

# *Winsight*<sup>®</sup> Assessment ELA Key Practices

CONDUCTING RESEARCH  
AND INQUIRY



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# ELA Key Practices: Conducting Research And Inquiry

## **What is the Research and Inquiry Key Practice?**

The key practice of *Conducting Research and Inquiry* in English language arts involves mastery of the knowledge, skills, and strategies needed to construct knowledge and to participate in a research community. This practice includes the ability to gather, evaluate, and synthesize information from multiple sources, to plan and carry out investigations to answer research questions or solve problems, and to present information one has learned in appropriate forms and formats, adapting the information to meet the needs of one's audience.

## **Connecting the Research and Inquiry Key Practice to the Common Core State Standards**

*Conducting Research and Inquiry* skills connect to several Common Core State Standards for English Language Arts (Grades 6 to 12). The Writing Standards deal with conducting research projects to answer questions or build knowledge (W.7), gathering, integrating, and evaluating information from multiple print and digital sources (W.8), and incorporating evidence from sources to support one's research (W.9). Reading standards related to integrating information in diverse formats (R.7), comparing texts that discuss similar topics (R.9), and evaluating authors' points of view and purposes for writing (R.6) also are relevant to this practice.

### How is the Key Practice Organized?

The key practice is organized into three phases: (1) Inquiry and Information Gathering, (2) Analysis, Evaluation, and Synthesis, and (3) Communication and Presentation of Results. For instructional purposes, these phases may occur in sequence, but for advanced levels of the practice, the phases often overlap or may be revisited multiple times as the student’s understanding of the subject develops and becomes more refined over the course of their research project. For example, as a student begins to prepare a presentation describing her results, she may realize more information is needed and return to information gathering and evaluation, or that the research question needs further refinement to focus the work. Figure 1, below, shows the three phases of the *Conducting Research and Inquiry* key practice.

