

Shad in the Classroom Tank Assembly Manual



Tank Parts

Wooden Frame



- Two square frames – top and bottom
- Four legs, one with a power strip attached
- Plywood top with hole in center
- 16 carriage bolts, 16 washers, & 16 wing nuts

Lower Reservoir



Upper Reservoir



- Red 16-gallon utility tub
- Attached stand pipe with drain valve

Pump & Tube Assembly



Egg Chamber & C-clamp



Fry Chamber & Siphon



- Clear cylindrical fry chamber
- $\frac{1}{2}$ " tube for siphon with attached binder clip and filter

Tank Parts

Stand Pipe



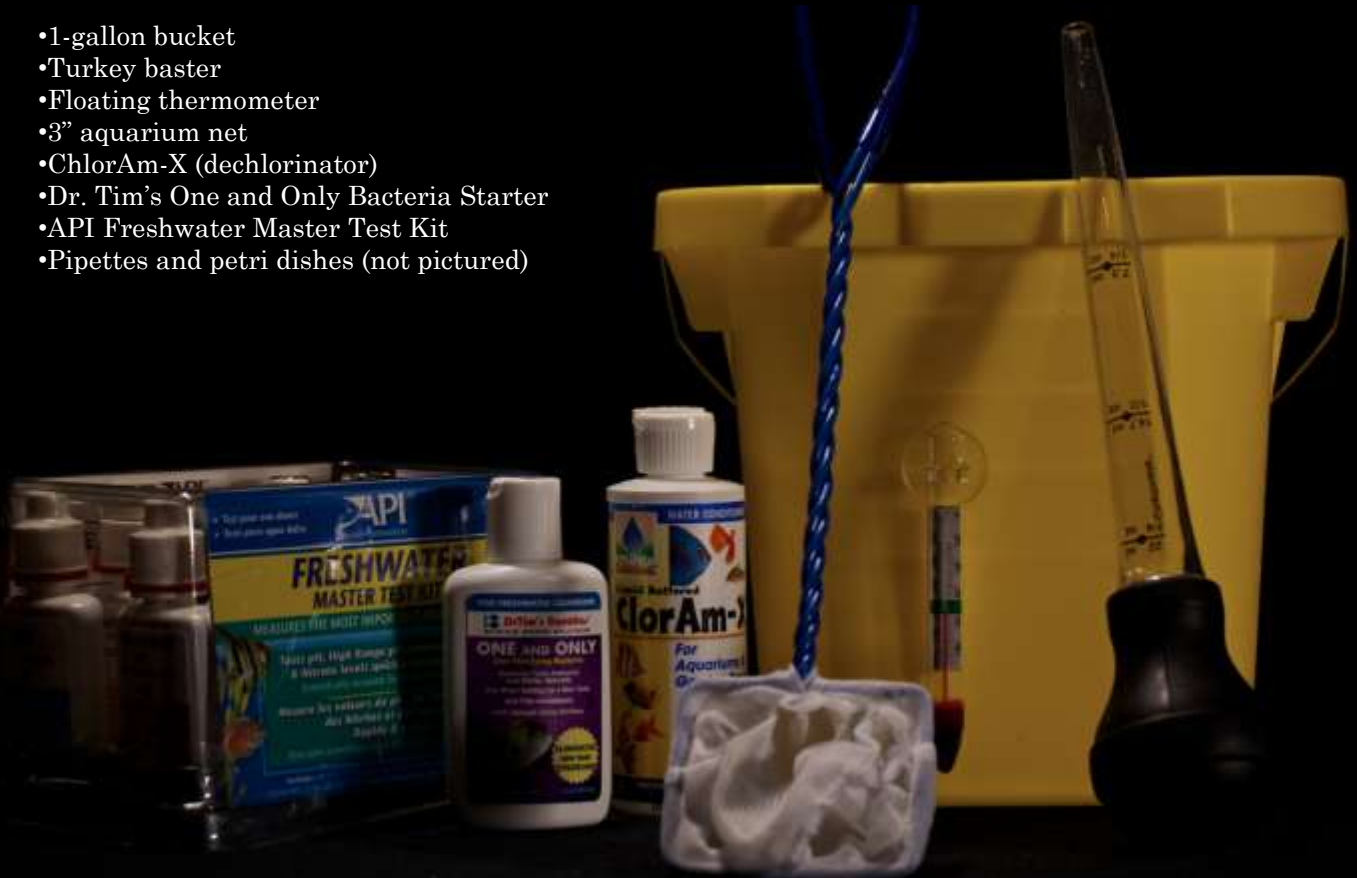
- 2" PVC pipe
- Filter on top and bottom
- Included rubber band(s) to attach fry chamber
- Holes drilled at bottom of pipe

