THE R.A.N. STRATEGY: READING AND ANALYZING NONFICTION

The strategy for reading and analyzing nonfiction, or the R.A.N. strategy, is an excellent tool for students to use as writers when researching a specific topic for either class or individual projects. Researchers collect information and organize their ideas on a chart to make their thinking visible. The chart is used throughout a research project to record and categorize information on the go. The R.A.N. helps writers in two critical ways: first, to be aware of and critically examine their thinking, and second, to organize their research information in preparation for writing.

The R.A.N. strategy is a modification of the KWL strategy—What We Know, What We Want to Know, What We Learned (Ogle, 1986)—and expands KWL into a critical research process. The comparison between the two strategies can be seen below.

KWL STRATEGY		
What We Know	**What We Want to Know**	**What We Learned**
Children state information they know or think they know about the topic.	Children come up with questions they want answered.	Children research to answer specific questions raised.

R.A.N. STRATEGY				
What we think we know	**Yes, we were right, or Confirmed information**	**We don't think this anymore, or Misconceptions**	**New learning, or New facts**	**Wonderings**
Children state information they believe to be correct about the topic (prior knowledge).	Children read to confirm prior knowledge.	Children read to discard incorrect prior knowledge.	Children read to locate additional information not part of prior knowledge.	Children raise questions based on the new information gathered.

Comparison of the KWL and R.A.N. Strategies

OVERVIEW OF THE R.A.N. CHART

A R.A.N. chart—a large board for working with a whole class or a folder or simple graphic organizer for an individual—is divided into columns labeled with thinking-analysis headings. Facts about the topic are recorded under the appropriate headings—first, under "What we think we know," and later, after researching, under any one of the other headings.

	1	2	3	4	5
Headings → Categories ↓	What we think we know	Yes, we were right or Confirmed information	We don't think this anymore or Misconceptions	New learning	Wonderings
What bears look like	Children state information they think to be correct about bears (prior knowledge)	Children read to confirm prior knowledge about bears	Children read to discard incorrect prior knowledge about bears	Children read to locate additional information about bears	Children raise questions about bears based on the new information gathered
Where bears live					
What bears eat					
Other great facts					

R.A.N. chart for a class report on bears

1. "What we think we know" is similar to the KWL first step. This heading acknowledges that students come to school with background knowledge and that this background knowledge may not be correct.
2. "Yes, we were right" or "Confirmed information" gives students an opportunity to confirm prior knowledge as they research a given topic. It gives them a sense of success as they confirm facts that they already know.
3. "We don't think this anymore" or "Misconceptions" helps students understand that when researching, the information they locate may be different from or even contradict their prior knowledge. It encourages students to rethink what they previously thought to be correct.
4. "New learning" or "New facts" encourages students to think about information that is new learning, and to gather new literal understandings. This helps deepen their content understandings about a topic.
5. "Wonderings" is the same as the KWL heading "What We Want to Know." In the R.A.N. strategy, this heading is applied after students have researched and not before. This is because researchers raise questions during and after they explore a topic, not just before. It is difficult for students to raise questions about a topic they have little prior knowledge about.

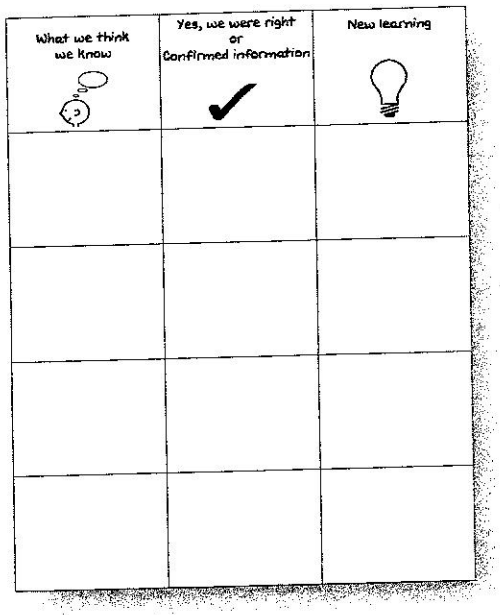
In addition to the thinking-analysis headings, the R.A.N. chart may specify categories of information. Content categories are derived from the specific content you want to cover as well as your research sources—you may want to identify subtopics for which you have the most information available. These categories help writers sift through and organize their research notes in preparation for writing. In this sample, a class R.A.N. chart for a report about bears, the content categories are "What bears look like," "Where bears live," "What bears eat," and "Other great facts." Illustrations help young researchers identify and remember both headings and categories.

