

## Beyond the Gas Giants

**WebQuest Description:** Most of us know what planets are in our solar system, but what lies beyond it? This Webquest will take you on an adventure deep into the cosmos! We will see what is beyond our 8 planets, where you could travel one day!

**Grade Level:** 3-5

**Curriculum:** Science

**Keywords:** Space Telescope Planet Gas Giant Asteroid Comet

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### Introduction

You are desperately needed! I need a crew to help me explore the cosmos beyond Pluto! Are you brave enough to explore the unknown? What exactly is out there? Are there planets like ours? Are there planets bigger than Jupiter? How many comets are out there? These are some of the many questions that I need your help answering! Please help me, and be a part of the greatest research crew of all time!

### Tasks

By the end of this lesson, you will be able to effectively: Describe the Kuiper Belt and what is in it using words or pictures. Tell where comets came from. Model what a Galaxy is and the different types of them. Name the planets in our solar system, and some beyond. Join the discussion about space travel, after looking at research.

### Process

This activity has three different steps in it. To complete the adventure, you must complete all three activities. First, you have been given two texts! Read them and become familiar with them. You will need them for the other two activities. Secondly: You are to complete the attached space flight activity by yourself. For this activity, you will need a computer, copies of both books, pencil, paper, and access to the internet. (You can use cell phones if you wish.) Complete the space flight activity and gather all of the data that you have obtained using it into one place. You will need it for the final assignment. Thirdly: Get into groups of five. Using a giant cardboard box, glue, scissors, construction paper, foam balls, plastic, wood, aluminum foil, and metal, you will construct a model that includes five galaxies. (One per person in the group.) You will group these galaxies together, interconnecting them, showing how all galaxies interact with one another to form the universe!

### Evaluation

To get maximum points, the student must successfully complete the space flight and the group assignment meeting all criteria. Space Flight: Complete one section of the first selection of questions. Make no grammar errors. Effectively show a detailed understanding of the material associated with the question. Complete the second question, making at least one connection between the books. The answer must be a paragraph in length at the least. Complete one section of the third selection of questions. If you choose painting, effectively show a detailed understanding of the material by showing galaxies, planets, stars, comets, and asteroids in your painting. If you choose the speech, make no grammar errors, and effectively answer the question, "is it safe to travel beyond the gas giants?" The answer must be at least 2 paragraphs in length and be written as a proper, formal speech. Group Project: Correctly and efficiently model 5 galaxies. Within these galaxies, include at least 3 comets, 4 asteroids, 5 stars, and 8 planets. Also, write a paragraph-long reflection about working with your group members, explaining who contributed each galaxy to the project.

Category and Score	25 - Very Great!	18 - Good!	10 - Developing	5 - Needs Improvement	Score
Space Flight Assignment Sheet	Completely and correctly gives a full answer to all 3 questions of the space flight. The answer for question 2 is at least a paragraph long. The painting is an accurate representation of a galaxy. The speech is 2 paragraphs in length and shows a detailed understanding of the content.	One of the questions contains an incorrect answer.	Two of the questions contain an incorrect answer.	All three questions contain incorrect answers.	25 /
Group Project	Project accurately represents 5 galaxies, containing at least 3 comets, 4 asteroids, 5 stars, and 8 planets.	Project is missing one component; 5 galaxies, 3 comets, 4 asteroids, 5 stars, or 8 planets.	Project is missing to components; 5 galaxies, 3 comets, 4 asteroids, 5 stars, or 8 planets.	Project is missing 3 or more components; 5 galaxies, 3 comets, 4 asteroids, 5 stars, or 8 planets.	25 /
Grammar and Spelling	Contains no grammar or spelling errors.	Contains 1-3 grammar or spelling errors.	Contains 4-6 Grammar or spelling errors.	Contains 7 or more grammar or spelling errors.	25 /
Group Reflection	Completed	XXXXXXXXXXXXXXXXXX X	XXXXXXXXXXXXXXXXXX X	Not Completed.	25 /
				Total Score	100 /

## Conclusion

Good Job, Team! You have successfully completed the unit on space outside of our own solar system. You have learned about the 3 different types of galaxies and their contents. You have learned about popular comets, and their home in the ice cold Kuiper Belt. You have learned about the asteroid belt separating the rock planets from the gas planets. Finally, you came together as a team and put your thoughts together to construct a model of how all of these things work and fit together to form our universe. You have now seen what is beyond the Gas Giants! However, there are many problems closer to home that we need to address before traveling out too far. Join me for our next unit, as we learn about the red surface of Mars, and plan a mission to travel there. I can surely use your help again! For those of you who wish to read more, check out the attached link for some fun facts about space!

## Teacher Page

This Webquest was an adventure through space using children's literature. This 2 hour activity was a great way to get children involved in ELA, Science, and group work, all while using technology. To use this in your classroom, your kids will have to have a good understanding on the solar system that they already live in. (Otherwise, how will they learn about the things outside of the solar system.) Most of all, this was fun for everyone! It was fun to develop, fun to implement, and fun to reflect over. The interactivity among the students increases with projects like this one! All science teachers should consider doing this activity to teach the children about things in space.

### Standards

5.RI.IK1.9 Integrate information from two or more texts on the same topic in order to build content knowledge. 5.W.PDW.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing, as well as to interact and collaborate with others; demonstrate sufficient command of technology skills to type a complete product in a single sitting as defined in W.1-3. 5.W.RBPK.9 Draw evidence from literary or informational texts to support analysis, reflection, and research, applying grade 5 standards for reading. GLE 0507.6.1 Compare planets based on their known characteristics.

### Credits

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### Other