Lesson Model for Question Answering

QAR (Question-Answer Relationships)

According to the National Reading Panel (2000), teaching students strategies for answering questions is an important part of comprehension instruction. QAR is a research-based method and language framework developed by Taffy Raphael (1986) for enhancing students' ability to talk about and answer comprehension questions. Applicable to both narrative and informational texts, QAR helps students understand that answers come from one of two main sources of information: In the Text and In My Head. These sources are further divided into four QAR categories: Right There, Think and Search, On My Own, and Author and Me. This language of QAR is introduced through analyzing the differences between questions with answer sources in the text and those with answer sources coming from students' own background knowledge or experiences (Raphael and Au 2005).

In this sample lesson model, sample text is used to represent a selection at students' independent reading level. The same model can be adapted and used to enhance comprehension instruction linked to informational or narrative text in any commercial reading or language arts program—as long as the text is at the appropriate level.
### Question-Answer Relationships (QAR)

<table>
<thead>
<tr>
<th>IN THE TEXT</th>
<th>IN MY HEAD</th>
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<tr>
<td><strong>Right There</strong>&lt;br&gt;The answer to the question is &quot;right there&quot; in one sentence; the question and answer have the same wording.</td>
<td><strong>On My Own</strong>&lt;br&gt;The answer to the question comes entirely from students' world knowledge.</td>
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<tr>
<td><strong>Think and Search</strong>&lt;br&gt;The answer to the question requires searching across the text; the question and answer have different wordings.</td>
<td><strong>Author and Me</strong>&lt;br&gt;The answer to the question comes from understanding the text in conjunction with students' world knowledge.</td>
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*Based on Raphael, 1982, 1986.*

## Introduce QAR

Display a Question-Answer Relationships (QAR) teaching chart, such as the example shown above. Cover the chart, except for the title and the first row. Explain to students that they can use QAR, or Question-Answer Relationships, whenever they need to answer questions about what they are reading. Point out that the QAR strategy for answering questions has its own language. Then point to the headings In the Text and In My Head. Tell students that there are two main places to find the answer to a question. Explain that one place to find an answer is in what they are reading, or In the Text. The other place to find an answer is from what they already know or have experienced, or In My Head.

Using an overhead projector, display a transparency of the first page of “Albert Einstein Asks a Question.” Read aloud the first paragraph. Then ask: *When Einstein was sick, what did his father give him?* (a compass) Ask: *How did you know the answer to this question?* (Possible response: *It was in what I read, or In the Text.*) Ask: *Why would you give a gift to someone who was sick?* (Possible response: *To make the person feel better.*) Ask: *How did you know the answer to this question?* (Possible response: *It came from my experience, or In My Head.*) Tell students that they have just uncovered the two main places to look for answers to questions: In the Text or In My Head.
Teach/Model

When students have a clear picture of the differences between the two main QAR categories, In the Text and In My Head, present the subcategories. First introduce In the Text QARs: Right There and Think and Search. Then introduce In My Head QARs: On My Own and Author and Me.

In the Text QARs

Continue displaying the transparency of the first page of "Albert Einstein Asks a Question" and the Question-Answer Relationships (QAR) teaching chart. Uncover the left side of the teaching chart, revealing the two categories of In the Text QARs. Explain to students that there are two different types of In the Text QARs, Right There and Think and Search.

Read aloud the first two paragraphs of the sample text. Then print the following pair of questions on the board: What did Einstein tell young people who wanted to become scientists? What topics did Albert like to think about? Tell students that you are going to model how to use QAR to find the answers to these In the Text questions.