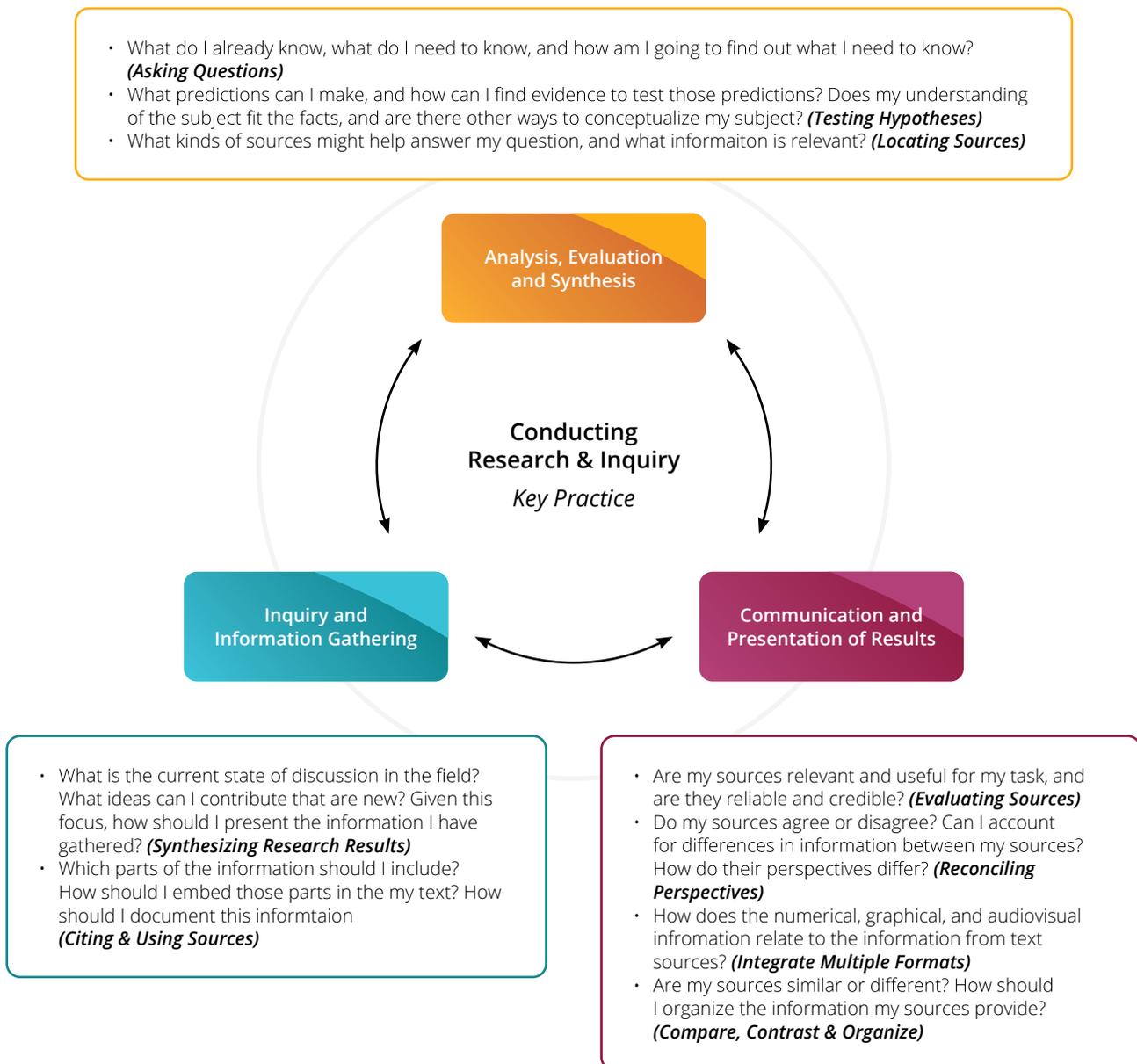


Figure1: Research & Inquiry Key Practice Diagram.

Students engage in this key practice when they conduct extended research projects. For example, an instructional unit on writing a research paper may begin with identifying a topic of interest and developing a research question that can be investigated. Students then may be asked to identify a number of print or digital sources that are likely to provide information relevant to the research question. Depending on the topic, students also may be asked to design investigations that involve collecting original data. After collecting relevant information sources, students must engage in close reading and analysis of those sources, to extract useful information for their research. Students may compare information across sources to identify agreements and disagreements, and evaluate the credibility and accuracy of the sources. After developing an understanding of the topic based on multiple sources of evidence, students can write a response that answers their research question, incorporating information from the source materials they examined. Students should consider how to present this information clearly so that it supports their own conclusions about the subject, and should use appropriate citations and references to make clear to readers where the information comes from.

Each phase of this key practice involves multiple skills. Within *Inquiry and Information Gathering*, students must develop appropriate research questions, locate relevant information sources using search tools or other strategies, or design their own investigations and generate predictions or hypotheses about what the results might show. *Analysis, Evaluation, and Synthesis* requires comparing sources' structure and content, resolving disagreements among sources, understanding multimedia sources in addition to text content, and evaluating the credibility and accuracy of sources. *Communication and Presentation of Results* involves incorporating information from sources in order to support one's own conclusions about the subject, including citing sources appropriately. The questions that are included as part of each phase of the key practice in Figure 1 are useful guides to help both teachers and students attend to how these multiple skills are organized to make up the larger practice.

Learning progressions are defined for each skill within the key practice. For example, the *Analysis, Evaluation, and Synthesis* phase includes learning progressions for Comparing and Organizing Sources, Integrating Multimodal Sources, Reconciling Perspectives, and Evaluating Sources. Each learning progression has five levels. At Level 1 of Evaluating Sources, students mainly evaluate sources based on surface features, including information quantity and presence of relevant key words. At Level 2, students can evaluate source content, including accuracy and presence of new information. At Level 3, students can evaluate sources based on both content and credibility, including expertise, bias, and currency. Level 4 focuses on source usefulness, or the application of source content to one's specific task goals. Evaluations at Level 5 incorporate all previous criteria, in addition to the standards for evaluating sources within a specific discipline (e.g., history, science) and the quality of their contributions to an ongoing conversation about the research topic. Teachers can use the higher levels of the learning progressions as models for the kinds of expert behaviors that we would like students to develop. These higher level descriptions can also inform the development of rubrics or guidelines for evaluating sources that can be used during in-class exercises. The appendix provides summaries of the nine learning progressions that make up this key practice.