CONSTRUCTING A CLASS R.A.N. CHART

For class projects, you will need to construct a large, sturdy R.A.N. chart as the centerpiece of your whole-group instruction. Begin with a basic chart containing the appropriate thinking-analysis headings. (See below for suggestions for tailoring these to beginning researchers.) Laminating the chart will enable you to use it again for future explorations. If you are using sticky notes for students to record their ideas, the R.A.N. chart may be displayed anywhere. If you use index cards or paper for recording information, you'll need to mount the R.A.N. chart on a bulletin board and affix the ideas with tacks. Information will be re-categorized during instruction, so it is important to use sticky notes or other means of moving information around the board easily.

The next step is to determine the categories of information you want students to look for as they research. (On the R.A.N. chart for the bear report, these were appearance, habitat, food, and other facts.) Three or four subtopics are enough

for beginning writers. These categories will become the subtopics or internal headings of the written report. Be sure that the resources in your research stations provide adequate information on all of your subtopics. Include a category like "Other great facts" to give writers a chance to share something that excites them but may not fit elsewhere.



Introducing the R.A.N. strategy

When first introducing the R.A.N. strategy or when using it with younger children, it is advisable to create your R.A.N. chart using only headings 1, 2, and 4 ("What we think we know," "Yes, we were right," and "New learning"). This way, students won't become overwhelmed on their first attempt at working with this new research strategy. As students become more comfortable working with the R.A.N. strategy, headings 3 and 5 can be introduced. For beginning researchers, you may also want to use the R.A.N. chart without the categories. This works well for a relatively narrow, focused topic and eliminates the challenge of categorizing information under the correct subtopics.

IMPLEMENTING THE CLASS R.A.N. CHART

Working collaboratively with children on a class R.A.N. chart is an excellent way to model and guide young researchers' thinking. The chart helps students keep track of the facts they are gathering while still giving them the freedom to discover information on their own. It also shows writers how to begin organizing the various sections of their writing.

Introduce the R.A.N. Chart

Provide an overview of the chart by explaining its purpose and how each of the thinking-analysis headings supports research.

We're going to put some of our most important research information on this chart as we study for the next couple of weeks. [Point to the first heading.] *This first heading says "What we think we know." I have put a picture of a brain here to remind me that this is where we will put information that is already in our brains before we start researching. We're going to write down what we already know about bears on sticky notes and put them on this chart under "What we think we know."*

After we've researched for a while, we'll look at our sticky notes and decide if we found facts to prove that [point to the second heading] *"Yes, we were right" or that maybe what we thought before isn't true, so* [point to the third heading] *"We don't think this anymore."*

Continue this process with the remaining headings on your class R.A.N. chart.

Then explain the categories and the illustrations you have chosen for your topic. For example, an introduction to the categories for the bear report above might begin this way: *One thing I hope we find out when we research is what bears look like. That's why I included this category: "What bears look like." You can see I have drawn a pair of eyes next to this category to remind me that it's about what bears look like, or their appearance. If I think I know something* [point to the "What we think we know" heading] *about what bears look like* [point to the "What bears look like" category], *this is where I'll put it.* [Indicate the square under "What we think we know" and beside "What bears look like."]

Continue explaining the remaining categories. After a few categories, children should be able to chime in or show you where you would put your researched facts.