Ask the first question: What did Einstein tell young people who wanted to become scientists? Say: The answer to this question is in the text. First, I'm going to look for words in the text that match the words in the question. Circle the words tell young people and scientists. Say: Now I'm going to scan the same sentence these words appear in to see if I can find the answer. Circle the words keep asking questions. Say: This is the answer to the question. Einstein told young people who wanted to be scientists to keep asking questions. On the board, print the answer below the question. Say: This is a Right There QAR. The words from the question and words that answer the question are right there, all in one sentence. The answer is easy to find. Below the answer, print the QAR, Right There.
Now ask the second question: What topics did Albert think about a lot? Say: The answer to this question is also in the text, but I may have to look a little harder. First, I’m going to look for words in the text that match the words in the question. In the second paragraph, the word thought is repeated four times. Circle the word thought each time it appears. Say: Now I’m going to reread the four sentences. Maybe I’ll find the topics that Albert thought about. Yes, here they are. Circle the words space and time, energy, atoms, and light. Say: The answer is Albert thought about space and time, energy, atoms, and light. On the board, print the answer below the question. Say: This is a Think and Search QAR. To answer this question I had to search for information in different parts of the text, think about the information I found, and then combine the information into one answer. The answer was in the text but not all in one place. I had to think and search. Below the answer, print the QAR, Think and Search.

Have students use the pair of questions and answers to compare the two categories of In the Text QARs. Ask: How were the two questions the same? (They were both In the Text answers.) Ask: How were they different? (The first answer was found in one place, in one sentence. The second answer was found in more than one place, in four different sentences of the paragraph.)

In My Head QARs

Continue displaying the transparency of the first page of “Albert Einstein Asks a Question” and the Question-Answer Relationships (QAR) teaching chart. Now uncover the rest of the teaching chart, revealing the two categories of In My Head QARs. Explain to students that there are also two different types of In My Head QARs, On My Own and Author and Me.

If necessary, ask students to reread silently the first two paragraphs of the sample text. Then print the following pair of questions on the board: Have you ever misjudged someone’s ability? Tell about it. How did the gift of the compass change Einstein’s
**QUESTION: Have you ever misjudged someone's ability?**
Tell about it.

**ANSWER:** One time I thought one of my students was slow, but she wasn't.

**QAR: On My Own**

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**QUESTION: How did the gift of the compass change Einstein's life?**

**ANSWER:** It caused him to ask a question and then search for its answer. It led him to become interested in science.

**QAR: Author and Me**

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Tell students that you are going to model how to use QAR to find the answers to these two In My Head questions.

Ask the first question: **Have you ever misjudged someone's ability?** Tell about it. Say: This is a question I can answer on my own without ever reading the text. The answer is found In My Head. It is completely based on what I remember from my own experience as a teacher. I remember one time I had a student who never seemed to be paying attention. Foolishly, I assumed she was slow. One day, I noticed that she was a talented artist. I had misjudged her. On the board, print the answer below the question. Say: So, I found the answer to this question in my head from my own experience, without needing any information from the text. I answered it on my own. Below the answer, print the QAR, On My Own.

Ask the second question: **How did the gift of the compass change Einstein's life?** Say: Well, I could answer the first question based entirely on my experience, but to answer this one I need to have read the text. First, I will look for words in the text that match the words in the question. In the first paragraph, circle the word compass. Say: Oh, right here it says that Einstein asked a question about the compass and then studied the subject and found out the answer. I remember that Einstein told young people who wanted to become scientists that they should keep asking questions. I know that looking for the answers to questions is part of the scientific method. So I'm going to combine what I already know about science with something the author says in the text to come up with the answer. I think the gift of the compass caused Einstein to ask a question and then search for its answer, which may have led him to become interested in science. On the board, print the answer below the question. Say: I couldn't have answered this question without reading the text, but, on the other hand, the author didn't provide all of the information I needed. My answer came from both the author and me. Below the answer, print the QAR, Author and Me.
**Guided Practice**

Print four questions, such as the ones shown on the following page, on a transparency of the QAR Worksheet. Using an overhead projector, display the transparency. Distribute copies of "Albert Einstein Asks a Question." Read aloud paragraphs 3 and 4 of the selection as students follow along.

