# **Engineering**

#### **Organizing Student Research**

As part of your Engineering Journal, you should conduct some research about the Request for Proposal (RFP). You can first organize the information that you find within your Research Notes document. Then, you can summarize it within your Engineering Journal.

Remember, the RFP is organized as follows:

- **Sponsor Overview** This section gives background information about the individuals or organization that is issuing the Request for Proposals.
- Research Description This section outlines the problem to be solved.
- Overall Project Deliverables This section identifies what is needed when responding to the Request for Proposals.

After reading and identifying the key parts of the RFP, you will likely begin to have questions about the problem to be solved. You can then conduct research to answer those questions.

Each team will be responsible for creating a functional prototype that addresses the problem communicated in the RFP. In the Sample RFP for example, the Confluence Department of Transportation is looking for a prototype that can aid in the inspection of the underside of bridge structures. Therefore, it is important to find more information about the inspection of bridges. That is what your research would focus on if you were designing a prototype for that RFP.



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#### **Key Questions**

Whenever you are planning to conduct research, it is always a good idea to start with some guided questions. The RFP provides the topic for the research. In the sample RFP, it is the inspection of bridges. When you read an RFP, it will likely provide you with answers to most of the following questions:

Who?When?Why?Where?How?

When you know the answers to these questions, you can write that information into the **KWL chart** that is in the Research Notes document. It belongs in the **first column** because that is where you write what you already know.

In the **second column**, you will list what you want to know about the topic. These are your *lines of inquiry*, or in other words, the questions that will drive your research. If you are uncertain, ask your teacher to model how to generate lines of inquiry using the sample RFP. You might ask *why* bridges need to be inspected, or *how* bridges are inspected.

You should then generate some ideas for where to find those answers. That information will go in the **third column** of the KWL chart.

The **fourth column** is where you write the useful information that you find.

The second page of the Research Notes document reviews keyword searching. It has tips for finding the information that you want, and a way to keep track of what you have already searched for.

