

Project Report

Problem Statement

Utilizing the Hubble Space Telescope, engage your students in a lesson involving science, technology, engineering, and mathematics. The project should reflect applicable national educational standards and encourage further exploration of STEM related fields.

Approach

This project began with my students completing an interest survey about the Hubble Space Telescope. The survey asked my students to define the Hubble Space Telescope and asked them to rate their interest in it and learning about the space program (Please see the attached word document titled "Interest Survey: The Hubble Space Telescope"). I then read The Important Book by Margaret Wise Brown to my classes to provide them a model for the writing they would do later in the project. The Important Book conveys a text pattern that names an object then provides facts about it. We researched the Space Telescope at www.hubblesite.org to build background knowledge for the project. I explained that my students would select a picture from the Hubblesite, research the picture, and ultimately create a page on our wiki space using their picture (For more details about the project please see the attached word document Hubble Inspired Lesson plans). Following the project the students took a post survey and asked family and friends to review their page. The post survey allowed me to gauge the impact of the project.

I chose to do this project to in an effort to spark my students' interest in Space, which is a focus area in my classroom. I continuously look for ways to incorporate space exploration and technology into my lessons. I want my students to be aware of the possibilities that exist for them in the space program. I know that grabbing my students attention and utilizing technology is an effective way to help make a lasting impression. This project is one way that I have been able to further this goal.

Results

The impact of this project was determined by the use of a pre- and post-project survey. In both surveys, the students were asked to define the Hubble Space Telescope, to indicate their interest in the Hubble Space Telescope, and to indicate their interest in the space program. The students were asked the same set of questions before the project began and at the conclusion of the project.

Figure 1 presents the data for the results to the first question, which was, What is the Hubble Space Telescope? On the pre-project survey, if a student indicated that the Hubble Space Telescope is telescope in space it was satisfactory. As Figure 1 shows, the results were low and many students could not offer any definition. On the post-project survey, a satisfactory response indicates that the Hubble is a telescope in space that takes pictures to help us understand the universe. As Figure 1 shows the percentage of satisfactory answers increased. Following the project, 79% of my students offered a correct definition and indicated a clear understanding of the Hubble Space Telescope.

Figure 1:

Satisfactory Answer to "What is the Hubble Space Telescope?"

Pre- and Post-Project Questionnaire

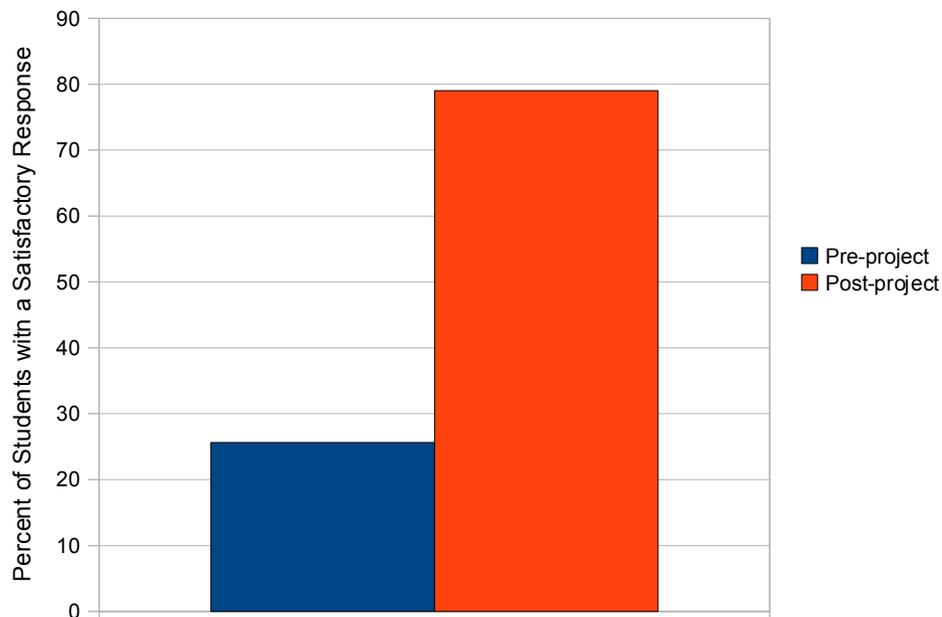


Figure 2 presents the data for the results to the second question, which was, How interested are you in the Hubble Space Telescope? As Figure 2 shows, before the project the results were low and some students had no interest at all. Following the project, the majority of my students had an increase in their interest in the Hubble Space Telescope. Very few showed no interest at all.

