



ACTIVITY 1: INTRODUCTION TO UNIT (CONT'D)

INSTRUCTIONAL NOTES

Portfolio

Throughout the research process, students are expected to use a structured organizational system for annotating and analyzing sources and recording and storing information. As they work through the steps, they build Research Portfolios consisting of various tools that guide, store, and organize their research and analysis. The portfolio may be either electronic or on paper.

Use the Portfolio Description to introduce and explain the purpose and structure of each section.

The Research Portfolio is not filled sequentially. Its purpose is to organize information and analysis **throughout the research process**, as opposed to compiling and organizing information **at the end of the process**. Organizing information along the way helps focus research and supports comprehension and successful writing.

Inquiry Questions are at the heart of the process and guide students every step of the way. Students are constantly asking and answering questions, and the Research Portfolio is a reflection of the process that they follow. The Research Frame will then help students organize the search and the information even further, grouping Inquiry Questions into coherent Inquiry Paths in a meaningful way.

Student research thus remains organized at all times, allowing them to browse within their materials, to establish connections easily, and to decide what inquiry steps to take next based on the analysis of their current findings.

PORTFOLIO SECTIONS	CONTENT
<p>SECTION 1: DEFINING AN AREA OF INVESTIGATION <i>This section stores all the work you do exploring the topic and choosing an Area of Investigation.</i></p>	<p>Exploring a Topic Area Evaluation Checklist Potential Sources (from pre-researches)</p>
<p>SECTION 2: GATHERING AND ANALYZING INFORMATION <i>This section stores all the information you gather throughout your investigation. It also stores your notes and analysis of sources. All the tools should be grouped by source.</i></p>	<p>Potential Sources Annotated Sources Personal Drafts Taking Notes (about sources) Forming EBC</p>
<p>SECTION 3: DRAWING CONCLUSIONS <i>This section stores your Notes and EBCs about Inquiry Paths, your research evaluations, and the personal perspective that you come to at the end of your inquiry. Group the Taking Notes, Forming EBC or Organizing EBC by Inquiry Path.</i></p>	<p>Taking Notes (about Inquiry Paths) Forming EBC Organizing EBC Synthesizing EBC Research Evaluation Evidence-Based Perspective</p>
<p>SECTION 4: DISCARDED MATERIAL <i>This section stores all the sources and analysis that you have discarded throughout your investigation. The purpose of this section is to keep a record of discarded materials until the end of the research process in case you change your mind and want to use them.</i></p>	

PART 1

INITIATING INQUIRY

OBJECTIVE:

Students learn the purposes and processes of using inquiry and research to deepen understanding. Students initiate inquiry on a topic through collaboratively generating questions to direct and frame research. By the end of Part 1, students will have chosen an Area of Investigation and developed Inquiry Questions.



ACTIVITIES

1- EXPLORING A TOPIC

The teacher leads a class exploration of a topic.
Students independently explore the research topic.

2- CONDUCTING PRE-SEARCHES

Students conduct pre-searches for sources around one or two Areas of Investigation to validate availability of information.

3- VETTING AREAS OF INVESTIGATION

Students vet their potential Areas of Investigation and develop a research question or problem.

4- GENERATING INQUIRY QUESTIONS

Students generate Inquiry Questions to guide their searches for information regarding their Areas of Investigation.

MATERIALS:

Texts #1-3
Student Research Plan
TCD Checklist
Exploring a Topic
Potential Sources
Area Evaluation Checklist
Posing Inquiry Questions
Research Criteria Matrix



ALIGNMENT TO CCSS

TARGETED STANDARD(S):

W.11-12.7: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. **W.11-12.8:** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **W.11-12.9:** Draw evidence from literary or informational texts to support analysis, reflection, and research.

SUPPORTING STANDARD(S):

W.11-12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **RI.11-12.1:** 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. **RI.11-12.2:** Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text. **SL.11-12.1:** Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.



ACTIVITY 1: EXPLORING A TOPIC

The teacher leads a class exploration of a topic. Students independently explore the research topic.

EXPLORING A TOPIC TOOL

The **EXPLORING A TOPIC** tool helps students explore potential Areas of Investigation within a topic before choosing the one they will focus on. The tool prompts them to describe potential Areas of Investigation and why it presents an interest to them. They are then prompted to express the area succinctly in the form of a problem or question. It will also guide them in parts of the collaborative exploration process. An annotated version is provided for teachers.

