



LESSON PLAN

Level:	Grades 4-8
About the Author:	Matthew Johnson, Director of Education, MediaSmarts. <i>Note: This lesson is based on the article "Teaching Internet Literacy Strategies: The Hero Inquiry Project," by Maya Eagleton, Kathleen Guinee and Karen Langlais. Adapted with permission.</i>
Duration:	2-3 hours plus presentation time (may be completed in shorter segments)

The Hero Project: Authenticating Online Information

Overview

Students are introduced to Internet search skills through researching a personal hero. By focusing on the early parts of the research process, students learn to select well-defined topics, ask relevant research questions and select effective keywords. Students then present the information they have found to their classmates in the form of a media product.

Learning Outcomes

Students will:

- identify key steps in searching for information
- evaluate their prior knowledge about search techniques
- learn to identify strong and weak keywords
- practice effective search techniques
- research a topic in detail
- organize research and present their findings to the class
- create a media product

Preparation and Materials

Read and photocopy the following handouts:

- Identifying Good and Bad Keywords
- Keyword-category Concept Map Exercise
- Mind Map: What I Already Know
- Question Focus Web Example
- Question Focus Web
- Keyword-category Concept Map



Procedure

Steps in a search

Ask students if they ever do research on the Internet, either for school or for personal reasons. Then have them think about and list the steps that are involved in an Internet search. When students have done this, have them share their results with the class. Use students' contributions, and your own if necessary, to build a master list that contains the following key steps:

1. Figure out exactly what you're looking for. Be as specific as you can.
2. Go to an online information source (search engine, online encyclopedia, online database, etc.).
3. Enter relevant keywords and perform the search.
4. Look over search results to find the ones that look most relevant.
5. Go to the first relevant result and collect useful information.
6. Record the source of the information so you can cite it in your bibliography later.
7. Repeat steps 4 and 5 until you have as much information as you need.

Scavenger hunt

To test students' ability to use search engines effectively, have them perform an online "scavenger hunt." Ask them to use a search engine to find answers to the following questions, being sure to record the search terms they use:

- Who directed the movie "Ghostbusters"?
- How many prime ministers were born in Quebec?
- Of which province or territory is the ptarmigan the official bird?

Once students have completed the scavenger hunt, have them share their search terms. What elements were necessary to find the information in each case? How many students used full-phrases (using the entire question as the search term) and how many just used key words? Did any use quotes around words that went together (such as "official bird" or "prime minister")? Which techniques were most effective?

Point out to students that each of the three searches required a different strategy: the first one just required two keywords ("director" or "directed", "Ghostbusters"), the second needed three or more ("prime ministers", "born" and "Quebec") and the third needed a term to be expanded ("official bird" instead of just "bird").

Choosing key words

Explain to students that search engines don't read sentences the way people do; instead they look for the *key words* in your query in the Web sites they search. In other words, you're not asking a search engine a question but rather asking it to look for Web sites where the words appear. In order to use a search engine or database effectively, therefore, they need to be able to choose the best combination of *key words*.

Distribute the handout *Identifying Good and Bad Keywords* and go through the first two or three examples with the class. Which are good keywords and why? For instance, "what Canadian invented basketball" might get you the



information you need, but because it's a very specific phrase you will only get a few results. "Canadian basketball," on the other hand, will get you too many results that aren't relevant to your topic. By adding a third keyword, "invented", you cover your whole topic and get many relevant results.

Have students complete the rest of the handout (alone or in pairs) and then share their answers with the class. If you have access to the Internet, have students test their decisions online -- how good a result did they get with the keywords they identified as "good"?

Combining key words

Remind students of the three strategies they used in the scavenger hunt: adding a second keyword to the theme word (adding "director" to "Ghostbusters"), adding two keywords to the theme word (adding "born" and "Quebec" to "prime ministers"), and expanding a keyword (adding "official bird" to "ptarmigan" instead of just "bird.")

