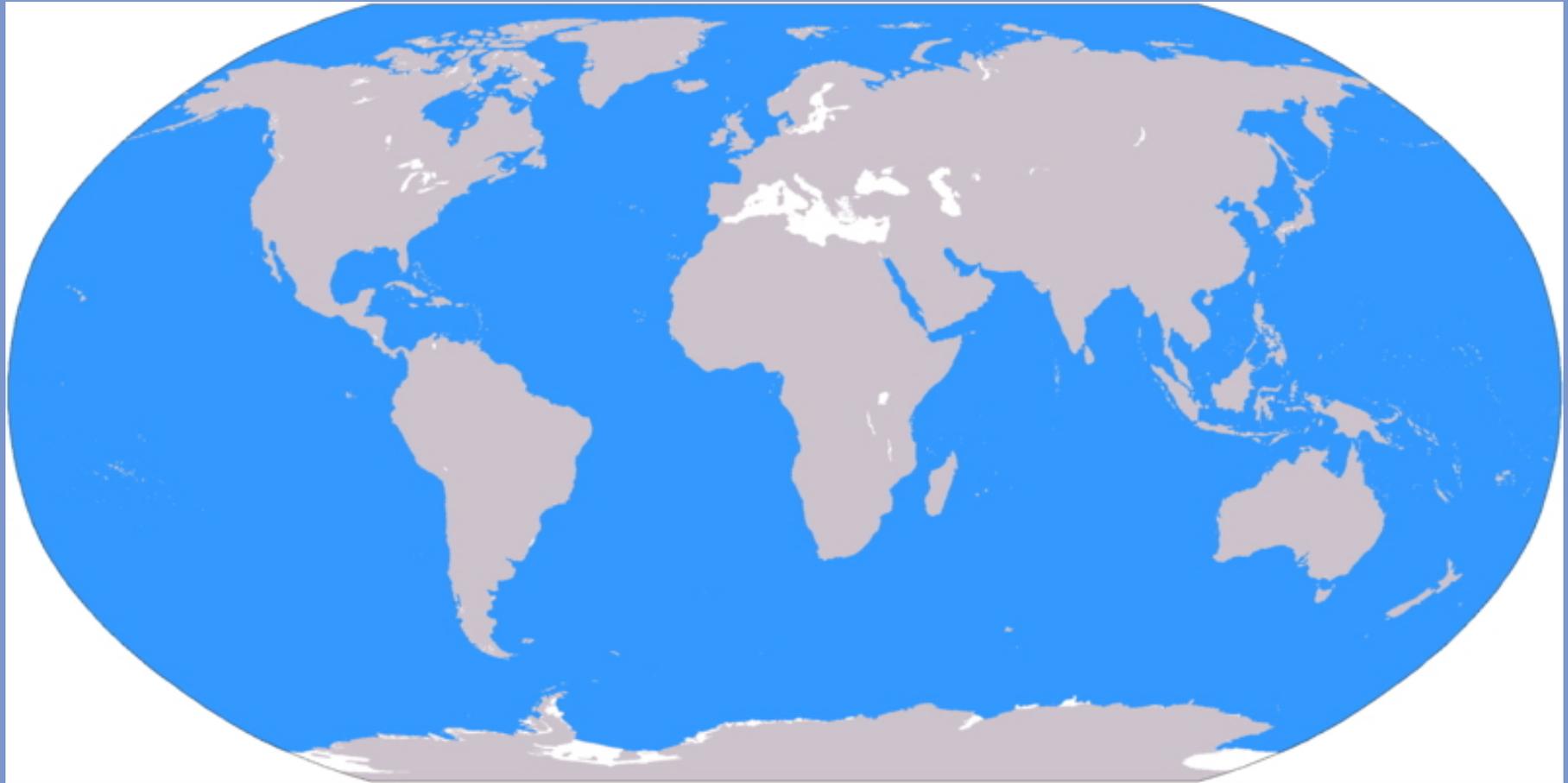


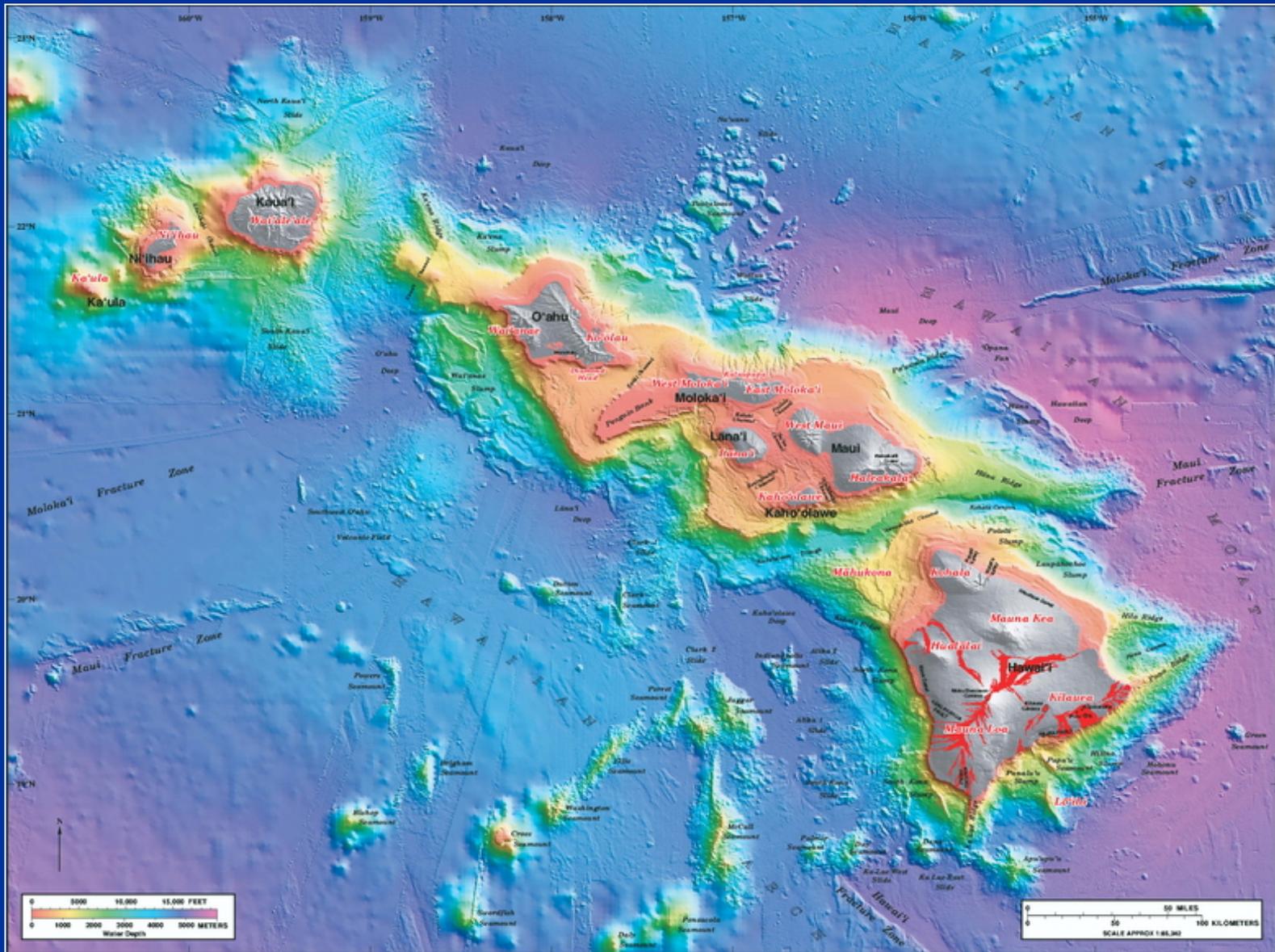
THE OPEN OCEAN

Grade 3 Unit 2 Lesson 1

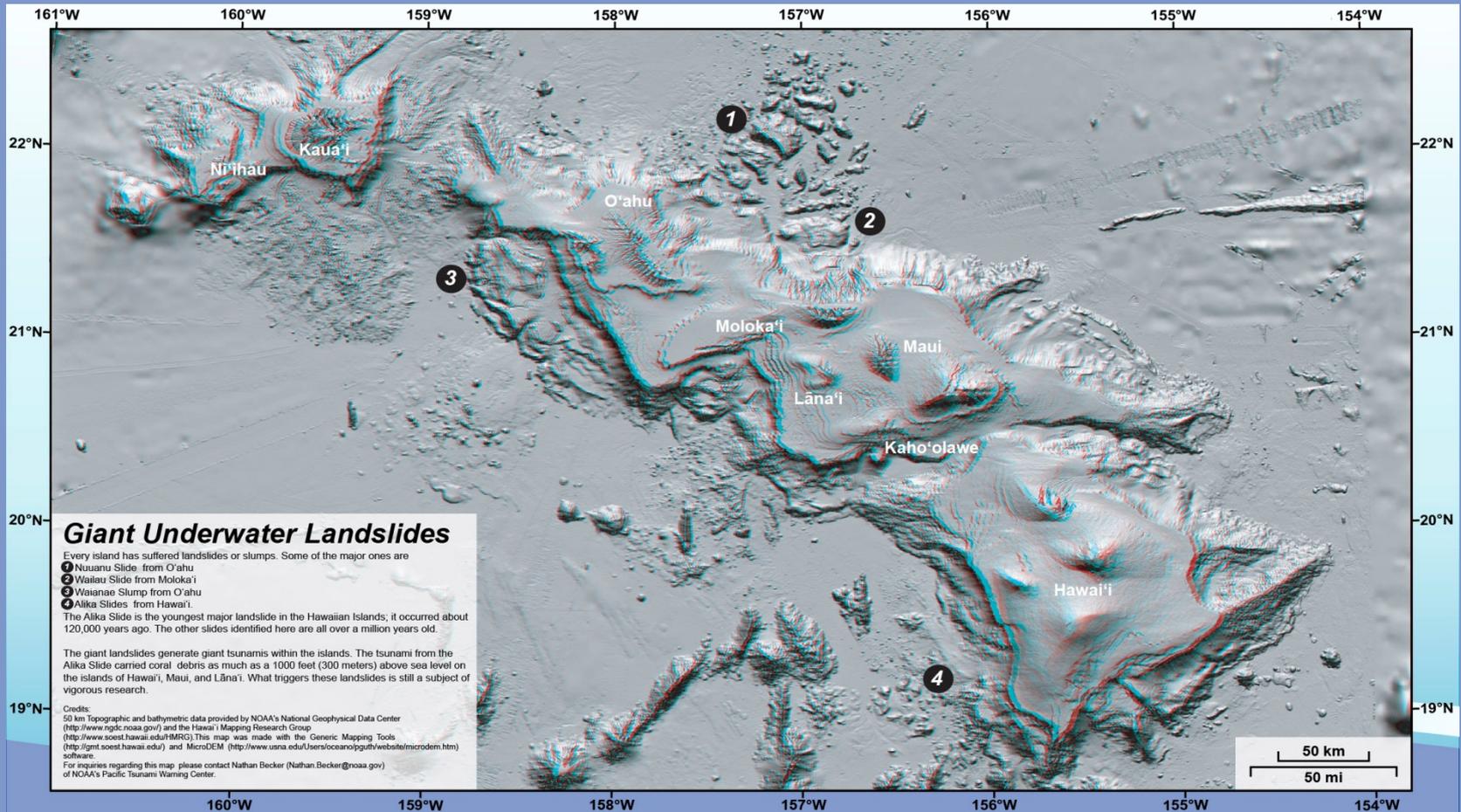


