

Life Cycle Survival Game

A simple, 5-minute game to help students consider the challenges to trout survival.

- a. *Each student chooses a number 1-6 and stands in place. (Option: Have each student write his/her number on a piece of scrap paper.)*
- b. *Extension options: Have students imagine additional challenges in a local stream or in the aquarium and run the test again.*
- c. *Will more trout survive in the aquarium than in the wild?*

EASIEST VERSION

Egg Stage: *(Read out results for each number, 1-6)*

1. It just rained a lot and sediment from eroding stream banks covered your redd and suffocated your egg.
2. Congratulations! You hatched!
3. Congratulations! You hatched!
4. The weather has been extremely warm recently, heating the water to 65 degrees. That is too warm for trout eggs.
5. Congratulations! You hatched!
6. Congratulations! You hatched!

Hatched eggs remain standing.

Alevin Stage:

2. Congratulations! You have completely absorbed your yolk sac!
3. Your yolk sack burst between tumbling rocks.
5. Congratulations! You have completely absorbed your yolk sac!
6. Pesticides from a nearby farm field caused a condition that kept you from fully developing your digestive system.

Fry/Fingerlings remain standing.

Parr/Fry, Fingerling Stage:

2. Sorry, a larger fish gobbled you up.
5. Congratulations! You have reached maturity and are able to reproduce. Go forth and multiply as ADULTS!

SLIGHTLY MORE COMPLEX VERSION... a little better, but more number-picking.

Egg Stage:

1. It just rained and you died when the pesticides that the farmer sprayed on his crops near your redd washed into your stream.
2. Congratulations! You hatched!

3. Congratulations! You hatched!
4. The weather has been extremely warm recently, heating the water to 65 degrees. That is too warm for trout eggs.
5. You weren't even fertilized.
6. Congratulations! You hatched!

b. Hatched eggs remain standing.

c. Those students choose a number 1-6

Alevin Stage:

1. Congratulations! You have completely absorbed your yolk sac!
2. Your yolk sac burst when something hit it.
3. Heavy rain washed a bunch of sediment into the stream and covered you up.
4. A dragonfly larva ate you.
5. Congratulations! You have completely absorbed your yolk sac!
6. You were born with a genetic mutation that causes you to die.

d. Fry/Fingerlings remain standing.

e. Those students choose a number 1-6

Parr/Fry, Fingerling Stage:

1. A larger fish gobbled you up.
2. An algal bloom used up all the oxygen in your stream.
3. Acid rain caused the pH of the stream to drop below 6.5.
4. You ended up as Hunter Garrett's dinner.
5. Bad news! There aren't enough resources to support the whole population of trout.
The carrying capacity has decreased, and you died of starvation.
6. Congratulations! You have reached maturity and are able to reproduce. Go forth and multiply as ADULTS!