INSTRUCTIONAL NOTES

NOTE ON UNIT TOPICS

Teachers can use the materials of this unit in multiple ways, depending on their students and curricular context. The entire class can focus on one topic with each student eventually investigating separate Areas of Investigation within this topic. The class could also focus on two or three topics. Limiting topics allows students to learn about other aspects of a topic from each other, and allows for deeper class discussions, helping students evaluate their plan, their strategic approach to the inquiry, and their findings. It also allows the teacher to model skills using common texts related to student's research and a wider curricular context. Regardless of the chosen approach, teachers can use topics and model common texts provided in the Topic Resource Repositories or choose their own topics and texts of similar richness and suitability. The Text Suitability Form (available for free at www.odelleducation.com) can help guide their research and selection of sources.

It is important for students to explore the topic for a few days to build an initial knowledge base and to discover various aspects of the topic that are of real interest to them. This exploration should take place in and outside of class—supported by interaction with a few common texts, as well as general discussion of the topic with their peers, teachers, and wider learning community.

By the end of these several days, each student should be able to summarize generally the growing conversation and to articulate a few areas that she or he would like to investigate. The Exploring a Topic Tool supports that work and captures it for evaluation by their teacher.

DISCUSSING TOPICS AROUND COMMON TEXT

- Begin the research process with the idea of exploring a topic.
- Introduce the general topic.
- Make connections to curricular contexts if relevant.
- Use **Text #1 from a Resource Repository** (or a topical text of similar characteristics) to help introduce the topic and to stimulate thinking and interest in the topic.
- Have students read the text in groups of three using Guiding Questions:
 - ◇ What do I find interesting?
 - ◇ What do I want to learn more about?
- Have students share their current knowledge of the topic based on the common text as well as personal previous knowledge: What do they already know about this topic?
- Model posing of questions and have students pose their own about the topic based on the common text and their personal interests: What (more) do they want to know about this topic?

Sections I-III (Topic Description, Possible Areas of Investigation, and Guiding Questions) of the Topic Resource Repository can be used to help pose questions and generate discussion.



ACTIVITY 2: EXPLORING A TOPIC (CONT'D)

INSTRUCTIONAL NOTES

- After the class discusses their findings, students complete the following sections on page one of the Exploring a Topic tool:
 - ◇ Name
 - ◇ Topic
 - ◇ Brief account of class conversation.
- Work with the class to model filling in the Area of Investigation 1 section based on the class discussion:
 - ◇ They write a sentence describing the area that they would like to know more about. Ideally, this area should be described as a question or problem within the general topic.
 - ◇ Then in a sentence they explain why they are interested in this area of the topic.
 - ◇ Finally, in a sentence they explain how they came to this question or problem.

EXPLORING A TOPIC INDEPENDENTLY

- Students spend time outside class exploring the topic. Direct them to talk with peers, other teachers, librarians, or other members of their learning community, asking them what they know about the topic and what about it interests them. They should also informally search the Internet, libraries and other places to begin exploring various dimensions of the topic.
- Ideally, orient the students to a media specialist in the school, or organize a session in collaboration with a media specialist to help them identify the tools they can use to perform searches, and learn how to use them efficiently.

Make it clear to students that they are not yet searching for definitive sources or knowledge on the topic, but rather exploring various aspects of it through accessing the knowledge, questions, and perspectives of their learning community.

- Students should bring back to class 2 or 3 new potential Areas of Investigation, using the second page of the Exploring a Topic tool to record their thinking. They follow the same process as for Area of Investigation 1 explored in class, and write sentences to describe the potential Areas of Investigation, why they are interested in these areas and how they came to these questions or problems.
- Instruct the students to work on their sentences and complete the tool in class. They should be:
 - ◇ **Clear:** The meaning of the sentence must be understood immediately by the reader. An easy way for students to check for clarity is to read each sentence to a parent or peer, without giving them any clarification, and ask them to explain what they understood.
 - ◇ **Concise:** They must provide a direct answer to each of the prompts and contain no unnecessary words.
 - ◇ **Correct:** They should present no grammatical or spelling errors.
- Collect the tools to confirm completion and to evaluate for initial coherence.
- Instruct students to store their material in SECTION 1 of their Research Portfolios: Defining an Area of Investigation.

≡ ACTIVITY 3: CONDUCTING ≡ PRE-SEARCHES

Students conduct pre-searches for sources around one or two Areas of Investigation to validate availability of information.