**The ocean is the world's largest habitat.
It covers about 70% of the Earth's surface.**





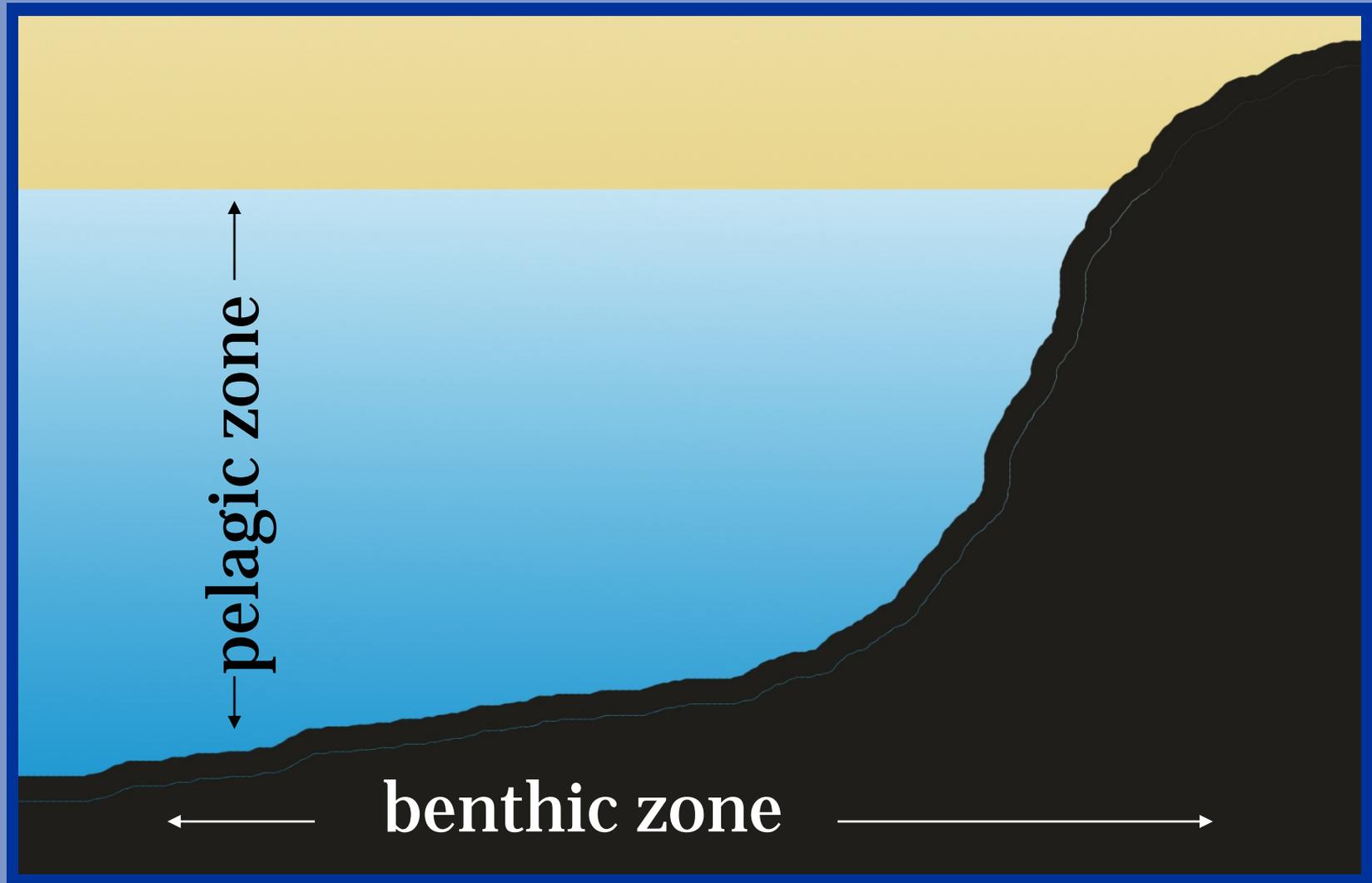
The ocean floor is not flat; it has valleys (canyons) and mountains (seamounts) just like those on land.



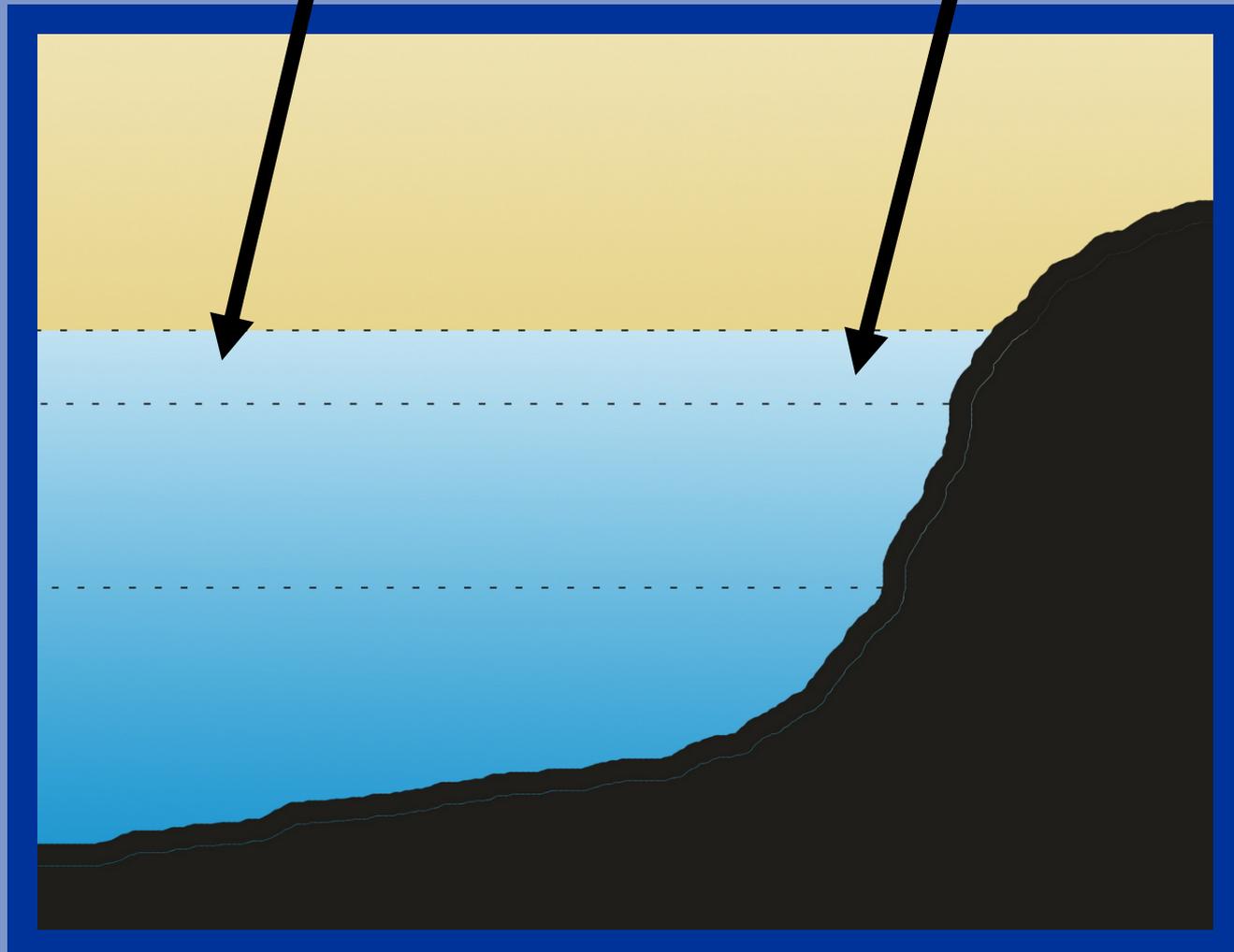
The ocean floor is not flat; it has valleys (canyons) and mountains (seamounts) just like those on land.

