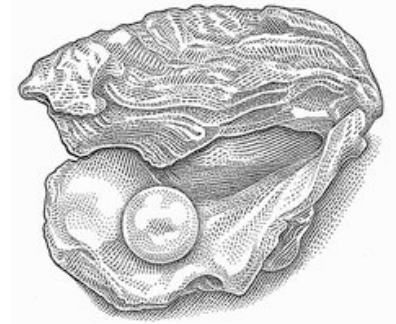


Oyster Shells

Oysters belong to a class of mollusks called **bivalves**, which are protected by a shell that consists of two hinged parts that open and close with a very strong muscle called the adductor muscle. The hard shells are made of calcium carbonate, the same material that is used to protect the oysters' soft bodies from irritants that enter the shell; the irritant is coated with layers of calcium carbonate to form a pearl



credit:

<https://i.pinimg.com/236x/01/34/11/013411300d8583c4fcc54dea3c7b.jpg>

Sea ducks and rock crabs are some animals that prey on Olympia oysters that live in bays and estuaries along the Pacific coast.¹ How might the shell help the oyster to protect itself from its predators?

Shell Building Activity²

Oyster bodies are protected by their shell because their bodies are so delicate and coveted by predators, including humans! Gulls can fly up with an oyster in its mouth and drop them onto a hard surface to get to the inside. Let's see if we can build a protective shell that is as effective as a bivalve's shell!

1. Get a peeled hard-boiled egg.
2. Plan and sketch a concept for how your unprotected oyster body (the egg) can be protected if attacked by a crab or dropped by a seagull.
3. Use any materials found around your home (egg cartons, tissue boxes, milk jugs, tape, glue, rubber bands, etc) to build a protective covering around the egg. Get creative!
4. With an adult's guidance, find a safe way to drop the egg without getting yourself or anyone else hurt. Maybe stand on a chair and drop onto a hard surface, or drop it from the balcony to the ground after making sure that no one is underneath.
5. Open the shell you built, and observe the egg. Did it sustain any damage? In what ways was your design successful, and what can be improved? Share your observations in words or pictures.

¹ https://en.wikipedia.org/wiki/Ostrea_lurida

² Adapted from Billion Oyster Project's *Ecosystem Engineers* curriculum:
<https://static1.squarespace.com/static/5c5604249b8fe80245a0d052/t/5e3af96365c5eb6706ce0fd2/1580923270611/BOP-ConEd-Workbook.pdf>