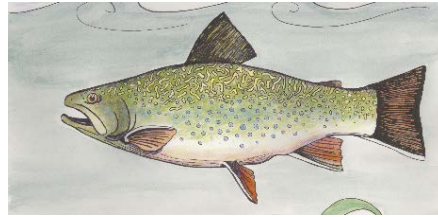




TROUT IN THE CLASSROOM

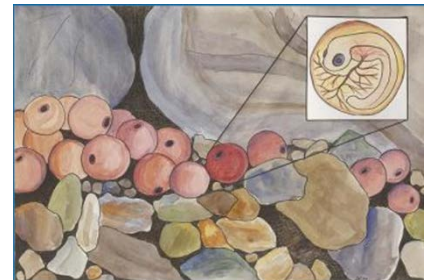


Tank and Trout Care Guidelines

EGG STAGES

Getting Eggs

- Transport egg jar in the cooler with an ice pack and padded with crumpled paper or foam to minimize the jostling and banging around.
- To acclimate the eggs, let the egg jar sit, closed, in the tank for 10 minutes before pouring the eggs into the hatching basket.
- Keep your tank dark and insulated, eggs are sensitive to light and insulation will help increase the longevity of your chiller.



Eyed eggs — *Identifiable by their characteristic dark spots—each trout's two eyes*

- Movement during delivery of the eggs can weaken the outer layer of the shell and cause weak spots or broken areas that are vulnerable to fungal infection. Pick ALL eggs with white spots (fungus) out.
- Fungus spreads REALLY fast, pick out spotted eggs twice a day, especially before the weekend.
- Outer shell must remain translucent, an egg with any opaque spots (or fully opaque) will not develop. If you are unsure, isolate the suspect eggs.
- Uniform cloudiness can be okay, it might be just the trout development. If you are unsure isolate the suspect eggs in a separate hatching basket.

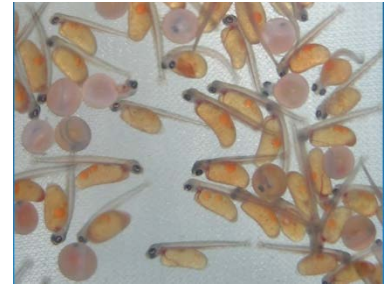
Hatching — *No more than 2-3 days from first egg to last*

- Most trout will hatch within 2-3 days of first egg hatching.
- Some eggs will not hatch properly, and some alevin may not come all the way out of the egg. Any leftover eggs must be removed (or isolated—these are unlikely to hatch).
- Leftover shells will float to the top of the tank or in the basket and fish enzymes will break them down and create foam—this is normal. Scrub the sides of the tank with an aquarium sponge to loosen this foam.

FRY STAGES

Just after hatching

- During this alevin phase you may feel a jelly-like fungal growth around the inside tank surfaces and hatching basket. If you find this, wipe or scrape the surfaces with a sponge to send it through the filtration system.



Alevin (sac-fry) — 1-3 weeks

- Length of time at this stage depends on the water temperature; warmer water causes fry to develop faster. Use a digital thermometer daily to make sure in-tank temperature is 50-53 degrees Fahrenheit. Chiller consoles are notoriously inaccurate.
- Look for trout development. Alevin can survive in a Petri dish, or under a microscope or hand lens for a short time.

Swim-up stage — one week or less

- As yolk sacs disappear, some trout will start swimming around looking for food. Start feeding tiny amounts when you see the first trout swim up in the hatching basket.
- Feed trout by spreading a miniscule amount of size 0 food near any swimming trout.
- Now is a good time to “boost” your tank’s nitrifying bacteria with a shot of Stress Zyme or Microbe-Lift, follow instructions on the bottle or box.
- Once all fry are swimming up and have been eating, unhook a corner of the basket or lower the mesh to allow strong, adventurous fish to swim out. Weaker fish will remain in the safety of the basket, with easy access to food, until they are ready to swim out as well.

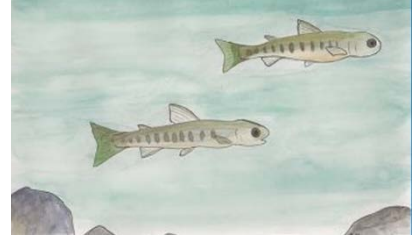
Fry stage — 6-8 weeks

- Feed may vary, try to ensure all of the fish are eating, this may require feeding on two separate sides of the tank. In general feed a tiny pinch of food every day or every other day. Use your judgment to make sure your trout are getting enough food.
- Some trout never learn to feed and will die. Non-feeding fish are called “pinheads”—big heads, little bodies.
- Every TIC classroom sees this mortality spike with the pinheads—it is VERY normal.
- Any leftover food that collects in one area MUST be removed 10-15 minutes later.
- A turkey baster is a great way to vacuum up extra food and waste. Continued leftovers mean that you are overfeeding, which can cause problems with ammonia levels and tank chemistry.
- Test your water weekly to monitor the chemistry and add water conditioners such as Nite-Out, Microbe-Lift, Amquel, and Novaqua as needed.