Use 3-D red/blue glasses to view this image.

Scientists divide the ocean into two zones:

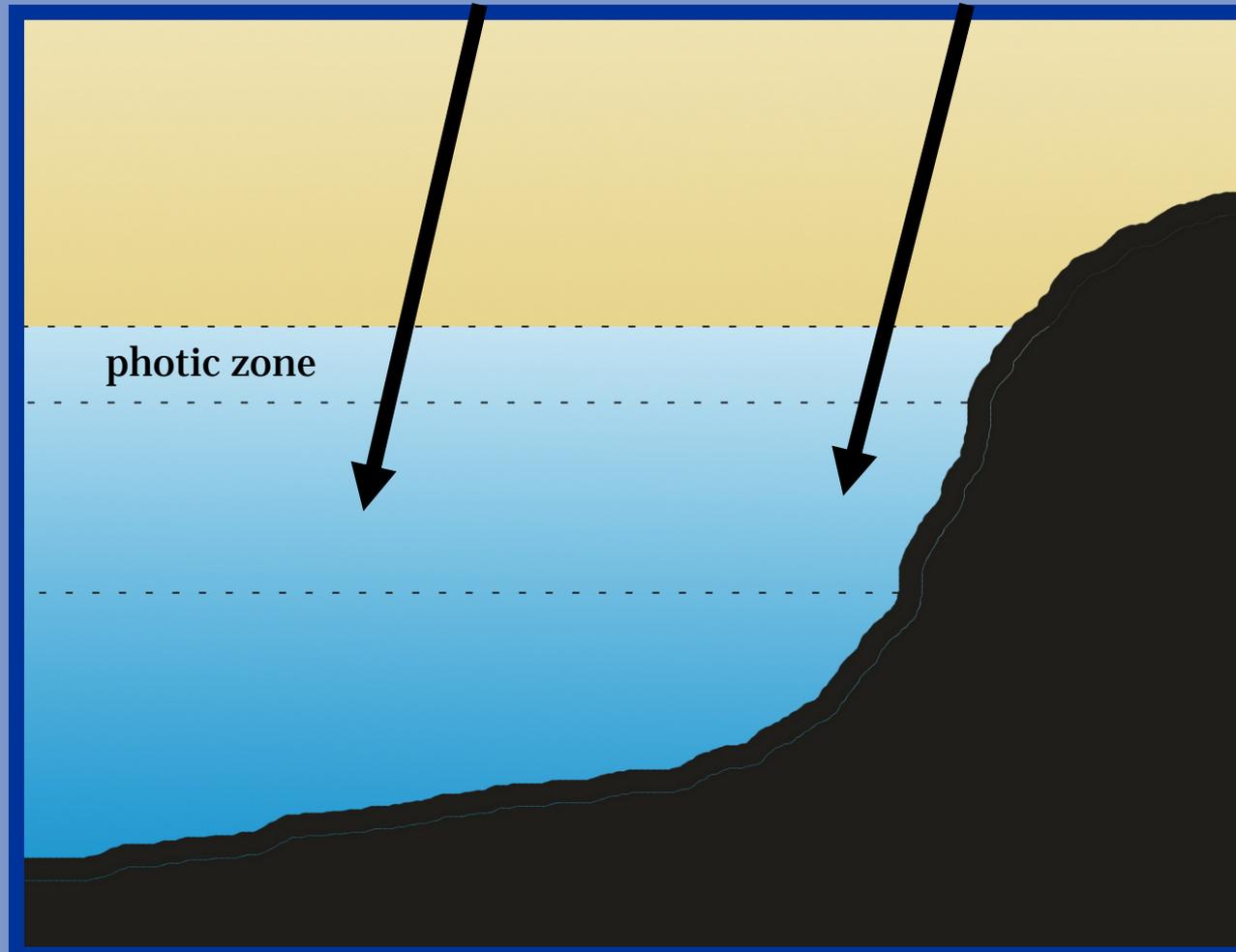


Photic Zone



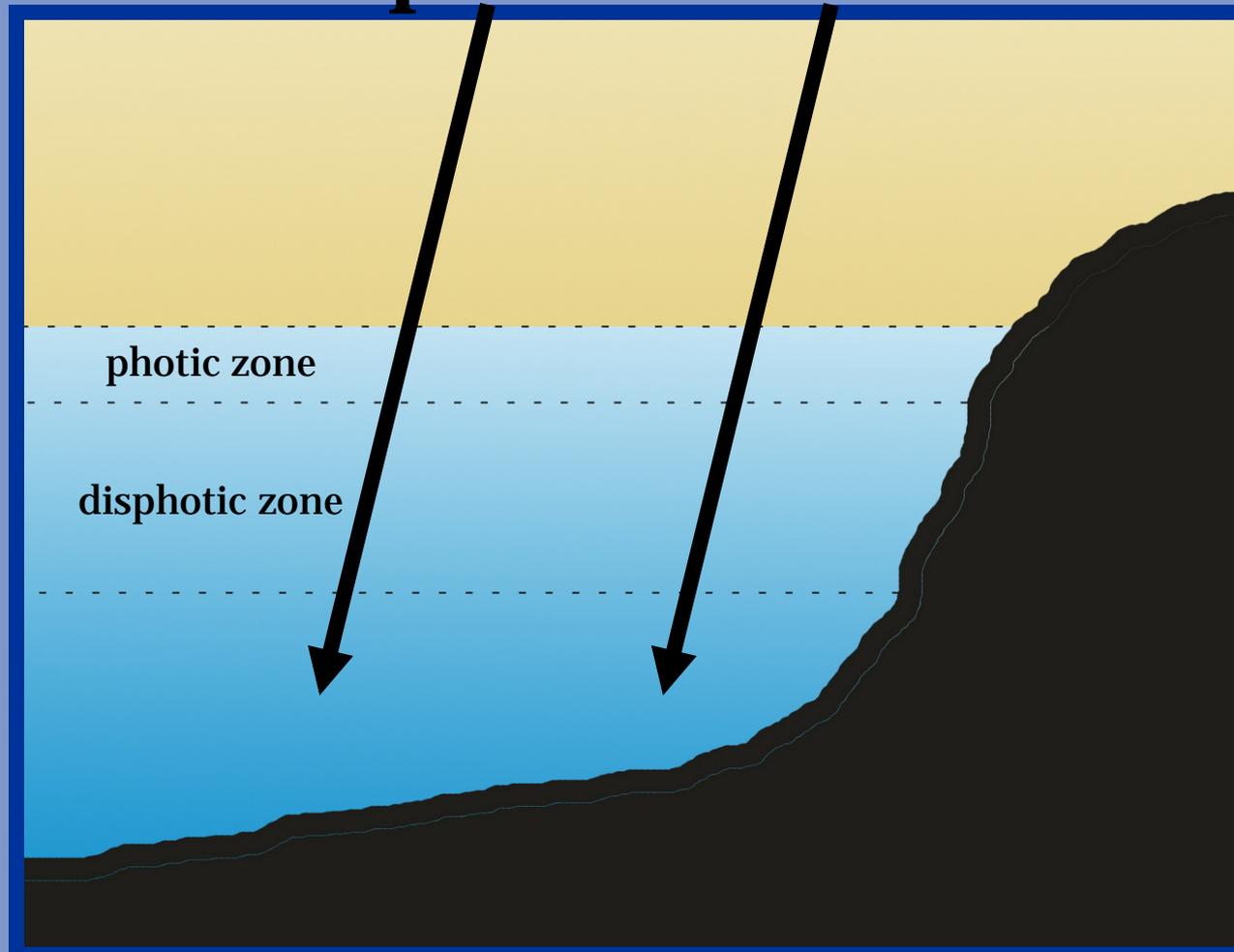
Photic Zone is the top layer, nearest the surface of the ocean and is also called the sunlight layer. In this zone enough light penetrates the water to allow photosynthesis.

Disphotic Zone



The **Disphotic Zone** is found just below the Photic Zone and is known as the twilight layer. In this zone only a small amount of light penetrates the water. Plants do not grow here due to the insufficient amount of light.

Aphotic Zone



The darkness layer or **Aphotic Zone** is entirely dark meaning there is no light. About 90% of the ocean is in this layer.



(c) Wolcott Henry 2005/Marine Photobank

The whale shark, like most marine organisms, is typically found in the *sunlight layer* or **photic zone** of the open ocean layers.

Animals that live in the **disphotic zone**, like many types of squid, are adapted to life in near darkness, cold water, and high pressure.