INSTRUCTIONAL NOTES

Introduce the process of performing searches using Inquiry Questions, and the importance of recording the potential sources found.

POSING INQUIRY QUESTIONS

Using Inquiry Questions is absolutely essential to the research process articulated in this unit. Developing student proficiency for posing general and specific questions to direct inquiry and deepen understanding is a central instructional focus. This questioning process, itself, is iterative and serves specific functions at different stages throughout the process. At this point, the goal of questioning is still explorative. Students have identified general areas of interest and now explore those areas to confirm their interest and the viability of the area to support research. At this stage, the Inquiry Questions are general. By the time these pre-searches (and eventual vetting) are done, students should be able to express their area of interest in a clear and coherent question or problem to guide their research. Once a research direction has been established, the role and nature of the Inquiry Question changes. Now the questions become more specific and serve to guide investigation in a way to gain a coherent and comprehensive perspective on their research question. These more specific Inquiry Questions will eventually make up a “frame” for ensuring sufficient research. At this stage, however, students should be simply introduced to the idea and importance of questioning and use more general questions to explore their potential Areas of Investigation.

- Explain the basic principles of using Inquiry Questions to guide initial searches. Inquiry questions can be simply defined as: questions that identify things you need to know about a topic and that will help guide your research and analysis.
- Brainstorm with the class possible Inquiry Questions that will help students conduct pre-searches on an Area of Investigation. **You may use the models in Section III of the Topic Repository.**
- Remind the students that at this stage of research they are looking for general information that will help them gain background knowledge and understanding of their potential Areas of Investigation.

To guide students in the brainstorming process, you might use the following basic Inquiry Questions from the Posing Inquiry Questions handout:

- ◇ How is it defined?
- ◇ Where did it originate?
- ◇ What is its history?
- ◇ What are its major aspects?
- ◇ What are its causes and implications?
- ◇ What other things is it connected to or associated with?
- ◇ What are its important places, things, people, and experts?

ACTIVITY 3: CONDUCTING PRE-SEARCHES (CONT'D)

POTENTIAL SOURCES TOOL

POTENTIAL SOURCES is a tool where students record general information about potential sources that they find while conducting research. They can also write a brief description of the content, key ideas / information and write personal comments. An annotated version is provided for teachers.

INSTRUCTIONAL NOTES

RECORDING SOURCES

- Introduce the structure and purposes of the Potential Sources tool. The annotated version of the tool can be used as a guide.
- Model its use with information from a few texts ([Texts #1-3 from a Topic Resource Repository, or other books, internet-based sources, etc. of similar complexity and richness](#)), connecting the source to one of the general Inquiry Questions from class discussion.
- When modeling, spend some time explaining different ways that notes for the section on "General Content / Key Ideas / Personal Comments" can be made: quotes, facts and numbers, brief description of the content, personal impressions and evaluation of the quality of the content, etc. Explain how this information will be used in the next activity to validate the direction of the research and the availability of sources of information.
- Have students practice using the Potential Sources tool with common Texts #2 and #3 from a Topic Resource Repository (or text(s) provided by the teacher).

CONDUCTING PRE-SEARCHES INDEPENDENTLY

- Students select two of their potential Areas of Investigation based on their previous assessment of relevance and interest.
- They conduct pre-searches and gather initial basic information, guided by some of their general Inquiry Questions.
- The goal of the pre-searches is to validate the availability of information, confirm further the student's level of interest in the potential Areas of Investigation, and refine the question or problem, and the scope of the area if necessary.
- For the purpose of this activity, students only use part of the tool:
 - ◇ Name; Topic; Source (# - Title - Author - Location - Publication Date);
General content/ key ideas / personal comments

Later on, they will record more information – related to their evaluation of the source's credibility, richness, and interest – when they use the Assessing Sources handout.

- Remind students that at this point, their notes must serve two main purposes: recording general information about a source, and providing relevant information about its content.

ACTIVITY 4: VETTING AREAS OF INVESTIGATION

Students vet their potential Areas of Investigation and develop a research question or problem.

AREA EVALUATION CHECKLIST

The **AREA EVALUATION CHECKLIST** guides students in the process of evaluating their potential Areas of Investigation. The checklist is used collaboratively with the teacher to determine if an area warrants investigation.