### What Does The Key Practice Look Like In Student Work?

Student responses to assessment tasks may reflect different learning progression levels. For example, when asked to explain how they know that a website about New Zealand is not written by an expert (a Level 3 task), students may provide the following responses:

- "Because he said that he was a computer programmer, which is not an expert. Also, he's writing his information based off of a trip he took 14 years ago." (Level 3)
- "He could have put down things that are not true about New Zealand." (Level 2)
- "Because it talks about physical features and birds." (Level 2)
- "Because the writer did not show too much of the information about it." (Level 1)
- "It doesn't look like it is made by an expert." (Level 1)

Each response emphasizes different criteria for evaluating the source; students at lower levels of the learning progression emphasize surface features or the content being discussed, rather than attending to information that affects the authors' expertise, such as his profession. Examining student responses for evidence of their level of understanding about evaluating sources will help a teacher target the next learning opportunity for students.

### How Can We Help Students Make Progress with this Key Practice?

In the classroom, teachers can use the *Conducting Research and Inquiry* key practice as a model for the research process, which can help provide a meaningful organization for classroom-based activities by connecting them to high-level purposes for engaging in research. For example, citing sources using an appropriate citation style is an important research activity because it ensures that researchers give credit to the source of their ideas, while communicating this information to readers, so that they can understand how the writer's claims relate to other available sources about the topic. Readers can also refer to the original source material if needed. Making explicit connections between specific research skills (such as citing sources) and high-level goals (making clear to your readers how your ideas build on previous work) can help students to see the value of the individual activities in relation to the ultimate goals of conducting research and inquiry. Teachers can also use the learning progressions to identify where students are in their current level of skill development, and use this to determine next steps for instruction. Incorporating these skills into work on the larger practice, such as developing an article for the school website, or building a presentation to inform members of the community about important issues, can provide meaning and purpose for students to develop this skill.

### Using the Key Practice Diagram and Learning Progressions

Teachers can use the Key Practice diagram and Learning Progressions to deepen their own understanding of how reading, writing, and critical thinking skills work together in the practice of Research and Inquiry, and how they might help their students develop these skills. In the classroom, the diagram can be used with students to model the inquiry process and to encourage self-reflection around the larger goals of students' research projects.

### For More Information

For further reading, see: (1) Sparks, J. R., & Deane, P. (2015). *Cognitively based assessment of research and inquiry skills: Defining a key practice in the English language arts* (Research Report No. RR-15-35). Princeton, NJ: Educational Testing Service. (2) Deane, P., & Sparks, J. R. (in press). Scenario-based formative assessment of key practices in the English language arts. To appear in H. Andrade, G. Cizek, & R. E. Bennett (Eds.), *Handbook of Formative Assessment in the Disciplines* (pp. 68-96), New York, NY: Routledge.

**Appendix: Learning Progressions Relevant To Each Phase Of The Conducting Research And Inquiry Key Practice<sup>1</sup>**

**Inquiry and Information Gathering Phase**

	<b>Asking Guiding Questions</b>	<b>Testing Hypotheses</b>	<b>Locating Sources</b>
<b>Level 1</b>	Understands inquiry as a process of finding correct answers to questions.	Generates plausible hypotheses and causal explanations for observed data.	Uses scanning, browsing, and linear reading patterns to locate exact matches to keywords.
<b>Level 2</b>	Understands inquiry as a process of exploring a topic and constructing answers to driving questions.	Distinguishes between theory and evidence; generates predictions and uses evidence to confirm or disconfirm predictions.	Uses text organizers or structural features to locate and select relevant information for further analysis.
<b>Level 3</b>	Understands inquiry as a process of constructing answers to multiple focused questions through selective use of reliable resources.	Executes systematic hypothesis-testing procedures and produces reports documenting hypotheses, predictions, evidence, and interpretation.	Plans and executes efficient searches for relevant information; uses note taking and record keeping to monitor search results.
<b>Level 4</b>	Understands inquiry as a process of problem solving, using an understanding of the nature of the topic to construct and justify a solution.	Constructs a mental model of a causal process from multiple sources and presents that model to others, using topical concepts and evidence to support a synthesis.	Executes repeated searches, revising as appropriate; effectively monitors search process to avoid duplicating or repeating searches.
<b>Level 5</b>	Understands inquiry as a means of building knowledge, which can be applied to answer questions and solve significant problems in a discipline.	Produces extended arguments presenting competing hypotheses and data collection methods, analyzing whether evidence favors one hypothesis, and interpreting results given relevant theory or literature.	Uses citation-searching and tracking strategies to uncover related literature and recognize important and seminal sources in a discipline.