What We Think We Know

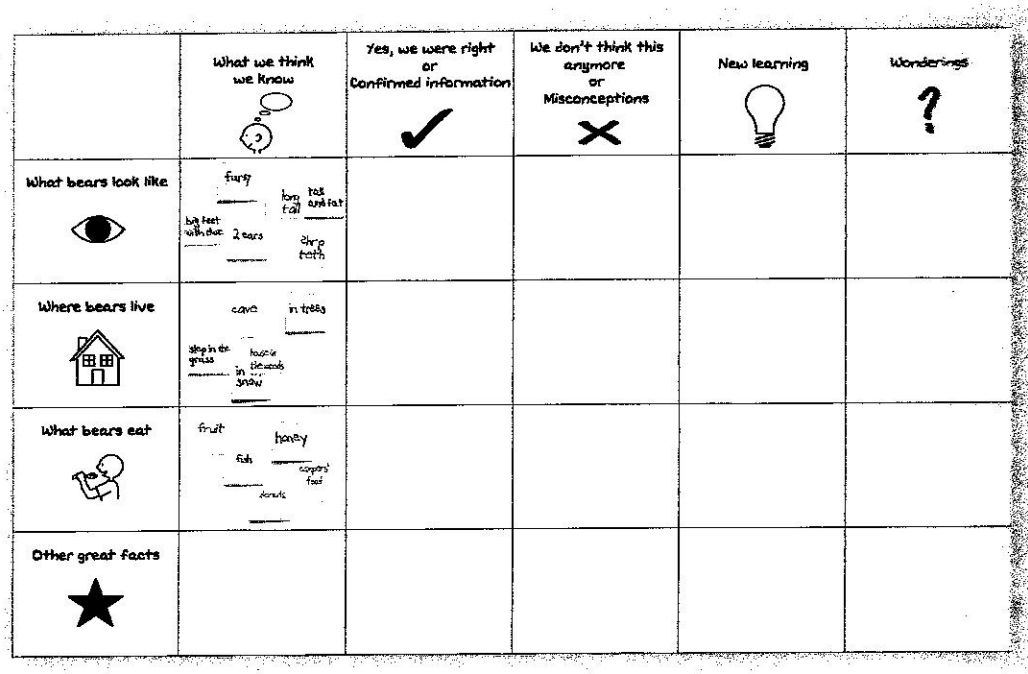
Begin research by asking children to share their prior knowledge about the topic. Introduce the topic you will explore together and model the thinking you expect children to engage in.

The first thing we're going to do is share all the information we already have about bears. [Point to the "What we think we know" column.] *Well, one thing I think I know is that bears eat fish. I remember seeing a picture once of a bear standing in a stream reaching for a leaping fish. I'm going to write* fish *on my sticky note and put it in the "What we think we know" column, next to "What bears eat."*

Then ask writers to tell you what they think they know about the selected topic. Accept all students' background knowledge, whether it is accurate or not. This is their prior thinking. Having them share is a wonderful way to assess their content knowledge on a particular topic and will help you extend their content understandings.

Chart students' responses using sticky notes, slips of paper, or index cards. Alternatively, allow each student to write his or her own fact onto a card or sticky note and then post it on the chart in the "What we think we know" column next to the appropriate category. This will ensure that all students have their thinking recorded. However, limit each child's information to what they consider to be their best or "Wow!" fact. This will help you avoid filling the class R.A.N. chart with too much information to process.

If you find that your students possess little background knowledge on a topic, introduce the topic through a read-aloud, a shared reading, or a field trip before asking again for "What we think we know." This will give all students some accurate prior knowledge to contribute and will give them a sense of success when they confirm their prior thinking through research.



Children record prior knowledge on sticky notes under "What we think we know."

If students come up with similar background knowledge, place the sticky notes or cards on top of each other, or write the initials or names of the students who came up with the same information on one note and discard the others. This will signify that more than one person was thinking the same idea.

