

Research questions

preparing effective questions to guide research

- targeted
- adaptable
- Primary
- Intermediate
- Middle
- Senior

Objectives:

- appreciate the value of having research questions to guide research, particularly when an assignment requires gathering information in order to reach a decision.
- learn strategies to develop questions to guide research on an assigned topic.

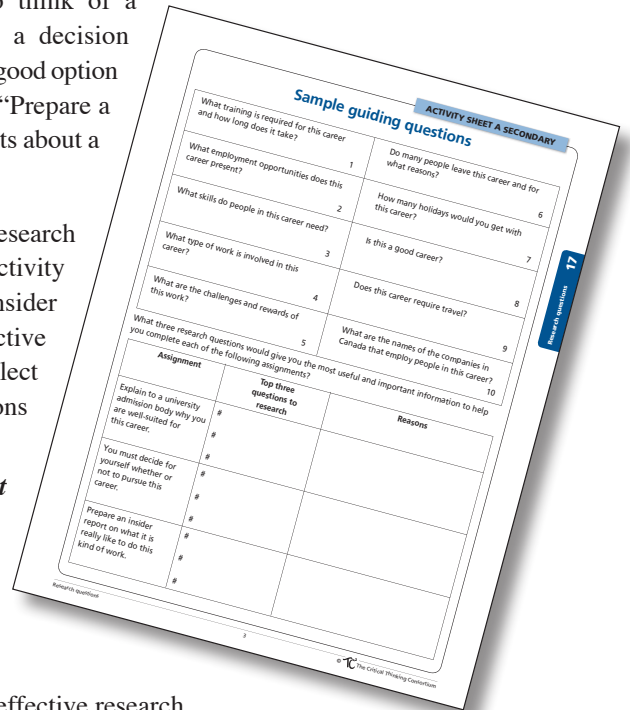
Use the following activities to introduce the featured research strategy

Introduce the strategy

➤ Provide each pair of students with a copy of *Sample guiding questions* (Activity Sheet A: Secondary or Elementary). Invite students to examine the questions. Ask students to speculate what topic or assignment the questions might be related to. If students suggest “careers,” encourage them to think of a relevant assignment requiring a decision such as, “Would this career be a good option for you? Why or why not?” or “Prepare a poster that informs other students about a career that interests you.”

➤ Present students with the three research tasks listed at the bottom of Activity Sheet A. Invite students to consider the following criteria for effective research questions, as they select the three best research questions for each task:

- **Provide clear and relevant direction:** effective research questions provide clear direction to help you satisfy the purpose of the task or assignment.
- **Interesting and important:** effective research questions lead to the discovery of interesting and important information.
- **Manageable:** effective research questions match the resources and time available.



Practise the strategy

➤ Divide students into groups and provide each group with a copy of *Generating guiding questions* (Activity Sheet B). Provide one of the following examples of a research assignment:

- **FOR SECONDARY STUDENTS:** Take a position on a relevant immigration issue in Canada. Explain to students that the first step in developing guiding research questions is to make sure the purpose of the assignment or task is understood. Prompt students to identify the possible purposes of the research assignment on the chart and to determine the decision or judgment required.

- **FOR ELEMENTARY STUDENTS:** Make a recommendation on improving the school playground. Explain to students that the first step in developing guiding research questions is to make sure the purpose of the assignment or task is understood. Prompt students to identify the possible purposes of the research assignment on the chart and to determine the decision or judgment required.

- Invite students to brainstorm what they know about the topic and related ideas that emerge from this prior knowledge. Direct students to suggest possible guiding questions that would provide relevant, interesting, and important information.
- Arrange for students to share their charts with other groups.
- Introduce the Student Resource, *Research questions*. Review each of the elements: the purpose, strategies, practice sample, and self-assessment rubric. Encourage students to refer to this resource when using the strategy in the future.

Reinforce the strategy

- Individually or in groups, ask students to use *Generating guiding questions* (Activity Sheet B) to explore a research topic and generate effective research questions on an assigned theme—either a topic students have just studied in class or one that they are about to examine.

Apply the strategy in everyday teaching

- At appropriate times over the ensuing several weeks, ask students to use this literacy strategy in regular classroom situations, including the following:
 - researching people, places, or events;
 - finding out information before making a decision;
 - learning more about an issue before taking a position.

Assessment

- Encourage students to refer to the rubric found in the Student Resource when self-assessing their use of this literacy strategy:
 - Allow students opportunities to apply the strategy two or three times without evaluation.
 - Guide students in interpreting and using the rubric to assess their own responses.
 - Encourage students to use the rubric whenever they use this strategy.
- To use the rubric for teacher evaluation of student work, remove the first person (student) reference from each descriptor.

Sample guiding questions

What training is required for this career and how long does it take? 1	Do many people leave this career and for what reasons? 6
What employment opportunities does this career present? 2	How many holidays would you get with this career? 7
What skills do people in this career need? 3	Is this a good career? 8
What type of work is involved in this career? 4	Does this career require travel? 9
What are the challenges and rewards of this work? 5	What are the names of the companies in Canada that employ people in this career? 10

What three research questions would give you the most useful and important information to help you complete each of the following assignments?