Distribute to students the handout *Keyword-category Concept Map Exercise*. Have students use this exercise to practice the three techniques discussed above:

Doing a simple two-keyword search, identify two books written by William Bell

Using an expanded keyword search, find out how many blue whales are left in the world

Using a search with three or more keywords, find out which Canadian city has the grave of Jack Dawson, the character played by Leonardo DiCaprio in "Titanic"

In each case, students are already provided with the question and theme (the general topic, which may or may not be one of the actual keywords) to which they will need to add a topic keyword and one or more focus keywords.

Have students complete the rest of the handout (alone or in pairs) and then share their answers with the class. If you have access to the Internet, have students test their keywords online.

The Hero project: What is a hero?

Tell students that they will be using their new search skills to do a report on a personal hero. Have students brainstorm a definition of a hero and make a list of possible heroes on the board. Remind students that for the purposes of this exercise a hero has to be a real person and that a hero could be either a man or a woman.

Once they have chosen a hero, have students brainstorm possible information sources where they could research their hero, either online or offline.

The Hero project: How much do you know?

Have students create a **mind map** to summarize what they already know about their hero:

- The student should begin by writing the name of the hero in the middle of the page and drawing a circle around it.
- The student then should write any facts s/he already knows about the hero in circles that branch off from the central one.



Finally, any details that expand on the known facts can be added in circles that branch off from the relevant facts.

(You may use the handout *Mind Map: What I Already Know* to model this process for students.)

Prompt students to expand their mind maps to include everything they already know about their hero. In some cases, you may have to suggest that they choose another hero if the student has too little prior knowledge, if it seems unlikely that sufficient research sources on the hero will be available, or if the hero selected is unsuitable.

The Hero project: Narrowing your focus

Have students brainstorm the difference between looking for a single fact online (such as in the scavenger hunt) and researching a topic in depth. (For instance, if you're looking for a single fact you'll be satisfied with a small number of fairly limited sources, whereas researching a broader topic will require you to find multiple sources that deal with the topic in depth; as well, when you're researching a topic in depth you will need to collect and integrate information from different sources rather than just collecting facts.)

Explain to students that in order to research a topic effectively you need to narrow the focus to make it manageable. Distribute the handouts *Question Focus Web Example* and *Question Focus Web* to demonstrate to students how to narrow a topic down to the most important, relevant and manageable subjects. Remind students that they should start with their *What I Already Know* mind map, so that they're working from prior knowledge; for instance, in the *Question Focus Web Example* something the writer had identified about Bell in the mind map -- that his wife was deaf -- has been identified as a topic of inquiry.

Once you have demonstrated the *Question Focus Web* for students, have them complete their own to determine the focus of their research.

The Hero project: researching my hero

Have students use the *Keyword-category Concept Map* handout to develop Web searches on the different aspects of their hero. Make sure that they use the different strategies (two keywords, specified keyword, three or more keywords) as indicated.

Bring students to the library or computer lab and have them research their heroes. Help students to judge search engine hits, evaluate the credibility of the sources they find, and take citable notes from those sources. (For more information on evaluating online sources, see the MediaSmarts lesson "[Deconstructing Web Pages](#).")

The Hero project: presenting my hero

Once you judge that students have gathered enough information, have them return to the focus questions they developed and prepare to present the answers to those questions in the form of a media product. (Examples of media products include a poster, a timeline, a pamphlet, a narrative with accompanying audio, a series of blog entries or a multimedia presentation.)



Emphasize to students that they are not just presenting **all** the information they found about their heroes, but the information that answered their focus questions. Tell students that each presentation should include:

- Purpose: *why* this person is a hero
- Structure: the different parts of the presentation should be clear and distinct
- Chronology: in what order did the events presented happen?
- Context: how the time and place the hero lived are important to his/her significance

