquiry and research! Now let’s share what we wrote! When we tell each other things that are important, we are presenting ideas. Can you think of a time you presented or shared ideas with other people?</b> Give students a chance to think of times they shared ideas. Guide the conversation to help students see the difference between casual conversation and presenting ideas.</p> <p><b>Let’s learn more about presenting ideas to others! Before we start, let’s look at our presentation checklist. It asks us, “Can I tell about Inquiry and research?” Can you?</b> Answer any questions the students have about their questions and how to find the answers. <b>It also asks us, “Do I know how to say all of the words?” Let’s look over our writing. Are there words you need help saying?</b> Give students a chance to ask about specific words they do not know how to read or say. <b>Our checklist says to practice with a partner and then with a group. Let’s learn more about this!</b></p>	<p><b>We wrote about Inquiry and research and how this is the approach to solve problems and answer questions. Now let’s share what we wrote! When we tell each other things that are important, we are communicating by presenting our ideas. Can you think of a time you presented or shared ideas with other people?</b> Give students a chance to think of times they shared ideas. Guide the conversation to help students see the difference between casual conversation and presenting ideas.</p> <p><b>Let’s learn more about presenting ideas to others! Before we start, let’s look at our presentation checklist. It asks us, “Can I tell about Inquiry and research?” Can you? Do you understand how to find the answer to your question?</b> Answer any questions the students have about their question and how to find their answer. <b>It also asks us, “Do I know how to say all of the words?” Let’s look over our writing. Are there words you need help saying?</b> Give students a chance to ask about specific words they do not know how to read or say. <b>Our checklist says to practice with a partner and then with a group. Let’s learn more about communicating with others! Let’s present!</b></p>

### Sharing What We Know with Model-Lead-Test

This instruction is leveled for three types of support needs. All instruction is delivered in a model-lead-test format. During the “test” phase of instruction, provide immediate prompting and error correction as needed. If students cannot respond independently after 4 seconds, deliver the prompt. This instruction is designed to teach students to use their writing component of Worksheet 5 to present ideas to the class.

**Materials:** Student Worksheet 5: Present and Communicate

	LEVEL 1	LEVEL 2	LEVEL 3
MODEL	<p><b>My turn.</b> Model reading the worksheet to the class.</p>	<p><b>My turn. I will share what I know about inquiry and research.</b> Model reading the worksheet to the class.</p>	<p><b>My turn. I will share what I know about inquiry and research and how this is the approach to solve problems and answer questions. I will use my worksheet to help me present about inquiry and research.</b> Model reading the worksheet to the class.</p>
LEAD	<p><b>Let’s work together. We can practice with one person first.</b> Place students in pairs with peers or adults. The student should present to the other person by independently stating or activating all three components of the presentation.</p>	<p><b>Let’s work together.</b> Place students in pairs with each other. Have students take turns presenting to one another.</p>	<p><b>Let’s work together.</b> Place students in pairs with each other. Have students take turns presenting to one another. Tell the listener to listen for their question, how to find the answer, and the summary statement.</p>
TEST	<p><b>Your turn.</b> Prompt each student to present to the group.</p>	<p><b>Your turn. Now you get to present to the whole group!</b> Prompt each student to present to the group.</p>	<p><b>Your turn. Now you get to present to the whole group! Listeners, let’s listen for all the parts!</b> Prompt each student to present to the group.</p>
PROMPTING AND ERROR CORRECTION	<p><b>Note:</b> To be used during the Test phase as needed.</p> <p><i>If the student does not respond after 4 seconds, model presenting the precipitation component of the presentation. Say, <b>Your turn. Say the whole thing.</b></i></p> <p><i>If the student makes an error, immediately say, <b>Stop, my turn.</b> State the correct information or model the correct sequence of information. <b>Your turn. Try again.</b></i></p>		

	LEVEL 1	LEVEL 2	LEVEL 3
REINFORCE	Great work presenting!	Great work presenting about inquiry and research!	Great work presenting! You communicated about inquiry and research!



**Instructional Tip!** Ensure everyone has a communication mode that allows them to read/recite each part of their speech, rather than programming the entire presentation (which would require a single activation of the device). This format allows students with communication support needs to actively engage in their presentation throughout the experience (as they will need to activate the output three times to fully communicate all of their ideas).

### Generalization and Extension Activities

To promote generalization, consider opportunities to present to different audiences across different contexts. This activity lends itself to an inclusive format, working alongside peers in general education classrooms. To further extend this lesson for students who are ready, add a fourth open-ended component to the writing and presentation template by creating a fourth box at the bottom of the page using a prompt such as: *The MOST important thing I learned about inquiry and research is \_\_\_\_\_.* OR *The most interesting thing I learned was \_\_\_\_\_.* For students ready to answer these questions, be sure you have pre-taught the concepts of “important” and “interesting.”

### Measuring Student Learning

Using the task-analytic “presentation” data sheet, collect data on student-specific responses during the presentation. This data sheet mirrors the presentation checklist students use to self-monitor and prepare for their presentation during this lesson. Monitor student progress regularly and make data-based decisions to ensure instruction is individualized.

### Independent, Technology-Delivered Instruction

enCORE provides additional instruction and practice on the target skills and concepts addressed in this Unit. Both teacher-led and independent student lessons that automatically adapt to differentiate across learning levels are key components of enCORE:

- enCORE automatically selects and assigns these lessons to your students based on their learning level and the Unit you are currently teaching
- or, to view and select any of these lessons at any time – go to the Curriculum tab in your enCORE teacher dashboard.