Assist students who have trouble putting their information in the correct category by involving the group in a think-aloud: *Harvey's note says "Bears eat berries." Hmmm . . . Where would I put that? Here, next to "What bears look like"? No; "Bears eat berries" doesn't talk about what bears look like. Does it go next to "Where bears live" or "What bears eat"?*

Use the R.A.N. Chart to Record Researched Information

Continue working with the R.A.N. chart throughout the research project, adding and moving sticky notes to reflect students' growing knowledge. Make time for writers to research the chosen topic. (See the section on research stations, page xiii, for ways to manage this process.) Come together as a group after each research session to share a "best fact" using the R.A.N. chart. Each heading on the chart prompts children to examine and evaluate their information. Following are tips for engaging their thinking and making it visible on the R.A.N. chart.

Yes, We Were Right or Confirmed Information

As students research, encourage them to look for facts to confirm the prior knowledge that has been posted on the class R.A.N. chart. Use think-aloud language to demonstrate this process: *I wrote in my research notebook under what I think I know that "Bears eat fish" and "All bears climb trees." Well, I did some research and I found that bears do eat fish. So, I put a check mark next to that fact in my notebook. This means "Yes, I was right." I didn't find out that all bears climb trees, so I can't put a check mark next to this piece of information yet.* On the R.A.N. chart, locate the appropriate sticky note and move it from "What we think we know" to "Yes, we were right" to show children that a fact has been confirmed.

To convey the importance of factual accuracy, ensure that each researcher is responsible for confirming her or his own prior knowledge. If other students locate information that confirms another researcher's prior thinking, encourage them to share this information so that the sticky note can be moved across to the "Yes, we were right" column.

When moving facts from "What we think we know" to "Yes, we were right," encourage students to provide evidence for their information by citing their sources. For example: *Dwain, you wrote on your sticky note in the "Other great facts" category that bears like to sleep in the winter. Now you want to move it to "Yes, we were right." How do you know that it's right? Oh, you read it in the book about bears at the books and magazines station! That's great, Dwain. Good writers always make sure their information is accurate.*

If students are unable to confirm their prior thinking and your class R.A.N. chart still has a lot of facts in the "What we think we know" column, you may need to guide researchers toward specific sources or look for additional resources that will help them achieve this goal.

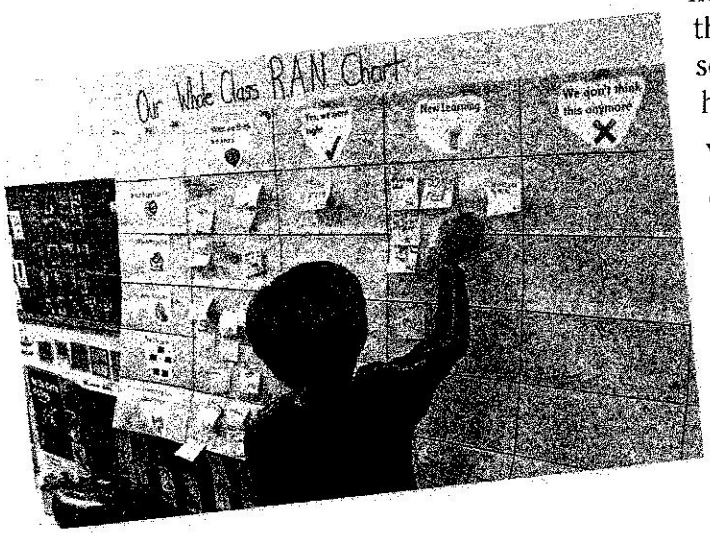
For more advanced learners, have them write the source from which they were able to confirm the information on the back of the sticky note or card. This is a valuable way to begin teaching students how to cite sources as they research.