Assessment and evaluation

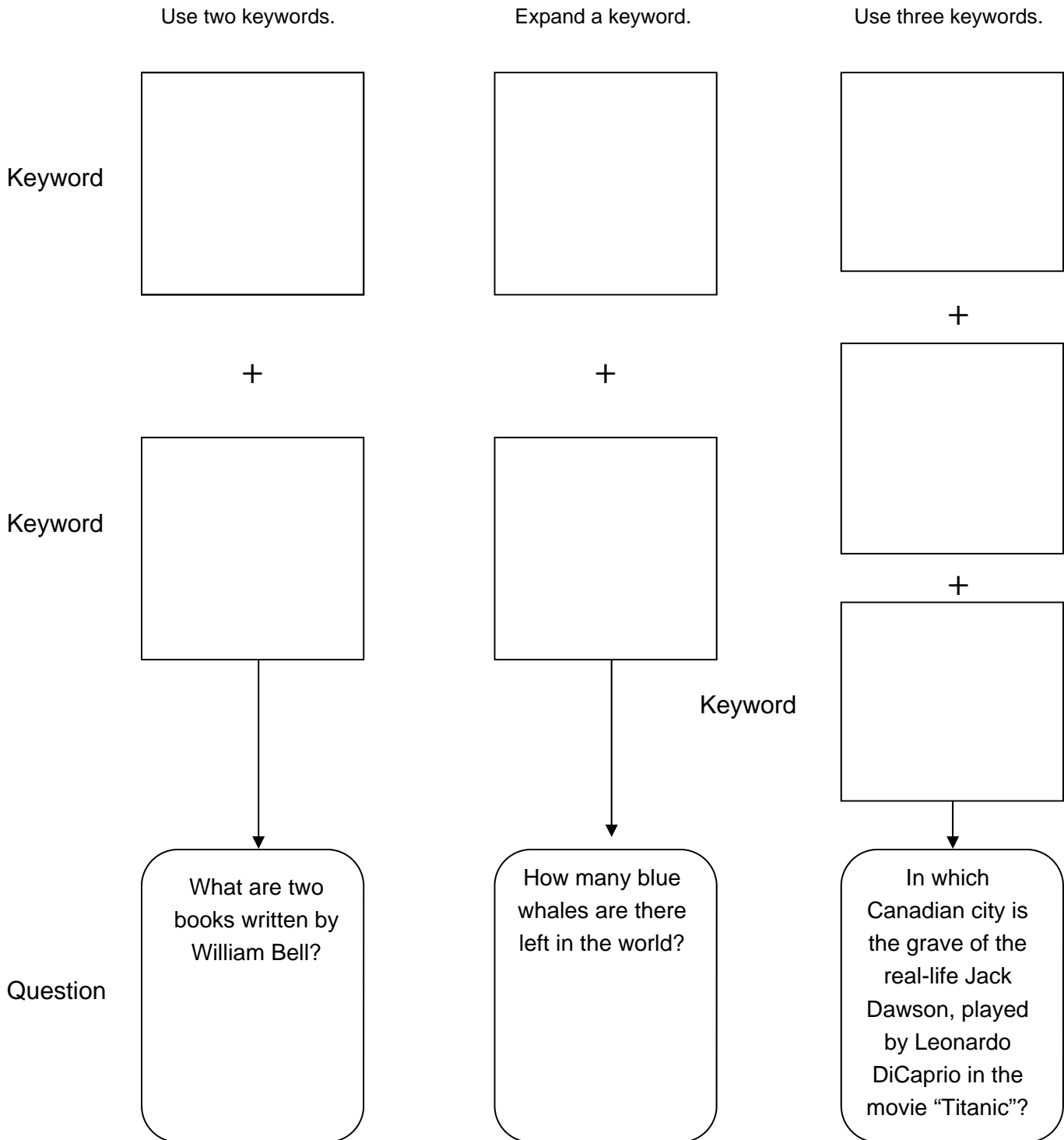
Have students present their media products to the class and submit all their research material to you. They may be marked on:

- their ability to focus the research topic
- demonstrating skill in creating effective searches
- their thoroughness and relevance of the research
- their organization of research results
- their structure, polish and presentation of the media product



