3. STAGES OF THE PROJECT

3.1 DELIVERY OF THE EGGS

The scheduled date and time for the egg delivery will be made known to each teacher in the weeks prior to the beginning of the project. Under normal circumstances, you should receive the salmon eggs in mid-February, or by the beginning of March. On that day, a representative will come to your classroom to deposit the eggs in the incubator and give you some additional instructions. You should contact us at the FQSA, or the organization responsible for sponsoring your school, for details on how the delivery will take place (animation, presentation to students on salmon, etc.).

Egg Acclimatization and Releasing the Eggs Into the Aquarium

Acclimatization is essential to the survival of the eggs and to ensure that they do not suffer from stress due to the change in their environment (between the thermos flask they are being transported in and the aquarium). When the eggs are brought in, transfer them inside a glass jar (e.g., Masson jar) that has been preliminarily filled with aquarium water (equivalent to the amount of water found in the thermos flask). Place the jar in the aquarium for 15 to 30 minutes (it will float). If the difference in temperature between the water in the thermos flask and the aquarium is too significant, allow more time for the water to temper.

Once the acclimatization is complete, the teacher (or another volunteer) will have to deposit the eggs inside the aquarium. Simply spread the eggs gently on the gravel and be careful not to move or disrupt the bottom surface while doing so.

Age of the Eggs Explained

The eggs will hatch once they reach a total of 425 to 450 degree days. We mention 429 degree days in the teacher's book, because we know that nature can be unpredictable. 429 degree days is a good indicator in predicting when the eggs will hatch, but you can explain to the students that there may be a slight variation. Thus, every day, the eggs are aging according to the temperature of the water in the aquarium.

3.2 CARING FOR THE EGGS

Here are the various tasks that need to be completed in order for the project to run smoothly.

3.2.1 Before hatching

- Know that the eggs are already at the eyed-egg stage, which means that they may be safely transported at this time (developing embryo).
- You will have to regularly remove the dead eggs using the baster, to avoid the propagation of mold and bacteria. Dead eggs are distinguished by their dull, whitish color.

3.2.2 After hatching

- Sac fry do not need to be fed as long as their yolk sac is still attached to them. When the yolk sac is resorbed in most fry, they will begin to emerge from the rocks to look for food. This is when we start feeding them, usually at the end of April, beginning of May.
- To feed the fry, only sprinkle a little bit of food at a time and do not overfeed them. Feed them once or twice a day and give them just a small pinch at a time.
- Dead fry and other visible waste should also be removed.

Note: If there is an unusual smell, rinse the carbon filter with non-chlorinated water.

3.3 RELEASING THE FRY (STOCKING)

The location of the fry release shall be confirmed to you upon delivery of the eggs and will be indicated on the SEG permit issued by the MELCCFP. The stocking will take place in a river near your school. To choose the location of the stocking process, please inquire with the FQSA. You can decide on the appropriate date between May 25th and June 23rd (end of classes).

There are many ways you can plan for this event. You may do the stocking process with your students yourself, or you can arrange with your river manager depending on theyr availability.

Two weeks before the official release day, you will need to start gradually increasing the temperature of the water in your incubator to match the temperature of the river (no more than one degree per day). Talk to your river manager to know the current water temperature.

On the day of the release, it will also be important that you carefully remove the pebbles one by one and decrease the water level as much as possible (remove 1/3 of water) while making sure that the filters in your incubator are still working. This will make it easier for you to scoop out the fry using the net.

If you transport the fry yourself, follow this simple protocol:

Stocking protocol

It is important to keep the fry at a constant temperature to avoid thermal shock.

1. Get some ice: the ice should not be in direct contact with the fry or the water. You can either put regular ice in Ziploc bags, rinse a small plastic bottle (e.g., water or juice bottle) and freeze water in it, or you can use icepacks.
   Note: remember that the amount of ice you need depends on the distance you have to travel. You do not need ice if you only have to travel 5 minutes on foot, but if you take a 45-minute bus ride, we recommend bringing the equivalent of 3-4 ice cubes. Bring more ice so you can replace it if it melts during the trip.

2. Transporting the fry: you have several options.
   - **Carrier bag and cooler**: This is the safest way to transport the fry, and is the method used by professionals. Carrier bags are provided by the FQSA upon request. These bags are resistant, clean, and made of plastic that is safe for the fry. We suggest you put your Ziploc bag or bottle of ice directly in the cooler along with the carrier bag containing the fry inside.
   - **Bucket**: Fry may also be transported in a large bucket. If you do so, be sure to wash it beforehand and only use a diluted bleach solution to do so (1/10). Rinse thoroughly with water multiple times and use dechlorinated water fort the last rinse, then let the bucket air-dry before using it to transport fry. When transporting the fry, put a lid on the container to protect them from any harmful exposure.
     Be sure to coordinate the transportation to the river in a timely manner. The fish should not spend more than 30 minutes to 1 hour in the bucket. Oxygen depletes quickly once the filter is no longer there to supply air to the water.

   Use water from the incubator to fill your carrier bag or bucket, and then put the fry inside using the hand net. You can ask for help to empty the aquarium by tilting it to one side. Doing this can be quite delicate, but if you do it quickly enough to keep the fry in the water, they will be much easier to scoop out once there is less water left in the aquarium. Be careful not to agitate them too much during transport.

3. Releasing the fry: releasing the fry is likely to involve students from your school only and should take approximately two hours to complete. You can contact the FQSA to find out if other schools in your area could join you (sometimes sharing travel fees), and you can ask your river manager or the organization responsible to guide you along the process.
    - You can invite parents to participate in the event, or you can invite other classes from your school. Many have combined this activity with a school field trip, such as a nature hike or canoe float.
    - You are responsible for the cost of the bus or other necessary transportation.
    - Students must wear boots for the event and dress accordingly to stay warm and dry in case it rains on the day of the release.
    - When the time has come to release the fry, the idea is for each student to be able to participate in the stocking process. You can give each student a small paper cup or another type of small container. Ideally, you should give out about 15 cups and have students share them. Having smaller groups of students go to the river to release the fry makes it easier to supervise and ensure that everything runs smoothly. Collect a few fry at a time from the containers and let the students take them into the river.
    - You must ensure the safety of the students on site.

3.4 AFTER RELEASING THE FRY

You must complete the **fry stocking report** that will be sent to you by the Salmon's Tale program manager and return it by email before July 1st. This form is essential for the completion of the final stocking report required by the Ministry for the issuance of the SEG permit. The form takes approximately 5 minutes to fill out and should include information such as the number of students, the number of fry released, and any comments related to the activity.

3.5 CLEANING AND STORING THE INCUBATOR

1. Remove the gravel, wash it with a bleach solution, rinse and let it air dry. Store in a clean bucket for reuse again the following year.
2. Wash all components of the incubator with a bleach solution (1/10) and let them soak for a few minutes. Rinse and let components dry out before storing them in a dry and clean room where they cannot be exposed to freezing temperatures.

We hope that the project has met your expectations and those of the students and that it has raised awareness on the importance of respecting our beautiful rivers and the environment.

Thank you to all the students, teachers, and volunteers for participating in this great collective project.

Bucket with fry inside during a stocking activity.

Fry inside a small plastic cup before being released.