We Don't Think This Anymore or Misconceptions

In addition to finding information to confirm their prior knowledge, encourage students to look for information that contradicts any facts they thought they knew: *I was looking at a website trying to confirm my information that all bears climb trees, and I found out something I didn't know. Bears can climb trees, sometimes to get away from danger, but some bears—like grizzlies and polar bears—are really too big to climb, so they run away instead. I don't think all bears climb trees anymore, so I'll move my sticky note to the "I don't think this anymore" column, but I'll keep it in the row next to "Other great facts."*

If students identify misconceptions posted on the R.A.N. chart, encourage them to share information with the "owner" of the relevant fact so that the sticky note can be discussed during class time and moved to the "We don't think this anymore" column.

Be alert to any misconceptions you see in the "What we think we know" column, and try to provide students with adequate resources to correct these misconceptions. If important sources are not easily accessible to young researchers—they require too much reading or are too sophisticated—use your read-aloud time to highlight specific information.



You may also encourage older or more advanced learners to correct misconceptions. Have them cite the source of the correct information on the back of the sticky note or index card containing the original information.

With younger learners, some misconceptions should be left alone even if they are incorrect. If, for example, you are studying deer and the children come up with "Rudolph flies" under "What we think we know," do not deem this a misconception. We need to respect the fantasies that young students bring to certain topics. To the young learner, this piece of information is a fact and should be treated as nonfiction.

New Learning or New Facts

Although confirming and refuting prior knowledge is an important research skill, locating new information is at the heart of research. New information builds new learning and broadens students' knowledge base. Give students ample opportunities to research together to locate and record new facts. Refer to the section on research stations (page 285) to assist students with this task.

Fan the flames of children's excitement at learning new things. Encourage researchers' amazement, curiosity, and engagement. *Wow! I just found out about sun bears. They are the smallest bears in the world, but they are still*

almost twice as big as one of you kids! And they are kind of a mystery because no one has studied them much. This is my favorite bear so far. I'm going to put my sketch of a sun bear and its weight on the R.A.N. chart next to "What bears look like" because it tells what the sun bear looks like. What interesting facts have you found?

When the class comes together to share new information on the R.A.N. chart, continue to limit students' contributions to what they consider to be their best or "Wow!" facts to keep the volume of information on the chart manageable. This will also ensure that there is not too much information for young learners to process.

If your more advanced learners are recording the sources for their information, make sure that their source information is complete. At the conclusion of the unit, you can demonstrate how to use this information to create a bibliography or reference page.

Wonderings

One way to assure learners' engagement with information and ideas is to teach them to wonder about them. Learning doesn't stop with gathering, recording, and evaluating facts. It is fueled by taking the next step toward further research: raising questions, or "wonderings," about the facts students researched.

