# Collaborative Research that Works

by | Judith Snyder

## • Keep 'em Reading •

In an ideal collaborative learning environment, ideas bounce from one mind to another and new, collective thoughts evolve. Learning becomes a partnership that pushes individuals beyond their own capacity. This is how we want students to learn in groups, and how we want the librarian and classroom teachers to instruct—collaboration allows students to learn from best teaching practices and from peer interaction.

When I was a classroom teacher, I struggled to find cooperative projects to differentiate and foster higher level thinking skills, yet still allow success for novice researchers. So, as a librarian, I collaborated with classroom teachers to develop a unit that worked for our individual teaching styles and the unique needs of our students. In doing so, I discovered that as a librarian, I knew the curriculum very well, but the classroom teachers knew each student's instructional needs and how to help apply new skills in future assignments. When we worked as partners and supported each other, the students benefited. And when we implemented the unit and students worked together, they mastered research skills and clarified thoughts through an exchange of ideas.

The open-ended structure of this unit allows for modifications that adjust for students' instructional needs. The activities work best when taught collaboratively, but the project can be successful when the librarian must teach independently. I have tried to keep this exercise simple—a place to begin. Start small, with perhaps one or two teachers initially, and then modify and refine what works. Expand the skills each year and soon your teachers will be clamoring to participate in collaborative cooperative research.

## Collaborative Research Unit Overview

In this unit, students use nonfiction books, library reference materials, and online resources to research a country and create a graphic analysis of the information they find. Mini-lessons taught strategically throughout the unit process provide guided practice as students learn research skills. The classroom teacher, technology specialist, and/or librarian present the mini-lessons and act as facilitators. Students work in groups and rotate among computer research stations and print resources. Research and computer work can take place in the library, the computer lab, and the classroom over a time period of 2–4 weeks. Because library programs operate differently, this unit can easily be adapted to each school's situation.

**Materials:**

- A list of countries of your choosing (you will assign one country to each group of four students). Make sure your library has books and resources that address the cuisine, holidays, geography, arts, etc., of each country.
- Nonfiction books (put aforementioned books on food, holidays, travel, geography, history, sports, arts, etc., of each country) on tables
- Library reference materials
- Computers with internet access and a word processing program
- Individual Question and Research Note Cards for Research Days 1–4 (see page 6–8 for questions, example, and template)
- Graphic Organizers for Analysis and Presentation Days (see Resources on page 10 for a variety of examples)
- Description of mini-lessons (pages 4–5)
- Simplified Bibliography (page 9)

**Procedure:**

1. **Student Invitation Lesson.** Sharing the objectives for this research unit gives students a clear understanding of what they will be learning and why it's important. Curiosity and interest evolve with involvement in one or both of these introductory activities:
   - Create a slide show of people, places, arts, food, sport, and cultural events from different countries around the world. Add music and popcorn and you'll capture students' attention.
   - Spend 5–10 minutes modeling how to get information from pictures, and the importance of captions and bold face print in identifying key topics. Then, try a simple Book Look. Select at least ten books for each of the five countries to be studied. Place each country's books at a

   different table. Divide the class into five groups and assign their beginning table. Allow them to browse the books (perhaps students read to develop questions for research, or to identify things that appear to be different from the United States). Give students five to seven minutes to skim through the books on that table. After the allotted time, students rotate to the next set of books.

2. **Research.** Research begins after the initial student invitation lessons. Students receive individual questions, but they work together as a group. Ultimately, each country group answers sixteen questions about its assigned country. Divide the class into groups of four and assign each group a country. Then, instruct the "country groups" to sit together at a table with a collection of books about their assigned nation. (By dividing the research into four sets of four questions [see research questions on page 6], students focus on only one question at a time.) Assign each student in the group one of the questions.) Hand out copies of the Individual Question and Research Note Cards (see page 8) and move on to the Identifying Key Words Mini Lesson (10–15 minutes; see page 4). This first mini-lesson teaches the initial skills that will enable students to find answers to their questions. After the mini lesson, students use the remaining time to research. Alternating mini-lessons with research practice continues throughout the remaining research days (see pages 4–5 for a description of mini-lessons designed to support the research process further).
   Repeating the process four times (for questions A–D) reinforces research skills and cultivates independence. Students develop positive interactions as they work toward a common goal. Peer support deepens students' understanding of the concepts as students share the resources at the table as they work on their individual questions. Because everyone will have read all the questions, students often discover references for others in the group. Questions may vary in complexity, so if a group member finishes early, he or she assists others in the group (divide and conquer, cooperate and collaborate).