photo courtesy of Robbie Cada, FishBase



Photo credit: NOAA/MBARI 2006

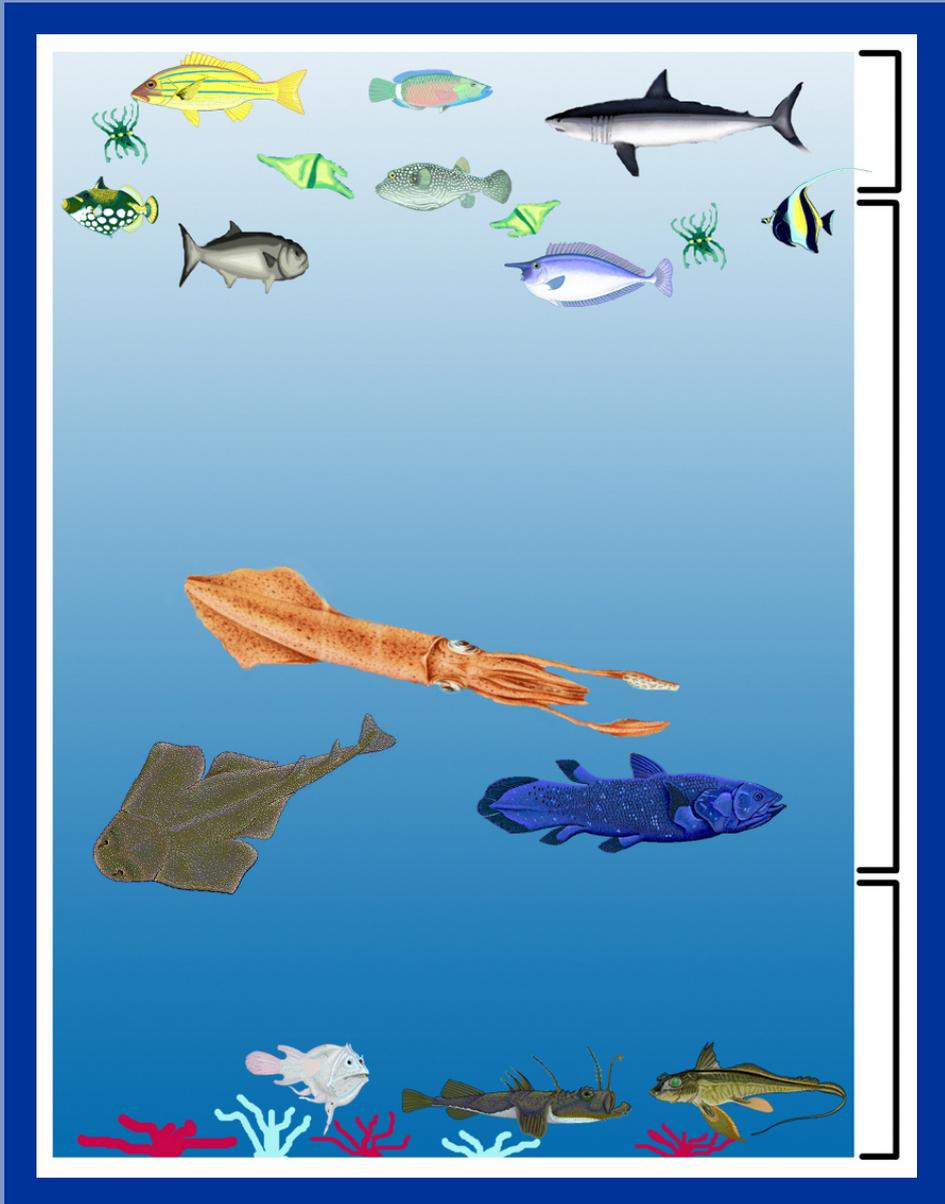
Image courtesy of New Zealand-American Submarine Ring of Fire 2005 Exploration,
NOAA Vents Program



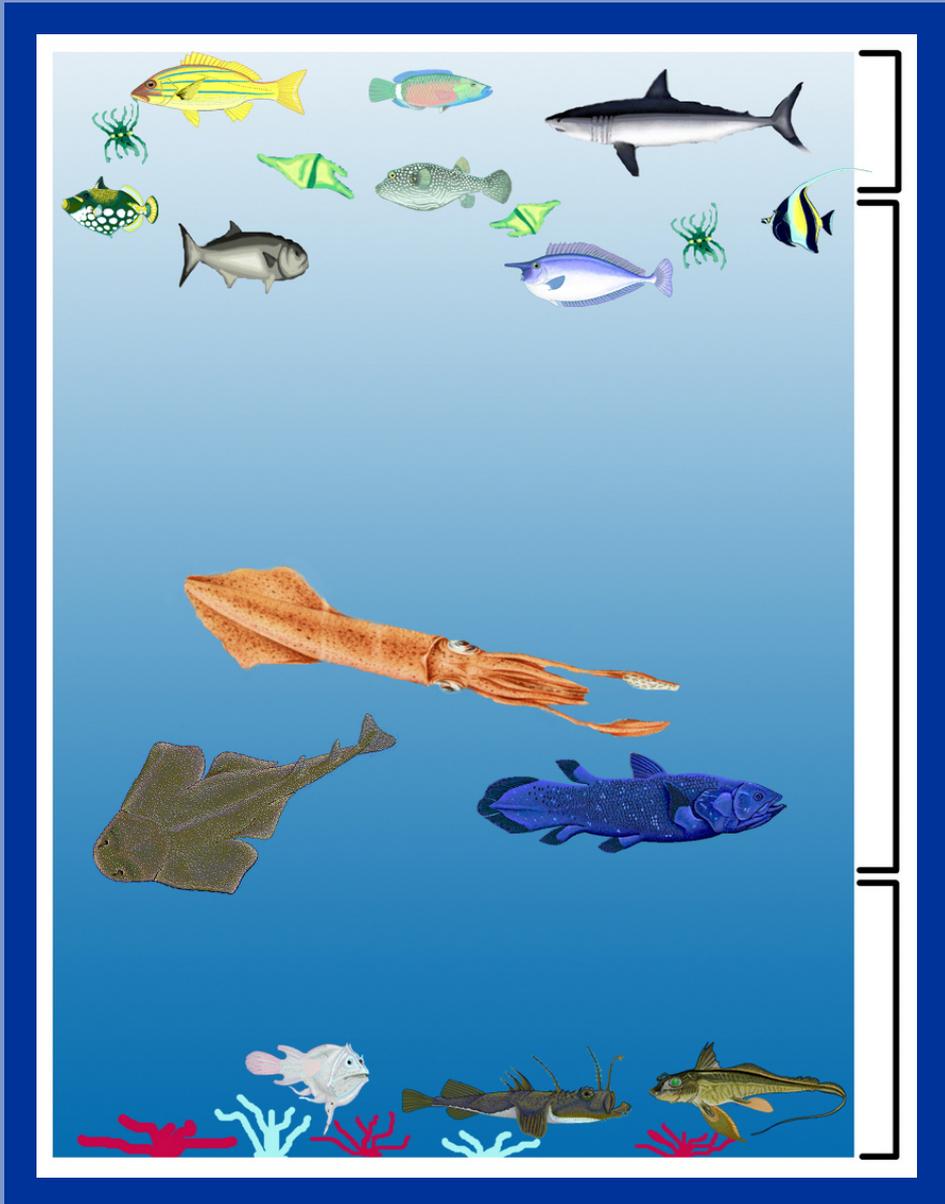
Animals that thrive in the ***aphotic zone*** are used to living without light!