Figure 2:

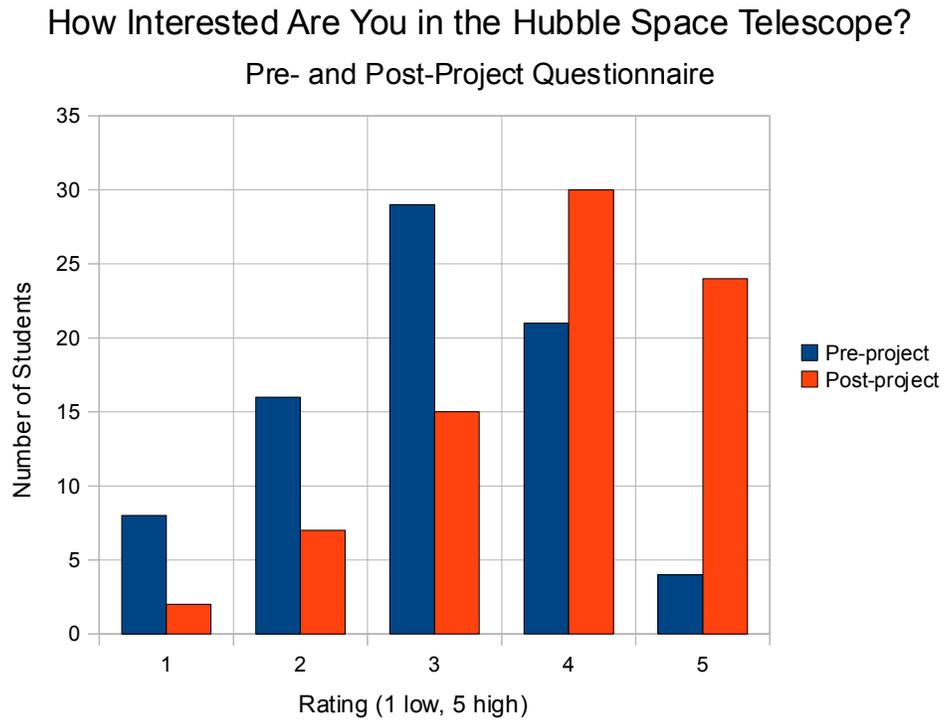
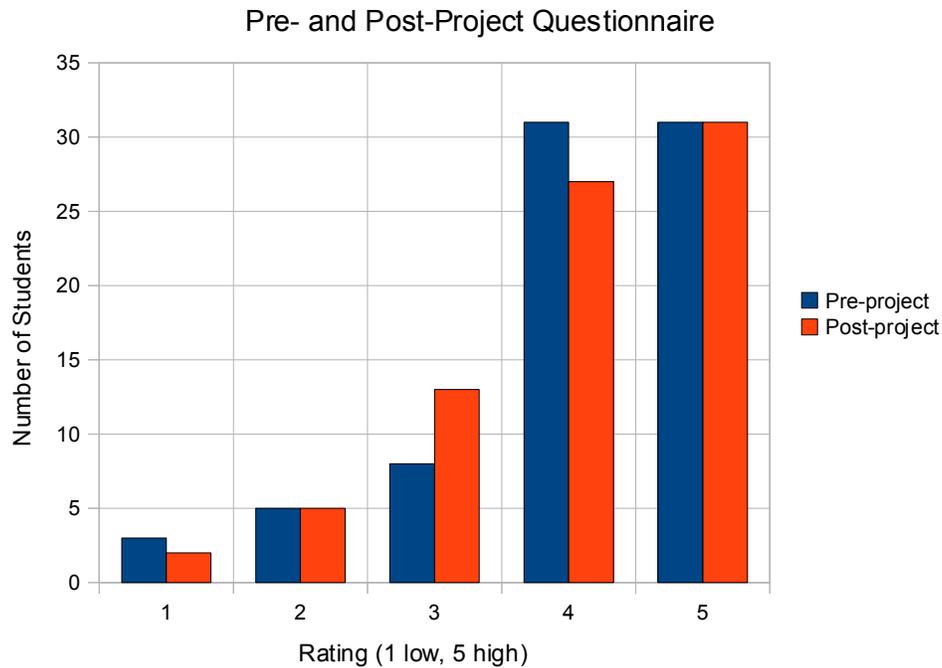


Figure 3 presents the data for the results to the third question, which was, How interested are you in the space program? As Figure 3 shows, before the project the interest in the space program is high with very few students indicating no interest at all. Following the project the interest level remained high with very little change.

Figure 3:

How Interested Are You in Learning About the Space Program?



As an additional gauge on my project's impact the students asked people to look at their wiki page and offer feedback. The students were excited about sharing their work with others and the feedback was generally positive. Additionally, conversation regarding the project continued well after it had concluded, further evidence of its impact.

Conclusion

This project was successful and the impact evident. My students can now intelligently talk about the Hubble Space Telescope and the majority of them have taken further interest in it, asking questions frequently. The positive comments from the students and the parents as well as the continued conversations and questions indicate the lasting effect the project is having on my students.