> **Book Looks** never fail to engage students—piles of books on a table snag even the reluctant reader, and the structured movement keeps active students attentive as they develop background knowledge.

3. **Analysis Groups.** When students have found the answers to their research uestions, they are ready to "jigsaw," or reassemble, into analysis groups. (All students responsible for answering Question A in one group, Question B students in another, etc.) Here they compare the information about the country they studied, display their findings in a graphic organizer, and discuss observations with the whole class. To keep these groups smaller, you may want to create two groups for each question.

## Jigsaw Groups

Dividing students into jigsaw groups fosters peer learning and cooperation. Students learn the subject matter in the country group and then "jigsaw" into analysis groups to examine information. For an overview and in depth description of the use of jigsaw groups, see: http://www.jigsaw.org/overview.htm.

4. **Assessment.** Since graphic organizers help students construct knowledge and develop visual/special intelligence, they provide excellent alternative types of assessment for this project. Other final projects can be added or substituted, but keep in mind the need to incorporate the higher order thinking skills found in these activities. Throughout the research process, instructors should assess students as they work, and add mini lessons (suggestions on pages 4–5) to support needed skills.

5. **Evaluation Information.** After sharing the analysis for the last Research Day, reconvene students into their country groups to evaluate what makes that country unique. Let groups share their findings and display results on a new graphic organizer.

## Extending the Project

Consider including these additional skills to extend this collaborative research project.
- Students creating their own questions
- Using an atlas
- Using databases
- Evaluating a source (book or internet)
- Creating a computer presentation
- Conducting an interview
- Writing a travel brochure
- Practicing technology skills
- Identifying prior knowledge
- Writing framed paragraphs

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# Mini-Lessons

## Identifying Keywords

Assign a permanent letter to each student in a group. Every group will have a student A, B, and C, and D. Distribute Question A to Student A, Question B to Student B, etc.

It's important for all students to hear all four questions that are to be answered that day, so read Question A aloud and ask the class to identify the one or two words that are the most important—the words that they will be researching. Have all Student As underline the agreed upon keywords on the question on their Individual Question and Research Notes Cards (see pages 6–7; blank template on page 8). Explain that there are often synonyms for their keywords that may be used in different sources' indices. Therefore, students will also need to identify synonyms and list them on their worksheet. Brainstorm these words as a whole class and create a list on a chart. (Students may find additional synonyms as they research.) Repeat this activity for each of the questions for Day 1 Research. Give students the remaining time to begin researching the books on their tables. Repeat this mini lesson when new questions are distributed for Research Days 2, 3, and 4.
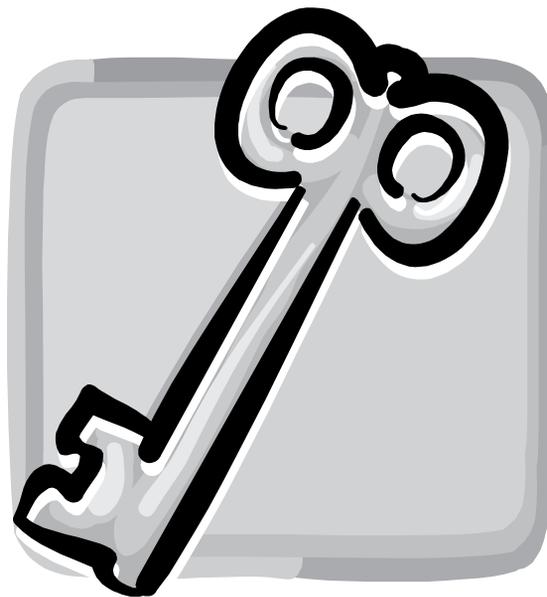
Schedule more time for this exercise on the first day than on subsequent research days. Because this keyword lesson is reinforced each time students receive a new question, most learners develop mastery quickly and require less time to finish.

## Using an Index

Project an image of index pages from two different books. Choose examples that include bold face, indenting, commas and dashes between numbers. Demonstrate how to use indexes to find the most relevant information. Allow remaining time for practicing the skill as they research.

## Analyzing Information and Display

Upon completion of research, all students with the same question reorganize into "analysis groups". Students choose a graphic organizer to display the differences and similarities among their countries. Two students from each group share this information orally. Repeat at the end of each research section.

# Mini-Lessons

### Using the Internet
Create a webpage with approved research links and/or databases most appropriate for novice researchers. Demonstrate how to access the information.