Name That Open Ocean Zone!



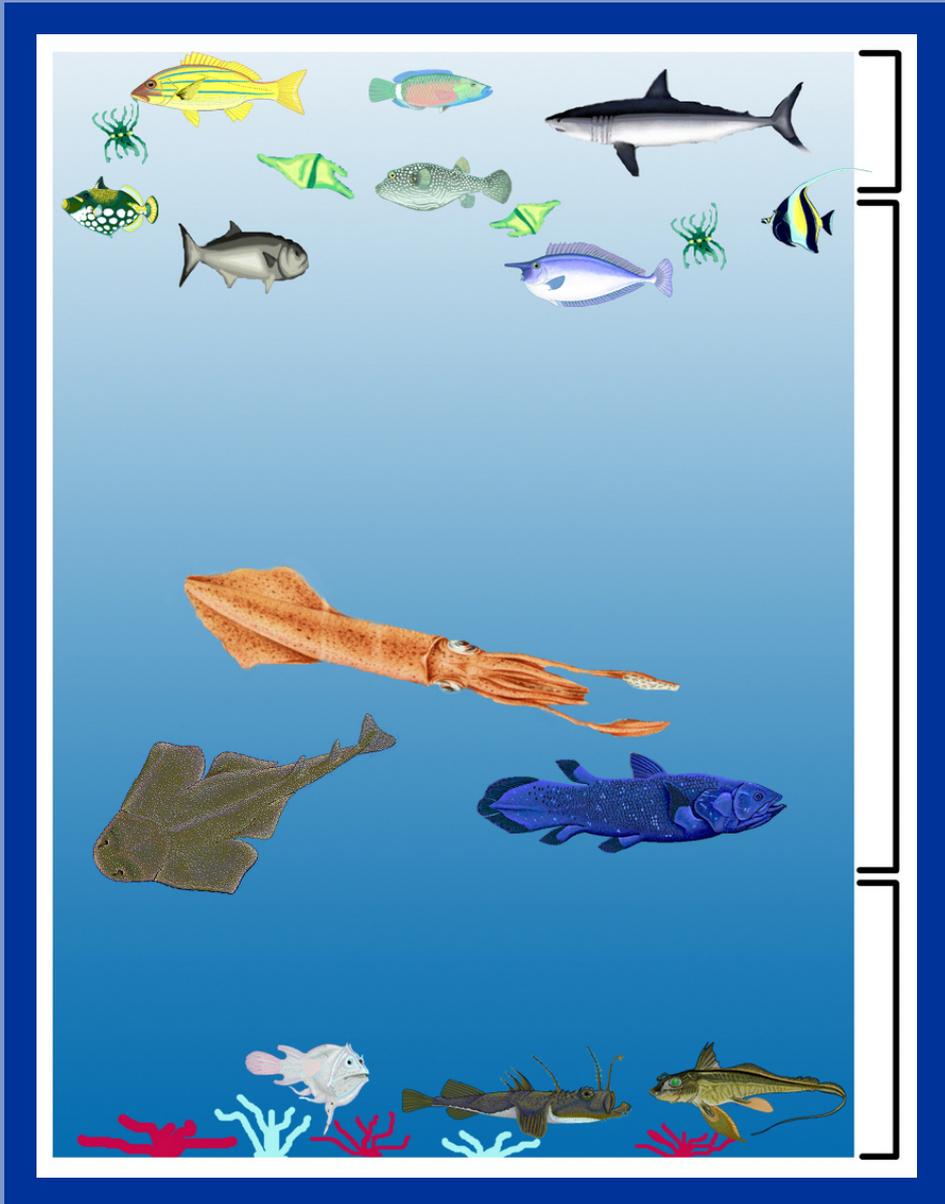
Name That Open Ocean Zone!



Photic zone
(sunlight zone)



Name That Open Ocean Zone!

