See/Think/ Wonder+

Ron Ritchhart and David Perkins. "Making Thinking Visible," *Educational Leadership* 65, no. 5 (February 2008): 57-61.

adapted from an OCTELA 2016 “Rethinking Research” presentation by Angela Faulhaber, Ohio Writing Project

USING INQUIRY TO LEAD RESEARCH & MAKE THINKING VISIBLE

1. **Set Up:** Present an image dealing with a broad topic of study. Be sure the image is shown in a way that allows students to see it in as much detail possible. Give students 2 to 3 minutes to observe without any talking or discussion.

2. **See:** Ask students to write what they noticed in the first column of the chart. (You do not have to make a special handout for this. Simply, have them make a three-column chart in their notebooks.) They should only share what they could see and give no interpretations.

SEE	THINK	WONDER

3. **Think:** Ask students what they think is going on in the image and have them write it in the "Think" column. The goal is to build up layers of tentative interpretations. Respond to students' answers with requests for evidence such as: What do you see that makes you say that?
4. **Tell:** Now tell the students the story behind the image. The one used here accompanied a story about the Rio Olympics. Despite cleanup promises, waters at the site of the 2016 Summer Olympics are still contaminated by bacteria and viruses. The waters where Olympians will compete in swimming and boating events next summer in South America's first Games are rife with human sewage and present a serious health risk for athletes, as well as for visitors to the iconic beaches of Rio de Janeiro. An Associated Press investigation found dangerously high levels of viruses and bacteria from sewage in venues where athletes will compete in the 2016 Olympic and Paralympic water sports. In the first independent comprehensive testing for both viruses and bacteria at the Olympic sites, the AP conducted four rounds of tests starting in March. The results have alarmed international experts and dismayed competitors training in Rio, some of whom have already have fallen ill with fevers, vomiting and diarrhea.These ailments could knock an athlete out for days, potentially curtailing Olympics dreams and the years of hard training behind them.
   —Note: This "Tell" Step can be used after "Wonder." Using it before Wonder allows for more focused inquiry.
5. **Wonder:** Ask students what they are now wondering about based on what they have seen, have been told, and have been thinking. Have them write these questions in the "Wonder" column. Wondering is about asking broader questions that push us beyond our interpretations to look at issues and ideas raised by the object. These items should become the inquiry questions that begin student research.
6. **R:** Students should look at the list of items in the "Wonder" column and put an "R" beside the ones that are researchable questions, i.e. the ones about which they will be able to find facts.
7. **Notecard-So What?**: Have each student pick two of the items that have an "R" beside them. For each one, put the question on the front of a notecard and write "So What?" below it.
8. **Six-Minute Research:** Using one of their own cards or one made by a fellow student, students do a very quick research to see if an answer can be found. They will write the answer/source on the back of the card and try to add an answer to the question "so what?".

Notes:

-This routine encourages students to make careful observations and thoughtful interpretations. It helps stimulate curiosity and sets the stage for inquiry. This routine helps students make careful observations and develop their own ideas and interpretations based on what they see. By separating the two questions, What do you see? and What do you think about what you see?, the routine helps students distinguish between observations and interpretations, which can be helpful in mastering Reading Standard One. By encouraging students to wonder and ask questions, the routine stimulates curiosity and helps students reach for new connections. In this activity, it was used as a way to begin an argument paper.