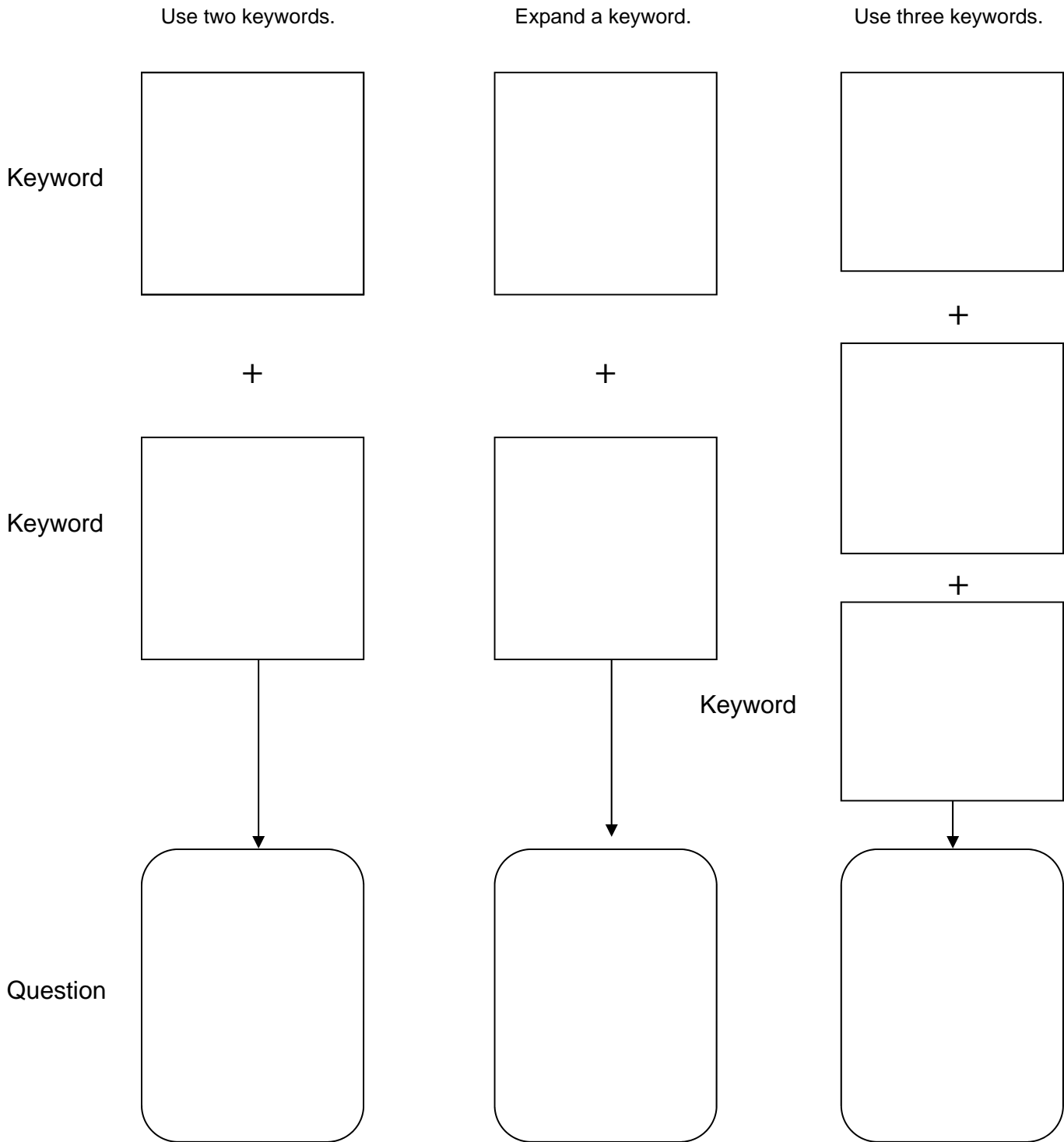
Keyword-category Concept Map Exercise

Fill in the missing keyword bubbles to find your search terms.

