
Aquarium Basics

Each classroom will receive a Marineland 20 gallon BIO-Wheel tank system. This system will include all the parts that you need to assemble your aquarium. This system will be used to support a **freshwater** environment.

Here are some questions that you will need to think about as you begin this process:

- How do you setup an aquarium properly?
- Are there ideal locations to place an aquarium in your classroom or building?
- Is it ok to just fill an aquarium with tap water and add fish?

Assignment #1

With your team, develop your own questions about the freshwater aquarium setup process and then research possible solutions. Don't forget to research the questions above as well. You will also need to sketch a diagram of what your tank will look like when it is setup. There are a variety of resources to help you get started at:

<http://www.cstecalumet.org/Aquatic%20Adventures%20Academy/aaaaquariumbasics.html>.

You should also use other websites and resources to help you answer your questions. Mr. Jeff Gibula, Director of Husbandry at the Newport Aquarium, is also available to help answer your questions. Be sure to cite any resources that you use in preparing your response. To get his input, you just need to post your questions using the discussion tab on the AAA Wiki at:

<http://aquaticadventures.wikispaces.com/Ask+a+Scientist>

Communicating Research Findings

Prepare a presentation to share your team's findings with the rest of the group. Be sure to include proposed solutions to the questions posed above. You should also include support for each response.



Curriculum Connections

Can you think of other situations where locations are important to the overall health and well-being of a community? Can you think of examples of cities, towns or countries that have been adversely impacted as a result of geographic location?

The dimensions of the aquarium are 25in. X 19in. X 12in. What is the volume of the tank?

If 1 gallon = 231 cubic inches, how many gallons of water will it hold?

We need to buy a cart to put our tank on. If the empty tank weighs 33lbs, what weight will the cart need to withstand in order to support our full tank? (Given: 1 gallon of water = approx. 8.35lbs)



Aquatic Adventures Academy Project Rubric

Teacher Name: _____

Student Name: _____

CATEGORY	4	3	2	1
Plan for Organizing Information	Students have developed a clear plan for organizing the information as it is gathered and in the final research product. All students can independently explain the planned organization of the research findings.	Students have developed a clear plan for organizing the information in the final research product. All students can independently explain this plan.	Students have developed a clear plan for organizing the information as it is gathered. All students can independently explain most of this plan.	Students have no clear plan for organizing the information AND/OR students in the group cannot explain their organizational plan.
Response to Questions	Students present well-developed responses to all of the posed questions.	Students present well-developed responses to most of the posed questions.	Students present well-developed responses to some of the posed questions.	Students present well-developed responses to few to none of the posed questions.
Delegation of Responsibility	Each student in the group can clearly explain what information is needed by the group, what information s/he is responsible for locating, and when the information is needed.	Each student in the group can clearly explain what information s/he is responsible for locating.	Each student in the group can, with minimal prompting from peers, clearly explain what information s/he is responsible for locating.	One or more students in the group cannot clearly explain what information they are responsible for locating.
Quality of Sources	Researchers independently locate at least 2 reliable, interesting information sources for EACH of their ideas or questions.	Researchers independently locate at least 2 reliable information sources for EACH of their ideas or questions.	Researchers, with some adult help, locate at least 2 reliable information sources for EACH of their ideas or questions.	Researchers, with extensive adult help, locate at least 2 reliable information sources for EACH of their ideas or questions.
Group Timeline	Group independently develops a reasonable, complete timeline describing when different parts of the work (e.g., planning, research, first draft, final draft) will be done. All students in group can independently describe the high points of the timeline.	Group independently develops a timeline describing when most parts of the work will be done. All students in group can independently describe the high points of the timeline.	Group independently develops a timeline describing when most parts of the work will be done. Most students can independently describe the high points of the timeline.	Group needs adult help to develop a timeline AND/OR several students in the group cannot independently describe the high points of the timeline.