PARR STAGE — *The rest of the time*

- Look for parr marks on the trout.
- Small water changes with a siphon can happen every day with a 20% change at the end of each week.
- Clean your tank 15 minutes after feeding.
- Always keep track of your water chemistry—water testing can help you with this.
- If any levels seem high, do a big 20% water change (make sure temperature is not changing drastically during the water change).
- In an emergency, clean water is more important than temperature stability.
- Cannibalism can occur—the big fish do eat the little fish. If cannibalism is becoming an issue, then feed more often to assuage hunger.
- Be sure to clean more often and do water changes if you are feeding more often.



CRISIS NOTES — *Read before trout tragedy occurs*

- Make sure that your hands are clean and have no hand sanitizer, soap, or lotion on them before putting them in the tank or touching any tank materials to avoid contaminating the water.
- Treat all the water with water conditioners, such as Amquel and Novaqua, when adding new water.
- If you come in and all fish are lethargic—WATER CHANGE.
- If you come in and all fish are unmoving at the bottom of the tank—WATER CHANGE.
- If you come in and your fish don't respond to food—WATER CHANGE.
- During the first few weeks, initial ammonia spikes from overfeeding are likely. Water changes and some water conditioners are the only solution.
- Try to “boost” your tank with Stress Zyme or Microbe-Lift weekly or as directed on the bottle instructions.
- If you change your filter media, only change one section at a time allowing the bacteria from the remaining section to colonize the new media. The ceramic media should not be changed.

TROUBLESHOOTING TIPS — *For if you find many dead trout*

- Remove healthy fish first and put healthy fish in a reserve water bucket (with treated water), no matter its temperature and use a battery-operated aerator or tank's airstone in the bucket.
- You may also add one small, clean ice pack to the bucket.
- Remove as much water from the tank as possible (80%).
- Leave pump and filter intake covered.
- Clean tank with a clean scrub sponge, removing as much crud as possible and remove gunk with turkey baster.
- Refill tank with water and treat with water conditioners (Stress Coat, Stress Zyme, Tap Safe, etc.).

- Cool water with frozen tank water (great to have in case of an emergency) or safe clean freeze packs.
- Replace at least one charcoal filter.
- Replace fish in tank.
- The next day, add more Stress Zyme, Microbe-Lift and/or Stress Coat.

VACATION NOTES

Prepping for short vacations (3- or 4-day weekends)

- Feed less on Friday.
- Do your water change as normal.
- They will be fine.

Prepping for mid-length vacations (7-10 days)

- Trout are wild animals that can survive leaner times. Trout do not need to be fed or visited during a 10-day vacation but, if possible, have someone check in on the tank to make sure equipment is running properly.
- One week beforehand, you can replace your charcoal filter using a new, well-rinsed cartridge/bag of charcoal. Charcoal can help reduce ammonia and fresh charcoal will work well over the vacation.
- Continue with the normal feeding cycle in the days leading up to vacation.
- If anything feed a little less to minimize ammonia discharge during holidays.
- Do a nice BIG water change right beforehand. Don't let the tank temperature fluctuate more than 5 degrees. In an emergency, clean water is more important than temperature stability, though.

Prepping for LONG vacation (11+ days)

- Same preparation as above.
- Plan to come in once to feed, if possible, about halfway through.
- If you can't come in, don't worry, trout are wild animals that can survive the lean times.

IMPORTANT: NYS DEC Guidelines and Rules for TIC

- Use a small to moderate number of eggs per aquarium. A good rule of thumb is 50 eggs per 25 gallons of tank water.
- Use only eggs from known, disease-free sources. DEC is pleased to assist by making eggs available for TIC.
- Avoid use of substrate obtained from local ponds or streams to minimize the chance of introducing fish pathogens to your aquarium, eggs, or fish.
- All release of fish must occur via a stocking permit that is issued by the appropriate regional DEC Fisheries Management Unit Office. TIC participants releasing in regions 2, 3 and 4 must apply for these permits through TIC's New York Trout Release Permit Application (<https://outreached.wufoo.com/forms/w1kw7y351w1sday/>) at least 30 days prior to release.
- The stocking permit allows TIC trout to be exempted from a current DEC inspection regulation.