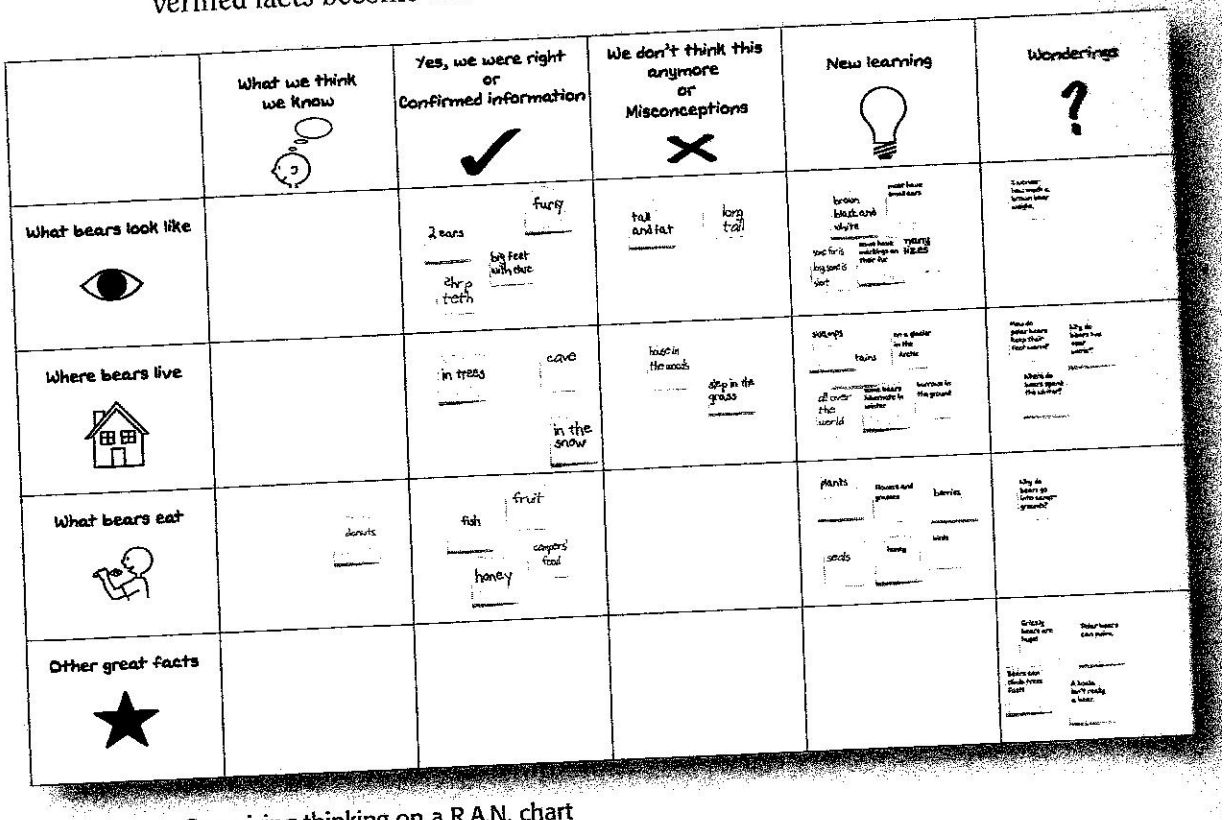
	Wonderings ?
What bears look like 	I wonder what color sun bears are. How long is a sun bear's fur?
Where bears live 	Where do sun bears live? In trees? In caves? I wonder where sun bears sleep.
What bears eat 	I wonder what sun bears eat.
Other great facts 	I wonder why no one has studied sun bears. How do scientists study bears?

Wonderings about sun bears.

Demonstrate how to raise wonderings by posing questions that use the standard "WH" question words—*who, what, when, where, why,* and *how*—and prompting children to do the same. Select a fact, confirmed or new, from your R.A.N. chart and use a think-aloud to model wondering or questioning with the question words. Use this opportunity to reinforce categorizing the questions by placing your questions next to the relevant subtopics on your R.A.N. chart. For example: *I'll look at my sticky note on sun bears. All I know is how much they weigh. Here are some other things I wonder about.*

Use students' wonderings to stimulate further research. Have researchers find answers to their wonderings and chart these answers under the heading "New learning." Also, encourage students to look at the wonderings raised by other students to see if they can find the answers.

Once the research is done, any information remaining under the heading "What we think we know" that has not been confirmed or deemed a misconception can be moved across to the "Wonderings" column. This helps students understand that not all of their prior knowledge can be verified and that unverified facts become unanswered wonderings.