Assignment	Top three questions to research	Reasons
Explain to a university admission body why you are well-suited for this career.	# # #	
You must decide for yourself whether or not to pursue this career.	# # #	
Prepare an insider report on what it is really like to do this kind of work.	# # #	

Sample guiding questions

What training is required for this career? 1	How long does the training take? 6
What jobs are available in this career and are people needed for these jobs? 2	How many holidays would you get with this career? 7
What skills does a person in this career need? 3	Is this a good career? 8
What type of work is involved in this career? 4	Does this career require travel? 9
What are the challenges and rewards of this work? 5	What are the names of the companies in Canada that employ people in this career? 10

What three research questions would give you the most useful and important information to help you complete each of the following assignments?

Assignment	Top three questions to research	Reasons
Explain to your parents why you are well-suited for this career.	# # #	
You must decide for yourself whether or not to pursue this career.	# # #	
Prepare a report on a day in the life of people in this line of work.	# # #	

Generating guiding questions

Purpose of the research assignment: Clarified task and focus:		
Prior information: What I know about the topic	Related ideas	Possible research questions
<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Underline the most effective questions: <ul style="list-style-type: none"> • provide clear, relevant direction • lead to interesting, important information • manageable to research </div>		

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Purpose

This strategy helps me successfully address the assigned topic by building on what I already know and developing focussed questions to guide my research.

For a sample use of the strategy, see the page after next.

Instructions

- Identify the purpose of the research assignment. Whenever possible, focus on an issue that requires you to reach your own conclusions using the information you gather.
- Clarify the required task by restating the assignment in your own words. If appropriate, narrow the topic by selecting a specific area or issue as a focus.
- Summarize what you already know about the topic (prior information).
- List related ideas that might be interesting or useful to complete the assignment.
- Brainstorm possible guiding questions that clearly ask for the kind of information needed to complete your assigned task.
- Examine your questions to ensure they are directly connected to the topic, generate interesting and important information, and are manageable given the resources and time you have available.
- Underline a few of the most effective questions to guide your research.

Assessing my use of “Research questions”

Accomplished	Good	Basic	Struggling
Clearly described expectations for the assignment:			
I described in careful detail the expectations for the assignment in words that I understand.	I described the main expectations for the assignment and tried to restate them in my own words.	I think I described some of the expectations for the assignment but not very clearly.	I need help understanding the expectations for the assignment.
Clear and relevant direction:			
All of the questions I selected provide clear direction that will enable me to address the assigned topic.	Most of the questions I selected provide clear direction that will enable me to address the assigned topic.	I selected several questions that I think address the assigned topic.	I selected a few questions but I’m not sure if any of them address the assigned topic.
Interesting and important information:			
My questions will lead to interesting information that is important for the assignment.	Most of my questions will likely lead to interesting information that is important for the assignment.	Some of my questions may lead to interesting information that is important for the assignment.	I don’t think any of my questions will lead to interesting information that is important for the assignment.
Manageable given time and resources:			
I am confident that my questions are manageable because I will be able to access all my resources in the time available.	I think most of my questions are manageable because I will be able to access most of my resources in the time available.	I think some of my questions are manageable but I’m not sure I will be able to access all of the resources within the time available.	I doubt that I will have time to find resources to answer any of my questions.

SAMPLE

use of the strategy Decide what questions should guide research you undertake in order to defend a personal position on some aspect of immigration.

Research questions

Purpose of the research assignment: To take and defend a position on an immigration issue that affects my community.

Clarified task and focus: I need to pick an immigration issue—I think I'll look at what my community does to support immigrants—and find out Canada's policies and what happens when an immigrant arrives in Canada. I will need to find evidence to develop my own opinion about whether or not my community is providing enough of the right kind of support for immigrants.

Prior information: What I know about the topic	Related ideas	Possible guiding questions
<ul style="list-style-type: none"> Everyone except Aboriginal people came from somewhere. There are rules about who gets to come to Canada. Some immigrant groups are unfairly treated (Chinese head tax). Sometimes people are sponsored. There are different ways to immigrate. There is a limit to how many immigrants will be accepted. Sometimes people are sent back. 	<ul style="list-style-type: none"> For every person who succeeds, how many people never realize their dream? Rules, policy, and enforcement. It must be so hard to immigrate when you have nothing. How do people survive? Are they treated fairly? What do immigrants do when they arrive? The number that come to Canada and elsewhere in the world. 	<ul style="list-style-type: none"> Why do immigrants come to my community? What are the stories of recent immigrants to my community? How do immigrants contribute to my community? What needs do immigrants have when they arrive in the community? Does the community provide effective support for immigrants?

SAMPLE

use of the strategy Decide what questions you will use to guide your research in order to make a recommendation about the playground equipment at your school.

Research questions

Purpose of the research assignment: To make a recommendation about the playground equipment at your school.

Clarified task and focus: I need to find out what the issues are with our playground and identify the problems as well as the things people like. I will need to investigate playground equipment that is available and affordable and make a recommendation that will solve the problems with our playground.

Prior information: What I know about the topic	Related ideas	Possible guiding questions
<ul style="list-style-type: none"> We have wooden equipment and a climbing dome. Parents are concerned that wood is unsafe—it is slippery when it is wet and kids get slivers. The ground under the equipment gets muddy. The parents' group has money to replace the equipment. There is no equipment that appeals to the older students. 	<ul style="list-style-type: none"> What do the students in our school want? Whatever decision is made, everyone will probably not be pleased. Older students get into fights because they are bored. What equipment would older students use? 	<ul style="list-style-type: none"> What types of pre-made playground equipment are available? How much money would the parents' group be willing to spend? Survey students to see what they would like. Are some equipment designs safer and more long-lasting than others? What is available that would appeal to older students? View other playgrounds in our town.