



Nature's Innovations | Student Edition Worksheet - Page 1

View the video clips for each animal listed on the table below (see video reference to find how to access the videos on shapeoflife.org). As a group, describe the animal's solution to its problem and sketch the solution. Read the comparable human problem and write & sketch a solution that is inspired by the animal's solution.

Think of how people have used ideas from animals to solve engineering problems.

Animal	Animal Problem	Solution	Sketch	Human Problem	Solution	Sketch
Porifera (Sponges)	How to move food to many cells without a mouth			How to clean a swimming pool		
Cnidarians (Jellyfish)	How to catch swimming or drifting food in the water			How to catch fish in the water		
Platyhelminthes (Flatworm)	How to move with intent to hunt			How to drive a car more safely		
Annelids (Burrowing Worm)	How to get underground			How to drill for sediment cores or oil		



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Think of how people have used ideas from animals to solve engineering problems.

Animal	Animal Problem	Solution	Sketch	Human Problem	Solution	Sketch
Arthropods (Crabs)	How to protect soft body parts yet still be able to move			How to protect soldiers in battle		
Molluscs (Nautilus)	How to swim when you have a heavy shell			How to float under the water while SCUBA diving		
Echinoderms (Sea Stars)	How to eat an animal with a protective shell			How to extract gold from ore		



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Student Video Reference

Sponge – Under Topics, click on Behavior, click on Sponges: Filter Feeding Made Visible (2:17 minutes).

And Under Topics, click on Animations, click on Sponge: Wild Ride through a Sponge (2:19 minutes)

Cnidarians – Under Topics, click on Other Topics, click on Cnidarians: Deep Sea Research (8:39 minutes total or go from minute 2:00 to 3:10)

Platyhelminthes – Under Topics, click on Phyla, click on Flatworms: The First Hunter (9:54 minutes)

Annelids – Under Topics, click on Behavior, click on Annelids: Abarenicola, Burrowing Worm (2:38 minutes)

Arthropods – Under Topics, click on Behavior, click on Arthropods: Blue Crab Molting (2:24 minutes)

Mollusks – Under Topics, click on Behavior, click on Molluscs: Nautilus Regulates its Buoyancy (1:54 minutes)

Echinoderms – Under Topics, click on Behavior, click on Echinoderm: Sea Star Time Lapse: Eating Mussel (2:47 minutes)