Organizing thinking on a R.A.N. chart

IMPLEMENTING INDIVIDUAL R.A.N. CHARTS

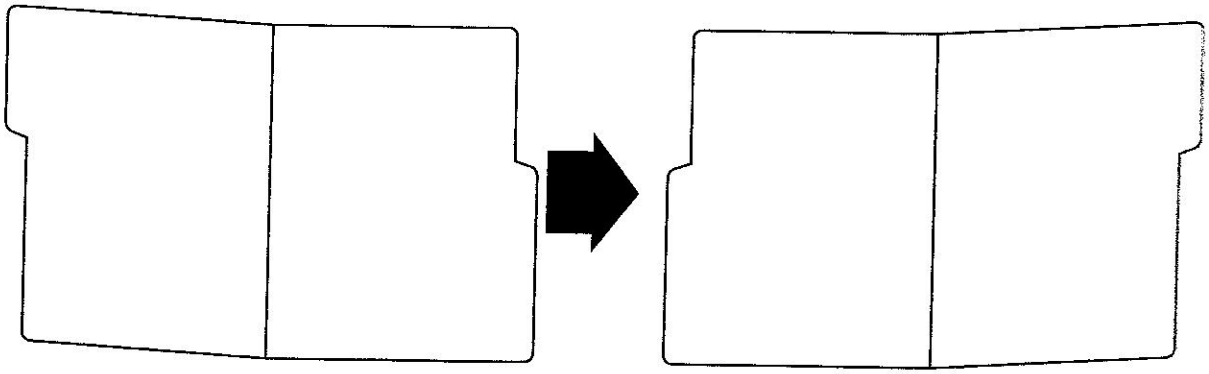
After regular use of the class R.A.N. chart, first- and second-grade students may become familiar enough with the thinking to use a personal version of the R.A.N. chart to organize their notes, either in conjunction with or instead of their research notebooks or folders. Use of an individual R.A.N. chart can go hand in hand with the class R.A.N. chart. That is, individuals can record prior knowledge in their R.A.N. chart as the class is doing so. They can confirm and collect new facts on their own and bring their results to the class discussion.

Individual R.A.N. charts can be constructed in many ways. One option creates a sturdy folder that can store and organize sticky notes and can be reused again and again. It is advisable to laminate the file folders before you put them together. This will ensure that the R.A.N. folder will last for the entire school year.

If you do not have access to file folders, you can use paper or card stock as an alternative.

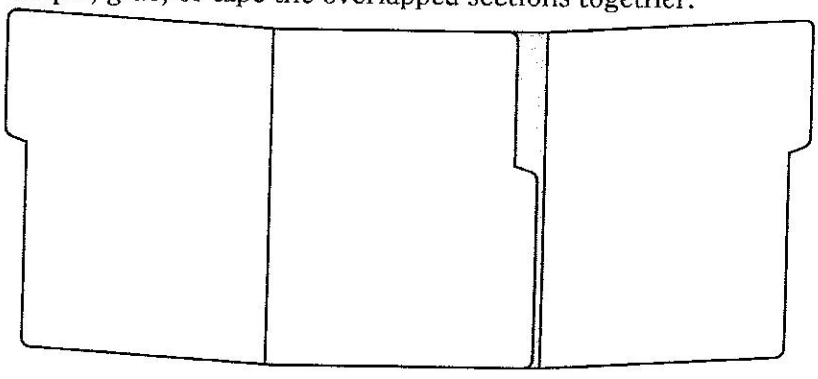
File-Folder R.A.N. Chart

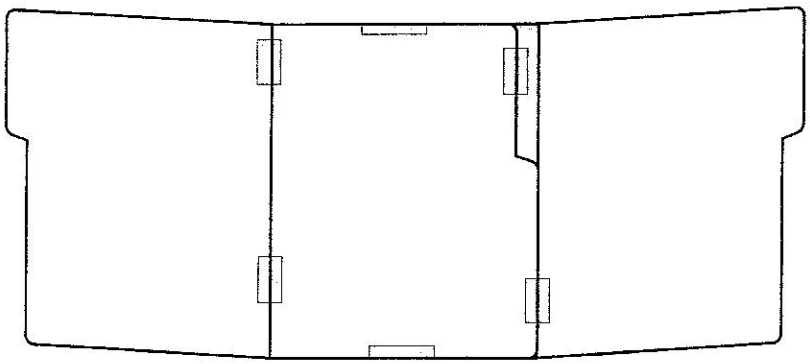
Step 1: Start with two file folders. Place the left half of folder 2 on top of the right half of folder 1.