<sup>1</sup>Note that for the three tables with learning progressions, the breaks between the columns are intended as a reminder that a student may have an uneven profile of understanding across the levels of the progressions. In other words, a student may display evidence of Level 4 on Locating Sources, but Level 2 on Testing Hypotheses.

### Analysis, Evaluation, and Synthesis Phase

	Comparing and Organizing Sources	Integrating Multimodal Sources	Reconciling Perspectives	Evaluating Sources
Level 1	Identifies important similarities and differences in content and structure between two texts.	Identifies common information between two sources that differ in modality or format.	Identifies and explains an author's point of view and purpose for writing.	Evaluates sources based on surface features, including information quantity and presence of relevant key words.
Level 2	Categorizes and organizes multiple texts on the basis of similarities and differences in content, mapping out shared and unique features of the texts.	Identifies and explains relationships among information modes or formats, including unique information.	Distinguishes among primary and secondary sources and identifies similar or different perspectives between accounts.	Evaluates source content, including accuracy and presence of new information.
Level 3	Classifies and analyzes texts according to features important for one's purposes and produces extended texts using compare/contrast as the organizing structure.	Transforms mutually relevant information from one mode to another, in order to aid comparison, integration, or problem solving.	Understands notion of subjective bias; recognizes and evaluates how authors' biases and perspectives shape text structure and content.	Evaluates sources based on both content and credibility, including expertise, bias, and currency.
Level 4	Writes analyses of similarities and differences among texts that consider multiple levels of comparison or classification schemes, which may be embedded within a longer text to support one's purposes.	Creates products that embed multiple modalities of information, translating the information into appropriate forms for one's purpose and audience.	Builds a coherent, causal model of events, reconciling differences among sources' content by appealing to the perspectives and context.	Focuses on source usefulness, or the application of source content to one's specific task goals, in addition to considerations of relevance and reliability.
Level 5	Applies analogical reasoning strategies to analyze, interpret, and produce extended texts that use comparison, allusion, allegory, or symbolism as elements in an exposition.	Produces extended discussions that incorporate multiple modalities and formats, while considering the importance and interpretation of the information from a disciplinary perspective.	Produces extended analyses of disputable events or situations, which consider effects of bias and perspective on the reliability of accounts, and provides an interpretation that best accounts for the evidence.	All of the above in addition to the standards for evaluating sources within a specific discipline (e.g., history, science) and the quality of their contributions to an ongoing conversation about the research topic.

### Communicating and Presenting Results Phase

	Synthesizing Research Results	Citing and Using Sources
Level 1	Scans to identify and explain points of agreement/ disagreement between two sources.	Identifies and provides source information for texts when prompted.
Level 2	Identifies the use and meaning of embedded sources and can explain relationships among several sources.	Identifies source attributions using textual cues; includes using informal citations in writing (e.g., "according to," "said").
Level 3	Builds coherent interpretations of multiple texts and their relations; writes discussions that cite and explain relationships among multiple texts.	Uses bibliographic strategies and provides full citations in writing; uses summary, paraphrase, and quotation as appropriate without plagiarizing.
Level 4	Writes analyses that review and critique multiple texts, identifying areas of consensus, disagreement, or gaps and unanswered questions in the literature.	Understands and articulates how multiple sources are used to support particular goals or purposes, in the work of others or in one's own written work.
Level 5	Presents and supports an original synthesis reviewing and evaluating evidence from relevant literature, and understands how the article contributes to and extends the current "state of knowledge."	Selectively draws on seminal and important sources in a discipline; contextualizes information drawn from sources to connect one's work to existing literature and to clarify its contribution to ongoing conversation on the subject.