INSTRUCTIONAL NOTES

- Students hand in their Exploring a Topic and Potential Sources tools and any initial notes they have from their pre-searches.
- Review the material in preparation for student-teacher conferences.
- Schedule an in-class conference with each student individually.
- The other students can be given time to work on their pre-searches or read additional sources while you are conferencing.
- Begin each conference by introducing the Area Evaluation Checklist. Show students how this tool will guide the conversation. Explain the different criteria.
- Work through the checklist with the student, probing and discussing the area based on the criteria.
- The goal of the conference is for the student to arrive at a written research question or problem.
- At the end of the conference, students file their Exploring a Topic tool, notes, and Area Evaluation Checklists in SECTION 1 of their Research Portfolios: Defining an Area of Investigation.

ACTIVITY 5: GENERATING INQUIRY QUESTIONS

Students generate Inquiry Questions to guide their searches for information regarding their Areas of Investigation.

INSTRUCTIONAL NOTES

Students should now have decided on an Area of Investigation based on their exploration, pre-searches, and vetting discussion. They will have expressed their area in the form of a problem or overarching question. They now brainstorm **more specific questions** about their Area of Investigation that will guide their research.

Use the Posing Inquiry Questions handout to guide students in the brainstorming process and to help students generate, select, and refine their emerging Inquiry Questions.

- Model posing various types of questions about an Area of Investigation, building from students' reading of common texts ([Model Texts and questions from a Topic Resource Repository can be used](#)).
- Work through modeling and discussion to help students frame fruitful questions that require and will sustain research.
- Questioning should begin collaboratively, either as an entire class or in small groups.
- Students should help each other pose questions exploring as many possible aspects of the topic areas as possible. As with any brainstorming activity, volume should be the initial goal, allowing students to build off each other's ideas.
- One method could be to rotate each student to the head of the class. The student presents his or her Area of Investigation. The class then brainstorms questions while a scribe (student or teacher) records the questions on the board. When each student's brainstorm session is over, s/he records the questions on a sheet of paper. Students could also each write their questions on notecards as they contribute them to discussion. At the end of the brainstorming, the presenting student collects all the notecards from her peers.
- If technology permits, the collaborative questioning can be done with a Google doc or Smartboard, allowing all the students to share and record their questions electronically.
- Encourage students to build on and borrow questions posed by the group for other students' Areas of Investigation that may be related. (Note: this is a benefit of limiting the class to one or two general topics. If student topic areas are related, brainstormed questions can be left on the board.)
- Once the brainstorming process is over, use the checklist provided in the Posing Inquiry Questions handout to help students vet and refine their Inquiry Questions. Model the process with a student volunteer's list of questions then have students work independently on their personal lists.
- Set a quantitative goal: at the end of the process, each student should have a list of 5-10 good Inquiry Questions.



ASSESSMENT OPPORTUNITIES

In this part of the unit students will have produced:

- ◇ Exploring a Topic tools
- ◇ Potential Sources tools
- ◇ Area Evaluation Checklist
- ◇ Inquiry Questions

Evaluate these products, as well as their participation and discussion using the Research Criteria Matrix.

The **Research Criteria Matrix** articulates the key proficiencies and habits of the research process that students need to build. The Matrix breaks up the skills into categories, articulating the various criteria within each by which to evaluate student performance. These skills and habits span the entire research process and should be tracked to ensure appropriate development. For each criterion, grade-level performance descriptors are provided to support evaluation.

For Part 1, examine student products and performance for initial ability in the following criteria:

- Setting direction for research
- Posing Inquiry Questions

Structured and purposeful collaboration plays an important role in this initial part. Developing an understanding that research involves a combination of collaborative and independent skills is an essential objective of the unit. Many of the activities are designed for building collaborative literacy skills. The Text-Centered Discussion Checklist can be a resource for supporting this instruction and evaluation. One strategy for using the TCD checklist in this context is to identify one to three of the criteria for the class as a whole to focus on throughout this unit. As students make their way through the unit, teachers can continually return to this focus. For example, the three “Questioning” criteria (Posing Questions, Responding to Questions, and Making Connections) might be a good natural focus for collaboration skills.

When students choose their potential Areas of Investigation, they are asked to produce coherent thinking and writing describing them. They also are expected to articulate each of their refined and vetted potential areas as a coherent problem or overarching Inquiry Questions. Students should receive feedback on the quality of their sentence construction so that they can begin to think about how to more clearly articulate their thinking and research findings.