1. **Read aloud the first question:** What is Einstein's most famous theory? Ask: Where do you think you will find the answer to this question, in the text or in your head? (in the text) Say: Yes, this sounds like information that will be in the text. Now you need to see if the answer is right there or if you need to think and search. Ask: Are there any words in the text that match the words in the question? (yes, famous theory) Have students circle the words on their copies of the selection. Ask: Can you find the answer to the question in the same sentence? (yes) Ask: So, what category of QAR is this? (Right There) On the worksheet, print the QAR in the corresponding space. Ask: What is the answer? (Einstein's most famous theory is the theory of relativity.) On the worksheet, print the answer in the corresponding space. Ask: How do you know that it was his most famous theory? (It says so in the text; the answer is right there in one sentence.) Say: The answer to this question is right there. You found all the information you needed in one sentence.

2. **Read aloud the second question:** What types of experiments do scientists do? Ask: Where do you think you will find the answer to this question, in the text or in your head? (in my head) Say: Yes, it sounds like information you may already know. Ask: Will you also need information from the text, or can you answer the question on your own? (on my own) Say: Yes, this is a question you can answer on your own without ever reading the text. Ask: So, what category of QAR is this? (On My Own) On the worksheet, print the QAR. Say: Yes, the answer to this question is based entirely on your own background knowledge. Ask: Now that you know this is
QAR (Question–Answer Relationships) Worksheet

Title: Albert Einstein Asks a Question

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>QAR</th>
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</thead>
<tbody>
<tr>
<td>1. What is Einstein’s most famous theory?</td>
<td>It's most famous theory is the theory of relativity.</td>
<td>Right There</td>
</tr>
<tr>
<td>2. What types of experiments do scientists do?</td>
<td>Scientists do experiments by mixing things in test tubes, then keeping track of what happens.</td>
<td>On My Own</td>
</tr>
<tr>
<td>3. Based on Einstein’s simple description of relativity, can you provide a similar example of relativity in your life?</td>
<td>When I play a video game, an hour seems like a minute. But when I have to stay after school, a minute seems like an hour.</td>
<td>Author and Me</td>
</tr>
<tr>
<td>4. How did Einstein travel around Princeton, New Jersey?</td>
<td>Einstein rode around on his bike.</td>
<td>Think and Search</td>
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</table>

an On My Own QAR, what answer would you give for this question? (Possible response: Scientists do experiments by mixing things in test tubes, then keeping track of what happens.) On the worksheet, record the answer.

Read aloud the third question: Based on Einstein’s simple description of relativity, can you provide a similar example of relativity in your life? Ask: Where do you think you will find the answer to this question, in the text or in your head? (Possible response: Both. I need an example from my life—that’s from me, but first I need to understand Einstein’s description of relativity—that’s from the author.) Ask: So, what category of QAR do you think this is? (Author and Me) On the worksheet, print the QAR. Say: Great, so you know that before you can connect your experiences you will need to find some information from the text. Ask: Are there any
words in the text that match the words in the question? (relativity) Have students circle the word on their copies of the selection. Say: So, now you can answer this question by seeing how the author explains Einstein's theory of relativity and then connecting it with your own experience. Ask: Who can answer this question? (Possible response: When I play a video game, an hour seems like a minute. But when I have to stay after school, a minute seems like an hour.) On the worksheet, record the answer. Say: Figuring out that this was an Author and Me QAR helped you know where to find the information you needed to answer the question—you needed some information from the text and some from your own experiences.

Read aloud the fourth question: How did Einstein travel around Princeton, New Jersey? Ask: Where do you think you will find the answer to this question, in the text or in your head? (in the text) Say: Now you need to see if the answer is right there or if you will need to think and search. Ask: Are there any words in the text that match the words in the question? (Princeton, New Jersey) Have students circle the words. Ask: Is the answer to the question in the same place? (no) Say: Right, to answer this question you have to look for information in different parts of the text, and then combine the information into one answer. Ask: So what category of QAR is this? (Think and Search) On the worksheet, print the QAR. Say: So now you know you will have to search across parts of the text to find the answer. When you think you've found the answer, circle the words. Ask: Who can answer this question? (Einstein rode around on his bike.) On the worksheet, record the answer. Ask: Where did you find the answer? (In the last sentence of the same paragraph it says that Einstein rode his bike.) Say: Figuring out that this was a Think and Search QAR helped you know where you needed to look to find the answer. To answer this question, you needed to combine information from different parts of the paragraph.
Collaborative Practice
Print the questions shown below on a copy of the QAR Worksheet. Then make copies of the worksheet and give them to students. Have pairs of students read paragraphs 5 and 6 of the selection. Ask students to work together to fill in the worksheet. Have them identify the QARs and the answers. Support students as needed. If necessary, help them locate text information to support their answers or articulate information from their experiences. When the worksheets are completed, call on pairs of students to share and explain their QARs and answers.

