**Student Competency Testing Over AquaPono Standard Operating Procedures**

**Test #1 Assembly**

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assembling the Frame:

|  |  |  |  |
| --- | --- | --- | --- |
| Checkbox | Step | Procedure | Comments |
|  | 1. | Open the tub and organize the pieces into groups: A) Short PVC B) Long PVC C) Elbows D) T’s |  |
|  | 2. | Locate two PVC T’s. Connect one short PVC at the center of the 2 T’s, making a capital letter “I”. |  |
|  | 3. | Connect one short PVC piece to one elbow. Repeat 4 times.  |  |
|  | 4. | Connect pieces from #3 to capital “I.” |  |
|  | 5. | Connect 4 long PVC “legs” to the elbow pieces. Steady and align the frame.  |  |

Assembling the Tanks:

|  |  |  |  |
| --- | --- | --- | --- |
| Checkbox | Step | Procedure | Comments |
|  | 1. | Place tub (without a hole) underneath the PVC frame. |  |
|  | 2. | Make 4 tape rolls and apply to wood piece on top of the frame, paralleling the capital “I.” |  |
|  | 3. | Locate the “stand-pipe.” It is the large PVC piece with black rubber grommet. Snap into tub (with hole). |  |
|  | 4. | Place tub on top of frame, aligning the stand pipe with the wood piece that has a hole.  |  |

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**Test #2 Fish Feeding**

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Checkbox | Step | Procedure | Comments |
|  | 1. | Wash hands. |  |
|  | 2. | Turn on digital timer. Reset to zero. |  |
|  | 3. | Set timer to 5 minutes. |  |
|  | 4. | Measure out the ¼ teaspoon of fish food. |  |
|  | 5. | Press the start button on the timer. |  |
|  | 6. | Dump the ¼ tsp of food into the tank. |  |
|  | 7. | Wait for the fish to eat all the food. |  |
|  | 8. | If fish eat all the food, continue to put in ¼ tsp until the timer beeps; press stop on timer. |  |
|  | 9. | Record the number of ¼ tsp the fish ate on the chart |  |
|  | 10. | Repeat until all fish in all tanks are fed. |  |
|  | 11. | If any feed is left in the tank, use net to scoop it out.  |  |

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**Test #3 Water Quality Testing**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Checkbox | Step | Procedure | Comments |
|  | 1. | Rinse test tube twice using water from the tank being tested. |  |
|  | 2. | Fill water from tank 1 to the line (5mL) in the test tube (make sure to get as close to the line as you can, take the time to do it once or twice to be as accurate as possible) |  |
|  | 3. | Take the yellow Ammonia Test Solution (Bottle #1) and add 8 drops (remember to make sure the bottle is straight up and down) |  |
|  | 4. | Cap the test tube and gently rotate the tube from the left to right to make sure there is even distribution of solution in the water |  |
|  | 5. | Take the yellow Ammonia Test Solution (Bottle #2) and add 8 drops (remember to make sure the bottle is straight up and down) |  |
|  | 6. | Cap the test tube and gently rotate the tube from left to right to make sure there is even distribution of solution in the water |  |
|  | 7. | Wait 5 minutes |  |
|  | 8. | Match the contents of the tube to the Ammonia chart |  |
|  | 9. | When emptying tube do not dump the contents of the tube back into the tank. The tube now contains chemicals that you do not want to put in the tank with your fish and plants.  |  |
|  | 10. | Move on to the next tank. Fill the tube with water from that tank. Place your thumb over the tube and shake. Dump water (once again, do no dump into tank). Fill the tube with water a second time. Place thumb over the tube and shake. Dump this water.  |  |
|  | 11. | Repeat steps 1-10 until all tanks have been tested.  |  |