5-gal Bucket of Bio Balls



Other Materials

- 1-gallon bucket
- Turkey baster
- Floating thermometer
- 3" aquarium net
- ChlorAm-X (dechlorinator)
- Dr. Tim's One and Only Bacteria Starter
- API Freshwater Master Test Kit
- Pipettes and petri dishes (not pictured)



Wooden Frame & Lower Reservoir

1. Place legs on outside of square frame, matching the letter/number combination at each corner. Make sure to line up the pre-drilled holes.



2. Insert carriage bolts, then place washer and tighten wing nut.



Wooden Frame & Lower Reservoir



3. Place the lower reservoir inside of the frame.

HINT: Now would be a good time to fill the lower reservoir with water. Fill with about 10 gallons of water.



4. Rest the plywood piece on top of the frame. It will not be fixed in place.

Upper Reservoir & Stand Pipe

1. Place the upper reservoir on the plywood, carefully extending the stand pipe and drain valve through the pre-cut hole.

HINT: Make sure the drain valve is fully open at all times.



2. Place the 2" PVC section of the stand pipe (with filters attached) over the smaller PVC section of the stand pipe that is attached in the center of the tub. It should rest on the bottom of the tub.

Egg Chamber



1. Hold the pre-assembled egg hatching chamber against the inside of the upper reservoir.
2. Hand tighten the 3" C-clamp, attaching the egg chamber to the tub.

HINT: C-clamp should be fitted against the wood of the egg chamber and under the lip of the tank.



Fry Chamber and Siphon

1. Place the fry chamber (lid off) between the egg chamber and the stand pipe.



2. Use the large rubber bands on the egg chamber to hold the fry chamber in place. Do not use rubber bands on the stand pipe. Alternatively, set the fry chamber on a few bricks to make it more stable.



3. Once the siphon is filled with water and you know it is functioning properly, use the binder clip to attach the siphon to the edge of the fry chamber.



FRY CHAMBER HINTS:

- Make sure the water flowing out of the spout from the egg chamber lands in the fry chamber.
- You may need to adjust the rubber bands holding the fry chamber many times to make sure the fry chamber is stable.
- Omit the fry chamber if you are unsuccessful in securing it or getting the siphon to work.

SIPHON HINTS:

- The siphon will only work if nearly all the air is removed from the tube. Hold it completely underwater in the upper reservoir and move it around to get the air out. Then cover one end with your finger while you insert the other end into the fry chamber.
- The end of the siphon with the filter attached should be inserted into the fry chamber; the un-filtered end should be in the upper reservoir.
- If the siphon is functioning properly, the water level in the fry chamber should be equal to the water level in the upper reservoir.

Pump & Tube Assembly

1. Place the pump in the lower reservoir, making sure to keep the power cord out of the tank.
2. Run the tube assembly to the upper reservoir, on the opposite side of the frame from the power strip.

HINT:

- Now would be a good time to add water to the fry chamber and upper reservoir. Fill to about the top of the stand pipe.

- The pump needs to be completely submerged underwater as it can burn out if it is not.





3. Insert the hard PVC end of the tubing into the egg chamber. Turn the pump on to start the flow of water. The steady flow of water into the egg chamber is essential to agitate the eggs and keep them healthy.

WATER FLOW HINTS:

- Be sure the tube doesn't kink, which could hinder flow.

- Adjust the flow with the valve at the side of the tank so that the water flowing out of the egg chamber spout is at a slow trickle. Check the flow regularly.

