



FISH LADDER KEVA CHALLENGE



TEACHER INSTRUCTIONS

Decide how you want your students to collaborate on the project - working in pairs or one group per table

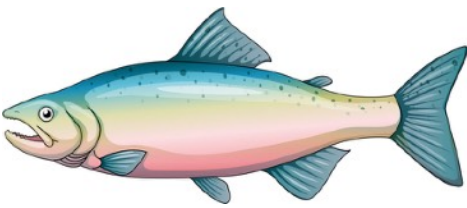
1. Go to ogestem.com on the smart board and click on the **"Maker Space"** button
2. Scroll down to Fish Ladder Challenge for background information
3. Show Science Man Digital Lesson **"Salmon Ladder"** video (2:24 minutes)
4. Point out other examples of fish ladders on the maker space page
5. Show the **"Salmon Super Highway" video** (2:31 minutes) to show **how STEM was used** to solve the problem of salmon being restricted by culverts and roads
6. **Introduce KEVA challenge** - review requirements
7. **Hand out Keva tiles**, challenge cards, and fish to each group (teacher can decide on time limit)
8. When students are ready to test their design, have a teacher give the fish ladder **3 puffs of air** to represent the water current. Also have students demonstrate their fish moving through the ladder. Have them improve the design if needed.
9. If students have successfully completed their challenge and there is time, they can **design a bridge** as seen in the Salmon Super Highway video
10. When finished with the challenge, return Keva tiles /containers and supplies to the table for the next class.

TAKE PHOTOS AND UPLOAD EVIDENCE

to be entered into a drawing for Salmon Super Highway bling (and provide any feedback on how we can improve this activity)

Optional:

- show Lifecycle of Salmon video (4:51 minutes)
- Have the explore.org salmon cam or other Fat Bear live cam showing while students are working (link at bottom of maker space page)



FISH LADDER KEVA CHALLENGE

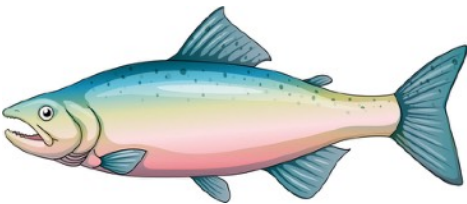
Problem: Salmon need to swim upstream to complete their life cycle. Unfortunately dams, culverts, and other barriers stop them from swimming upstream.

Solution: Fish ladders help fish safely swim upstream

Challenge

Design a fish ladder using Keva planks that:

- ➡ has at least 3 steps
- ➡ is taller than 1 keva plank = 4.5 inches or 12cm
- ➡ can withstand 3 blasts of air from the air cannon
- ➡ large enough for your fish to move through



FISH LADDER KEVA CHALLENGE

Problem: Salmon need to swim upstream to complete their life cycle. Unfortunately dams, culverts, and other barriers stop them from swimming upstream.

Solution: Fish ladders help fish safely swim upstream

Challenge

Design a fish ladder using Keva planks that:

- ➡ has at least 3 steps
- ➡ is taller than 1 keva plank = 4.5 inches or 12cm
- ➡ can withstand 3 blasts of air from the air cannon
- ➡ large enough for your fish to move through