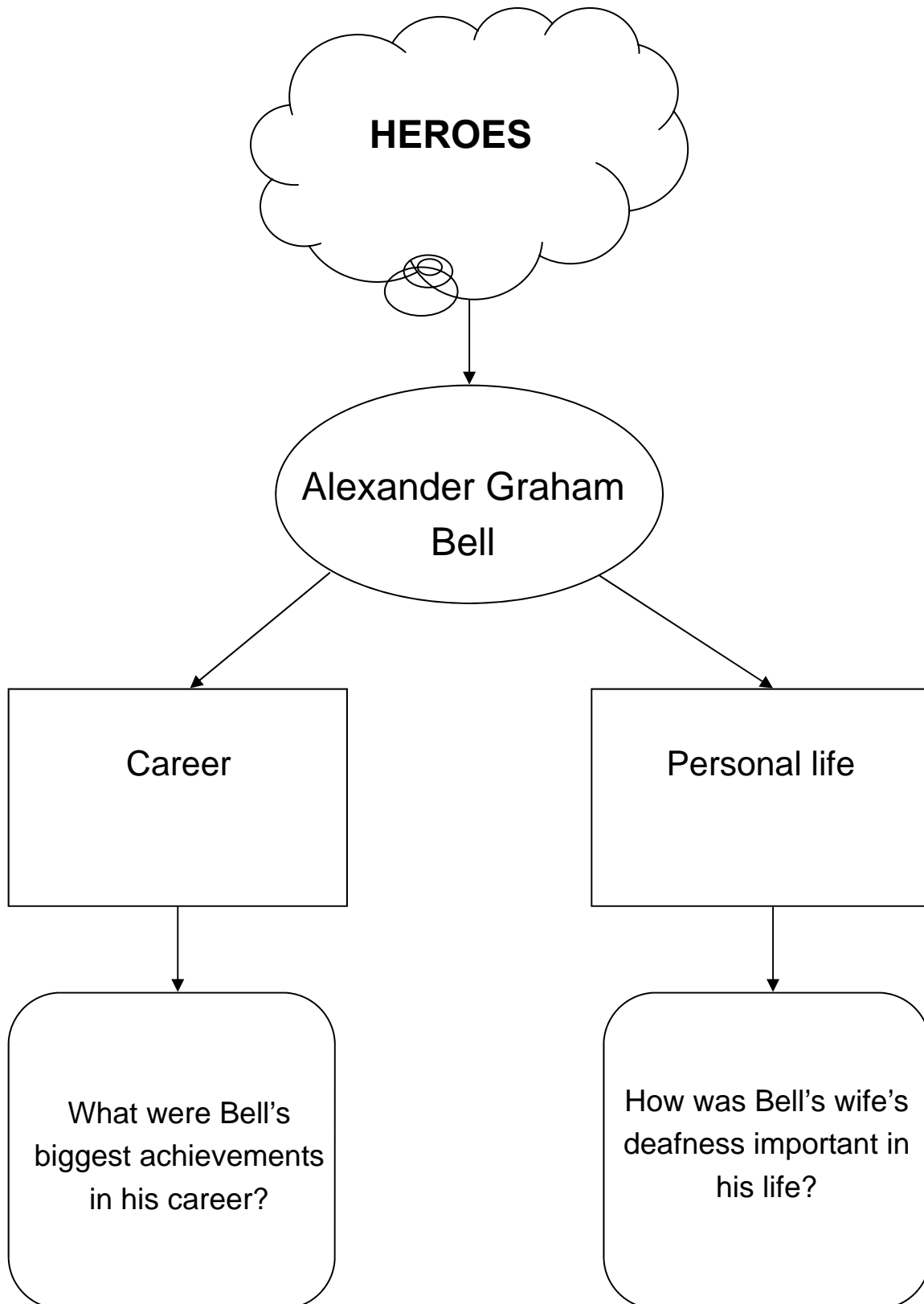


Keyword-category Concept Map

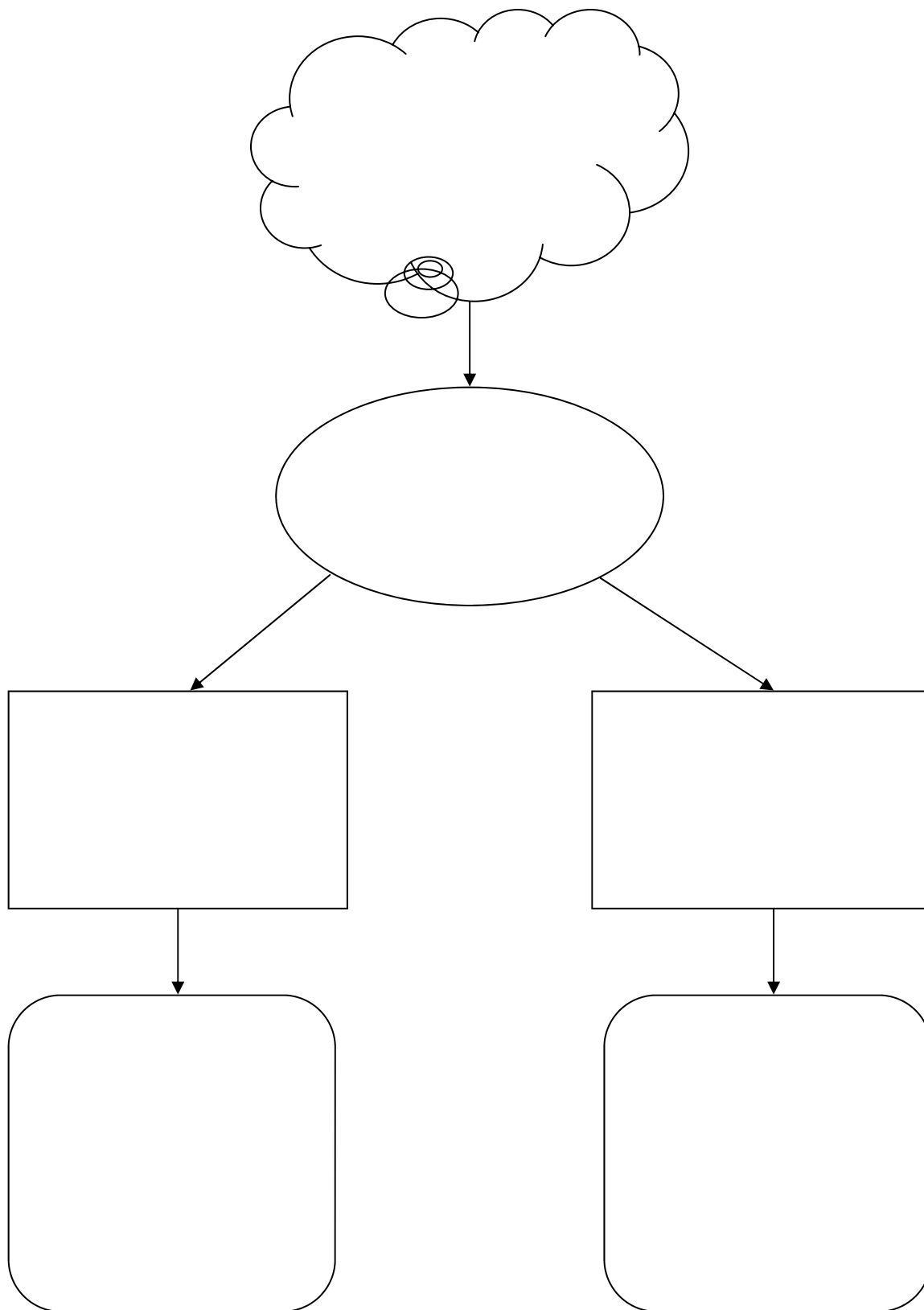
Write your research questions in the boxes at the bottom. Then fill in the keyword bubbles to find your search terms.



Question Focus Web Example



Question Focus Web



Identifying Good and Bad Keywords

Look at the keywords below and judge whether you think they will get you good results or not. Circle “good” or “bad” when you have made your decision and write in the box next to it why you made the choice you did.

1. “what Canadian invented basketball” good bad

2. +Canadian +basketball good bad

3. +Canadian +basketball +invented good bad

4. +family ”Naomi Klein” good bad

5. “no logo” ”Naomi Klein” good bad

6. “names of books by Naomi Klein” good bad

7. “Michael Cera” +career good bad

8. “movies Michael Cera has been in” good bad

9. “Michael Cera” +movies good bad

Mind Map: What I Already Know

