Fish in the Agriculture Classroom- one fish/aquarium can lead to so many opportunities!

Objectives Covered in the plan:

1) Testing water and the importance of understanding pH and fish/plant health
2) Different types of hydroponics/aquaponics/raising fish and plants together
3) How to use these concepts on a large scale

My classroom incorporates fish in our daily classroom activities and students really enjoy it. We have had two tanks set up in the classroom before. One was a tetra tank mainly used for students to take on some responsibility feeding and changing out their water when needed, and to be a calming additive to the room and the second a Trout in the Classroom tank where we monitor fish growth, eating habits and care for their tank.

I had students with special needs in my class this past semester and it was their job to take care of the fish every day. We all tested the water quality of both tanks every other day or as needed. We use this water testing to further our studies on pH levels.

The perfect lesson plan to incorporate fish and aquatics into the classroom is a project that stems from two main units in my Agriscience Applications class. The combination of plants and animals. Students study the different types of plant growing materials available and some alternatives we normally don't see very often. Students construct a mini hydroponics system using a water bottle, rock wool and seed.

Students then will be able to construct as a class a bigger aquaponics system using larger bottles or even jars and housing fish in the containers with plant material grown on top. Students will have fun and remain engaged in their learning because of the living things being used to create these aquaponics systems.

It is my goal to later use this concept on a much larger scale and introduce a commercial size aquaponics system in our school greenhouse. We would use this unit to learn about the types of aquaponics systems used in commercial fish/plant farming and can even sell some of the produce we grow. This is a concept students don't do well on in my class mainly because we do not have a system in place to show how this works. They can only learn so much from video and discussion. This gives them hands on learning. Learning how to set up the system, researching types of fish and plants that grow well together, and lighting and feed requirements to be successful.

Evaluation:

Evaluation of this lesson will be in many forms. Students will do better on the objectives during class tests as well as final exams. They will also have a better understanding of the importance of fish and plants working together and how they can be profitable. Students will also be able to tell other students at school about the neat processes we are learning about in class, in turn causing more students to want to take these types of classes!