

# How to Make an Oyster Restoration Mat

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# How to Make an Oyster Restoration Mat

## Start

**1** Thread a zip-tie through the hole in the oyster shell.

**2** Loop the zip-tie around 1 square of mesh and tighten. You should hear a zipping noise. The shell will be on top of the mat and the closed zip-tie will be on the bottom.

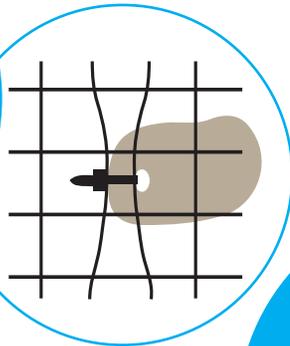
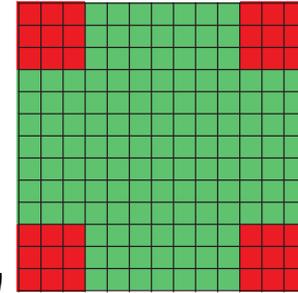
**3** While tightening, make sure the oyster is as upright as possible. You can alternate tightening and adjusting the position of the shell to achieve this.

## Materials

36 drilled shells  
1 square of mesh  
1 bundle of 36 zip-ties  
Newspaper

## The Setup

Oysters should be randomly spaced in the green area. The red area is off limits to enable us to attach mats to weights in the field.



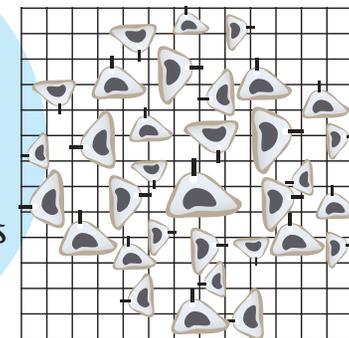
Repeat the process with the remaining zip-ties in your bundle. Keep your bundle together so as not to lose any zip-ties. Make sure you cover all the green area on the mat.

**5** Inspect your mat. Make sure there are 36 shells attached to the mat. Make sure all zip-ties are as tight as possible and attached correctly. You can do this by shaking the mat.

**Optional Step**  
If you are given permission, clip the end of each zip-tie as close to closure as possible. Scissors or clippers will be provided for this.



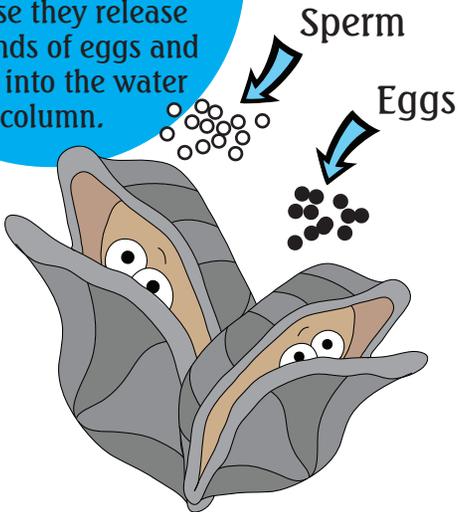
**Finished!**  
Recycle newspaper and the zip-tie ends that were cut off. Stack your completed mats in the designated area.



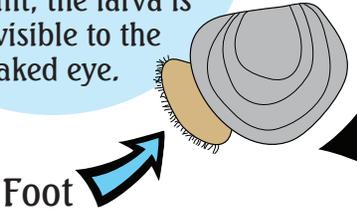
**7**

# Life-Cycle of an Oyster

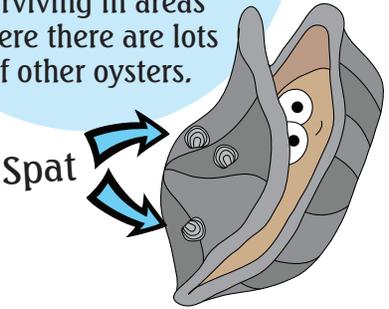
**1** Oysters begin their life-cycle when the waters warm up in spring. Oysters are broadcast spawners because they release thousands of eggs and sperm into the water column.



**2** If fertilized, the oyster larva feeds, grows and develops in the water column for 2-4 weeks until it develops a "foot." At this point, the larva is just visible to the naked eye.



**3** Oyster larvae attach to live oysters or shell. This is a great system because newly settled oysters, called spat, have a good chance of surviving in areas where there are lots of other oysters.



**4** Once attached, oysters radically change from a mobile animal to a sessile animal that will never move again. Oysters, over many years, create oyster reefs. Reefs are composed of layers of dead shells with a layer of live oysters on top.

## Why Are Oysters Important?

Oysters are considered a keystone species because of their importance in their habitat. They filter A LOT of water, an average of 50 gallons per day per oyster. Oyster reefs create hiding places and food for hundreds of animals such as shrimp, crabs and juvenile fishes. They also provide a solid base for attachment for other organisms, such as barnacles. Last, but not least, oyster reefs protect the shoreline from erosion caused by boat wakes, storms and wind.

## How You're Helping!

Globally, 85% of shellfish reefs have been lost. Reefs on the east coast of Florida are considered to be in fair condition, but are declining. To protect our world-class fishing, biodiversity and scenery, we need to protect and maintain our current oyster reefs and restore damaged ones.

The University of Central Florida, Brevard Zoo and many additional partners have been restoring Mosquito Lagoon oyster reefs since 2007. More than 1.6 acres of reef has been restored by 30,000+ volunteers. If you would like to help, please contact Dr. Linda Walters ([linda.walters@ucf.edu](mailto:linda.walters@ucf.edu)) or Jody Palmer ([jpalmers@brevardzoo.org](mailto:jpalmers@brevardzoo.org)). Thanks!