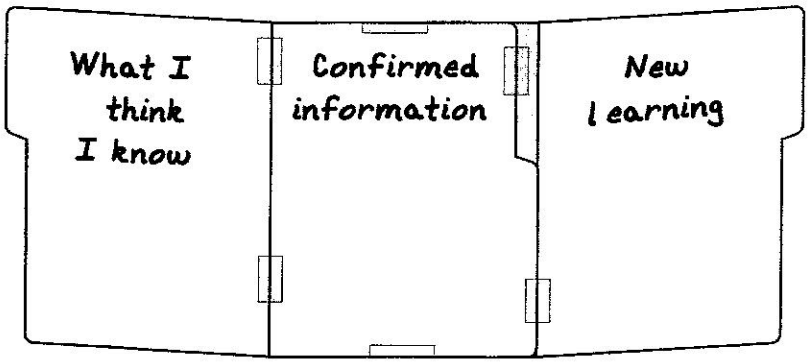
Folder 1 Folder 2

Step 2: Staple, glue, or tape the overlapped sections together.

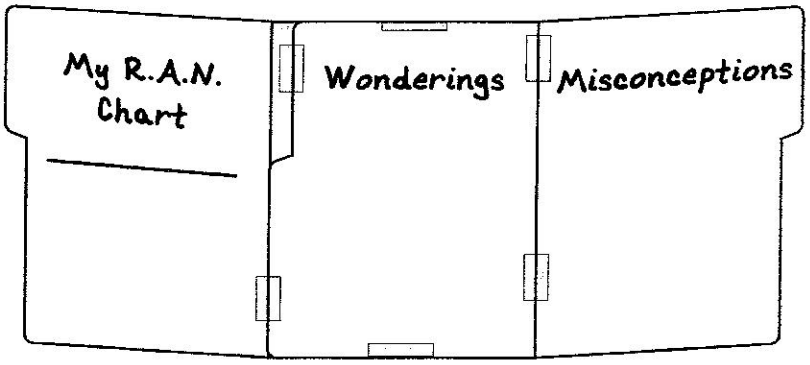




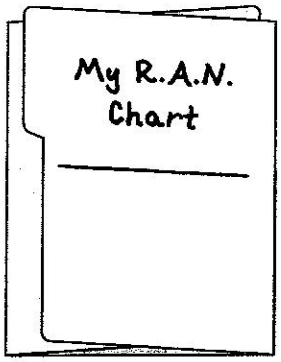
Step 3: Label the three sections at the top: "What I think I know," "Confirmed information," and "New learning."



Step 4: Turn the joined folders over and label the three sections. Make the left-hand panel a cover page, "My R.A.N. Chart," with a space for the student's name. Write the headings "Wonderings" and "Misconceptions" on the middle and right-hand panels.



Step 5: Turn to the first side again. Fold "What I think I know" over "Confirmed information." Then fold the cover panel to the front.



Simplified R.A.N. Organizer

Beginning writers may struggle using the R.A.N. folders as shown above. One simplified method is to use an organizer with just one or two headings: "What I think I know" and "New facts I learned." Look for a template on the *Resources* CD-ROM.

If you feel that personal R.A.N. charts are too complex for your students to navigate, you can instead provide them with research notebooks to record their information. A research notebook is simply a collection of blank pages with a cover.

More R.A.N. Resources

For further information on using the R.A.N. strategy, see the following resources.

Hoyt, Linda, and Tony Stead. 2011. *Nonfiction Writing: Intentional, Connected, and Engaging* DVD. Portsmouth, NH: Heinemann.

Stead, Tony. 2009. *Good Choice! Supporting Independent Reading and Response.* Portland, ME: Stenhouse Publishers.

Stead, Tony. 2006. *Reality Checks: Teaching Reading Comprehension with Nonfiction,* Chapter 2. Portland, ME: Stenhouse Publishers.