

USING ASTRONOMY AND BOTANY TO IMPROVE WRITING SKILLS

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ABSTRACT

Astronomy is one of the interesting but difficult topics in science for elementary education. Therefore, it is interesting to create astronomy activities that children can understand clearly. The researchers developed activities by using astronomy and botany to improve writing skills. They have to glue the local flowers on the star pictures then write the name of those flowers, the name of the constellation and write an essay describing their work. The participants are into two groups. 71 3rd year undergraduate students who registered for teaching and are learning science as an elementary education subject, and 10 1st grade student from the laboratory school of Ubon Ratchathani Rajabhat university. We can conclude that both groups were more interested in astronomy, they can tell the name of local flowers and not only used their imagination to create their work, but also to write great essays.

Key words: astronomy education

1. INTRODUCTION

Astronomy in Thailand, as one section in the science curriculum, is taught in school as a science subject. This will be a problem for primary school teachers because the nature of astronomy is to understand that they live on Earth, which orbits the Sun. This is something they sometimes cannot do well, or the teachers cannot teach clearly, and it is not good enough to inspire students to love to learn science. Therefore, researchers found a lovely idea from Princess Srinagarindra, the Majesty of the King's Mother, for astronomy. She had the ability to convey the meaning of the stars by painting constellations on tables and ceramic thin plates, and to paint flowers in constellations, with the number of flower petals and the color of the light of the stars as an astronomical magnitude. We created activities from this, and added a writing component to improve the students' writing as well.

2. METHODS

There are two groups of participants; 71 3rd year undergraduate student who registered for teaching and learning science as an elementary education subject, and 10 the 1st grade student from the laboratory school of Ubon Ratchathani Rajabhat university. Both groups have to do three activities as following:

- Finding the names of the constellations and local flowers.

- Doing the art work.
- Writing the essay.

First of all they should choose the local plants or flowers that they liked and find the name of the constellations and flowers by using technology such as the internet, or by asking local people. Then used their imagination to create art work by gluing the flowers into the star pictures given by the researcher. Finally they wrote an essay describing their work, or telling a story about the constellations and local flowers they used.

3. RESULTS

After the activities we found that:

1. All participants in both groups knew the name of the constellations and the local flowers that they used from the internet or asking local people.
2. The 1st grade students stayed with the art part longer than the 3rd year undergraduate students, and they wanted to do more.
3. Both groups could create an essay in three major styles as following:
 1. Telling the story of the star; 72% of the 3rd year undergraduate students and none of the 1st grade students.
 2. Telling the method of their work, 23% of the 3rd year undergraduate students and 40% of the 1st grade students.

- Telling a new story by using the name of constellations and local flowers, 5% of the 3rd year undergraduate students and 60% of the 1st grade students.

4. CONCLUSIONS

The activities improved their creativity by motivating them to think, learn more about their local environment, do the art and then summarize in the essay. There was no statistical finding about whether the creative writing activities were effective in changing the attitudes of the students towards writing in our research. According to the researcher, the students could spell the words correctly and write a longer essay than usual. Some of them could tell a long story of the star tale in the essay and some could mix the name of local flowers that they collected into the tale as well. We hope that the future of the project will have more local constellation pictures and more local plants to study and collect in the database, making an activity that can give motivation to make students feel positive about writing.

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Appendix A. some student works



Figure 1. Depiction of the Scorpius Constellation by a student using some local weeds in Thailand.

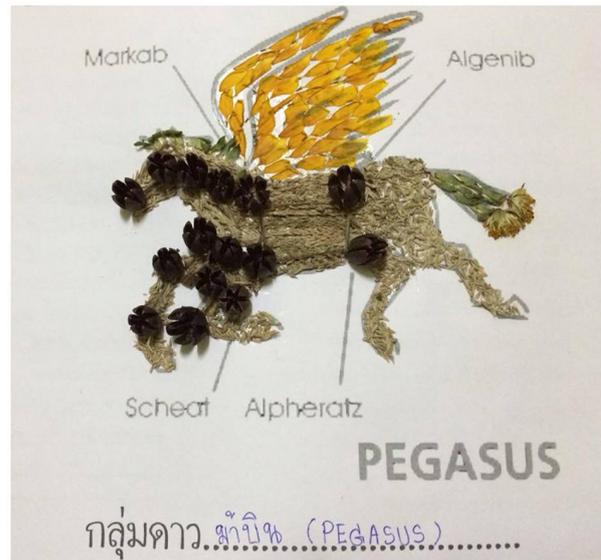


Figure 2. The Pegasus Constellation.

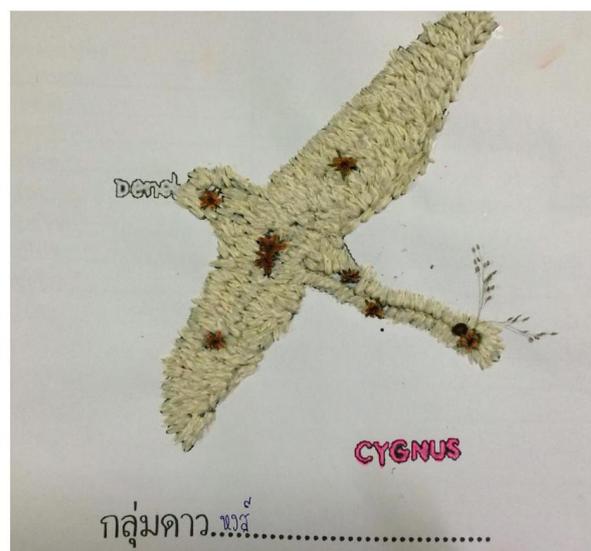


Figure 3. The Cygnus constellation.



Figure 4. A working student happily paying full attention to the learning activities.



Figure 5. Leo constellation.