### Note Taking
Individual Question and Research Note Cards (see page 6–8) contain the question to be answered, a place to write synonyms for the keyword, and a place for notes. Teach your preferred note taking style and demonstrate techniques that eliminate word-for-word copying.

### Writing a Simplified Bibliography
Explain the purpose of bibliographies and where to locate needed information on the title page and verso. Students choose two books from their table and a URL used in research to fill in the Simplified Bibliography (see page 9). Each country group compiles a bibliography for the project.

### Optional Mini-Lesson: Question Development
When students develop their own questions, interest and ownership of research increases. So if time allows, let the class create their own questions. Provide a pile of sticky notes for each student to write questions as they browse through the books. One question per sticky-note makes it easier to organize the questions. At the end of the time, create category topics on chart paper (i.e.- food, homes, clothing, etc.) and ask students to place their questions in the proper category. Choose 16 questions that allow for multiple answers, and substitute your students' questions on the Individual Question and Research Note Cards electronic form on pages 6–8.

# Individual Question and Research Notecards

## Research Questions

Use the following research questions (or substitute your students' questions) to create notecards. An example notecard can be found on page 7, and a blank, reproducible template can be found on page 8. Make copies, fill in the cards with the questions, and distribute them to the appropriate students who were assigned that particular question.

## Research Day 1 Questions

In this country…
A.    What are the traditional foods? How does food affect the culture?
B.    What are the different types of urban homes? Describe how they look.
C.    What places should tourists see and why?
D.    What cultural activities [art, music, dance, theater] are important in this country?

## Research Day 2 Questions

In this country…
A.    What are schools like? Describe a typical day.
B.    Describe an important festival. When and why is it celebrated?
C.    What sports do people play in this country? Explain them.
D.    What are important industries for this country? Tell what the people do in these work places.

## Research Day 3 Questions

In this country…
A.    Describe the geography and how it was created. What does the land look like in the countryside? (i.e.- mountains, forests, lakes, green vegetation)
B.    What do rural homes look like? What materials are used in construction? (Are they apartments or single homes with lots of land? Are they big or little?)
C.    How does the climate affect the people in this country?
D.    What types of work do the people do in rural areas?

## Research Day 4 Questions

In this country…
A.    Is there a major religion in this country? What is it? Tell something about it.
B.    What is the cultural dress for the people in this country? Describe what it looks like and when these people might wear it. (You may need to get your information from pictures.) Do they wear these clothes all the time?
C.    What is family life like? What do they do together?
D.    What are some important words or phrases tourists might need to know?

# Sample Individual Question and Research Notecards

**Individual Question and Research Note Cards:**

Day: _Research Day 1_ _____

Country: _____

Question:

_A. What are the traditional foods?  How does food affect the culture?_ _____

_____

Synonyms for Keyword:

_____          _____

_____          _____

_____          _____

Answers: (Complete sentences not necessary)

# Reproducible Template: Individual Question and Research Notecards

**Individual Question and Research Note Cards:**

Day: _____

Country: _____

Question:

_____

_____

Synonyms for Keyword:

_____          _____

_____          _____

_____          _____

Answers: (Complete sentences not necessary)

# Simplified Bibliography

Author: _____

Title: _____

Publisher: _____

Copyright date: _____

Author: _____

Title: _____

Publisher: _____

Copyright date: _____

Author: _____

Title: _____

Publisher: _____

Copyright date: _____

Website Name/Title: _____

URL: _____

Website Name/Title: _____

URL: _____

Website Name/Title: _____

URL: _____

# Resources

### Books

Burke, Kathleen. How to Assess Authentic Learning. Corwin Press. October 7, 2009.

Burke, Jim. Tools for Thought: Graphic Organizers for Your Classroom. Heinemann 2002.

Brookhart, Susan. Exploring Formative Assessment. Association for Supervision & Curriculum Development. 2009.

Hamilton, Boni. IT's Elementary! Integrating Technology in the Primary Grades. ISTE. 2007.

Hyerle, David. Visual Tools. Association for Supervision & Curriculum Development. 1996.

Parks, Sandra, Black, Howard. Organizing Thinking. Critical Thinking Press & Software. 1990.

### Web Resources for Online Graphic Organizers

http://www.eduplace.com/graphicorganizer/

http://www.greece.k12.ny.us/instruction/ELA/6-12/tools/index.htm

http://jimmiescollage.com/2009/08/a-homeschoolers-guide-to-graphic-organizers/

http://www.edselect.com/Docs/Graphicorganizers.pdf