The Big 6 Research Model

**Audience:** 5th and 6th Graders, Science Class, Solar System Unit

**Objective:** To correlate with our unit of stars and galaxies, students will research constellations to understand their meaning and practice their research and writing skills. The goal is to create a constellation research project with a visual component. Students will also create a constellation to represent themselves and write a paragraph to describe the meaning and symbolism behind it.

1. **Task Definition**
   1.1 Define the information problem

   Students will study constellations in the night sky. They will choose a constellation to research and will create a visual presentation about that constellation. Students may choose to create a slideshow, design a poster, write a research paper, create a video, or summarize their constellation’s story and meaning by creating a podcast.

   1.2 Identify information needed

   Students will first need to choose a constellation, therefore a list or website of the constellations should be provided by the teacher. Once each student has chosen a constellation, they will use nonfiction books and websites to research their constellation’s story and meaning. The students will fill out a graphic organizer to record their research. From there, the students will create their choice of research project as listed above in section 1.1.

2. **Information Seeking Strategies**
   2.1 Determine all possible sources

   - Students may utilize various websites and nonfiction texts about constellations.

   2.2 Select the best sources

   - For nonfiction books, students should visit the library and must have their book choices approved by their teacher prior to using them for research.
   - The teacher will also provide a research packet of various constellations that the students may incorporate into their research.

3. **Location and Access**
   3.1 Locate sources (intellectually and physically)

   Students may use the following websites for their research:

   - [https://stardate.org/nightsky/constellations](https://stardate.org/nightsky/constellations)
   - [https://www.iau.org/public/themes/constellations/](https://www.iau.org/public/themes/constellations/)
   - [https://www.space.com/23309-constellations-night-sky-star-patterns-images.html](https://www.space.com/23309-constellations-night-sky-star-patterns-images.html)
3.2 Find information within sources

- Students will outline the various sources in section 2 by reading and taking notes in their provided graphic organizers.

4. Use of Information

4.1 Engage (e.g., read, hear, view, touch)

- Students will read over the books and websites they have collected in order to fill out the provided graphic organizer. They should also view photos and pictures of the constellation they are researching in order to help them create a visual component to their research project. Students may also choose to make a model of their constellation and/or a podcast of their research to share with their peers and teacher.

4.2 Extract relevant information

- The graphic organizer will help the students to extract only the necessary information from their research sources, as various categories and characteristics are listed for the students to research and summarize.

5. Synthesis

5.1 Organize from multiple sources

- Students will incorporate information from all sources they have read into their graphic organizers. They will review all facts in their organizers in order to compile it together for their research project/visual presentation.

5.2 Present the information

- Once all of the research has been compiled, students will create a visual research project. Options consist of creating a poster, a slideshow, a written report, a video, or a podcast to summarize the constellation they have researched. They also must include a visual component of the constellation (photos, drawings, models, etc.).

6. Evaluation

6.1 Judge the product (effectiveness)

- Students will be graded by both teacher and peers using a rubric. Teachers will evaluate student work for accuracy and writing/grammar/spelling skills and will ensure all components from the graphic organizer are included as well as a visual piece to show the constellation.

6.2 Judge the process (efficiency)
• Students will use a peer rubric to critique a student’s project, presentation skills, and provide feedback of what components they enjoyed and how to improve the parts they may not have learned from.

**Accommodations:** Special Education students will receive a modified graphic organizer, specifically with fewer requirements for research. Additionally, they will receive extended time to complete this project and may choose to work with a partner to assist them. The teacher should also make himself/herself available for extra help sessions to assist any struggling learners with this project.

**Project Notes:** In order to help scaffold this project, prior lessons may be taught in both Science and Language Arts classes about how to perform research and how to summarize and paraphrase that research. Students often struggle with these tasks, so it is important for a teacher to model these skills multiple times prior to completing a project such as this. Students should also practice these skills on a smaller scale, possibly through the use of nonfiction articles. Therefore, resources needed prior to this project are various types of graphic organizers to help students practice their summarizing and paraphrasing skills, as well as a variety of nonfiction articles. My school utilizes the online program “Achieve3000” for reading comprehension, which provides scaffolding for these skills prior to the start of this project. Overall, the main goal and objective for this project is for students to learn how to create a successful research based project using nonfiction reading skills.

*Please see the sample graphic organizer for this project in my shared folder titled “Big 6 Sample Graphic Organizer”

**Overall Review of the Big6 Model:** The Big6 Model proves to be an organized way to approach methods of research. I like how concise the overall steps are in allowing students (and teachers) to think about the somewhat daunting task of research. However, as an educator, I believe this model to be lacking in more specific details describing each step. For example, I would appreciate more details for steps 2 and 3, “Information Seeking Strategies” and “Location and Access”, specifically what strategies the author of this model suggest, as well as some tips and tricks for weeding out poorly written websites over more worthwhile ones. This is usually a difficult task for my fifth and sixth graders, who, at the start of the school year, tend to simply cite “Google”, if anything at all. I would love to incorporate a model like the Big6 at the start of the school year to model research skills with my students and continue to use the language shared in this model throughout the year so that it becomes common word in my classroom among both myself and my students.