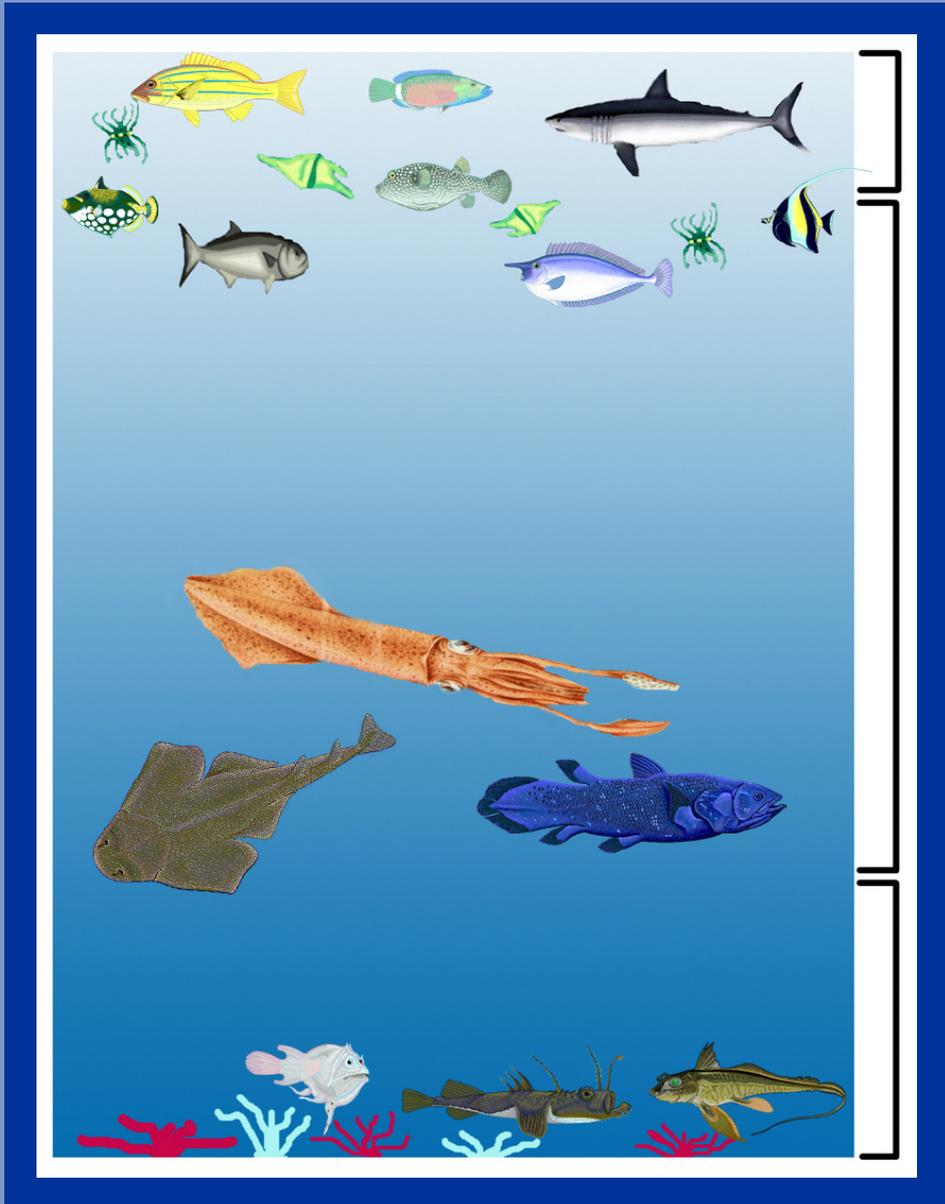


Photic zone
(sunlight zone)

Disphotic zone
(twilight layer)



Name That Open Ocean Zone!



Photic zone
(sunlight zone)

Disphotic zone
(twilight layer)

Aphotic zone
(darkness layer)

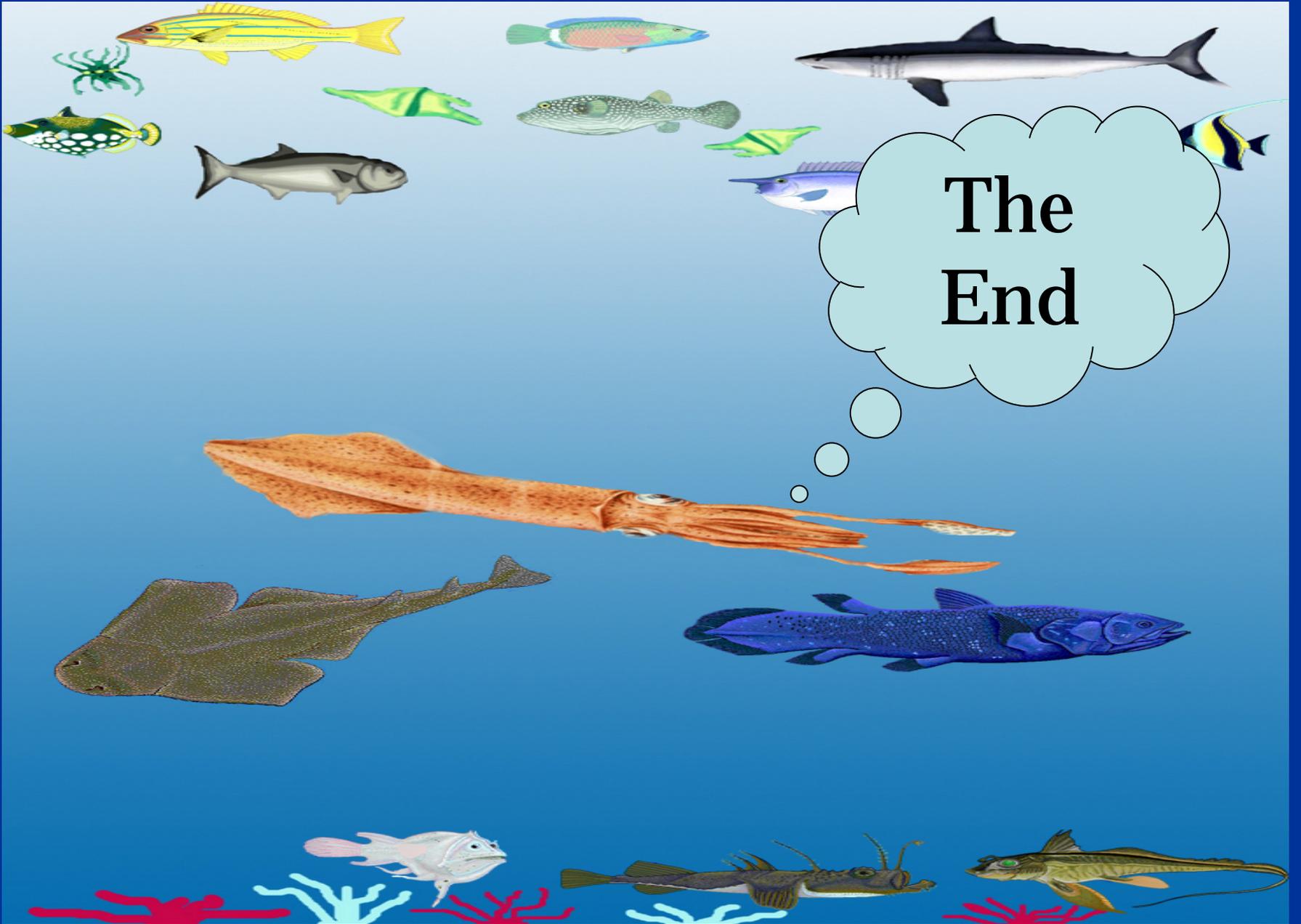
Name That Open Ocean Zone!



Photic zone

Disphotic zone

Aphotic zone



The
End