### QAR (Question-Answer Relationships) Worksheet

**Title:** Albert Einstein Asks a Question  
**Pages (Paragraphs):** 5 and 6

<table>
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<th>Question</th>
<th>Answer</th>
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<tr>
<td>What does it mean to be a genius?</td>
<td>Being a genius means you are way smarter than most people. Being a genius means you know a lot about a specific area or topic.</td>
<td>On My Own</td>
</tr>
<tr>
<td>Why did Einstein carry a notepad when he went for a walk?</td>
<td>To take notes on his thought experiments.</td>
<td>Right There</td>
</tr>
<tr>
<td>What did scientists discover about the area of Einstein's brain that has to do with mathematical thinking?</td>
<td>The area of Einstein's brain that has to do with mathematical thinking, is 15% wider than normal.</td>
<td>Think and Search</td>
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| Which explanation about Einstein's brain makes the most sense to you, and why? | - I think the mathematical part of Einstein's brain became larger because he used it so much—like exercise for the brain. The text shows that he did a lot of thinking.  
- I think Einstein was a math genius because that part of his brain was already larger. The text shows he was already a scientific thinker at age five. | Author and Me      |
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Albert Einstein was born in Ulm, Germany, in 1879. When he was five, he was sick in bed for a time. His father gave him a compass. "But why does the needle always point north?" asked the boy. "I don't know why," his dad confessed. Later, the young Einstein studied the subject and found out the answer. And he never stopped asking questions after that. "The most important thing is to keep asking questions," Einstein would always tell young people who wanted to become scientists.

Einstein did not do well in school. His teachers said he was slow to learn. "Albert will never amount to very much," said the principal. But Einstein's mind wasn't slow. It was really working much faster than the school principal could ever have imagined. He wanted to know how everything worked. He thought a lot about space and time. He thought a lot about energy. He thought about atoms and how all the energy inside them could explode outward. He thought about how light travels in waves. He wondered what would happen to a person if he or she traveled at the speed of light, and he guessed that person would never grow old.

Einstein's scientific theories forever changed our understanding of the world. He called his ideas "theories" or "thought experiments." He tested his experiments by making pictures in his mind and using his imagination like a laboratory. These thought experiments were so hard to explain that sometimes only a few people in the whole world could understand what Einstein was thinking. Einstein's most famous theory
is the theory of relativity. This is how he explained the theory of relativity: “If you sit with a pretty girl for an hour, it seems like only a minute. But if you sit on a hot stove for a minute, it seems like an hour. That's relativity.”

In 1933, Albert Einstein fled Germany and went to the United States. From then until his death in 1955, he taught at Princeton University in New Jersey. There, he enjoyed sailing, playing the violin, putting together jigsaw puzzles, and building houses from playing cards. Einstein rode his bicycle everywhere; he thought driving was way too complicated.

When Einstein wanted to think, he often went for a walk. He usually wore a long overcoat and a black hat on top of his wild white hair (which was always uncombed). He would bring a notepad with him, to take notes on his “thought experiments.” Sometimes he would get so lost in his own thoughts that he would get lost for real. Einstein would have to ask neighbors for directions home.

When this famous scientist died at the age of 76, he left his brain to science. Scientists wanted to see if it was different from the average human brain. Nothing unusual turned up—until quite recently. In June 1999, a research team from Canada announced that Einstein’s brain is fifteen percent wider than normal in one particular area. This area seems to have something to do with mathematical thinking. Maybe having a wider area caused Einstein to be a math genius. Maybe having a wider area is the result of Einstein’s being a math genius. Or maybe this larger area doesn’t mean either of these things. Hmmm. Maybe it has to do with asking all those questions.