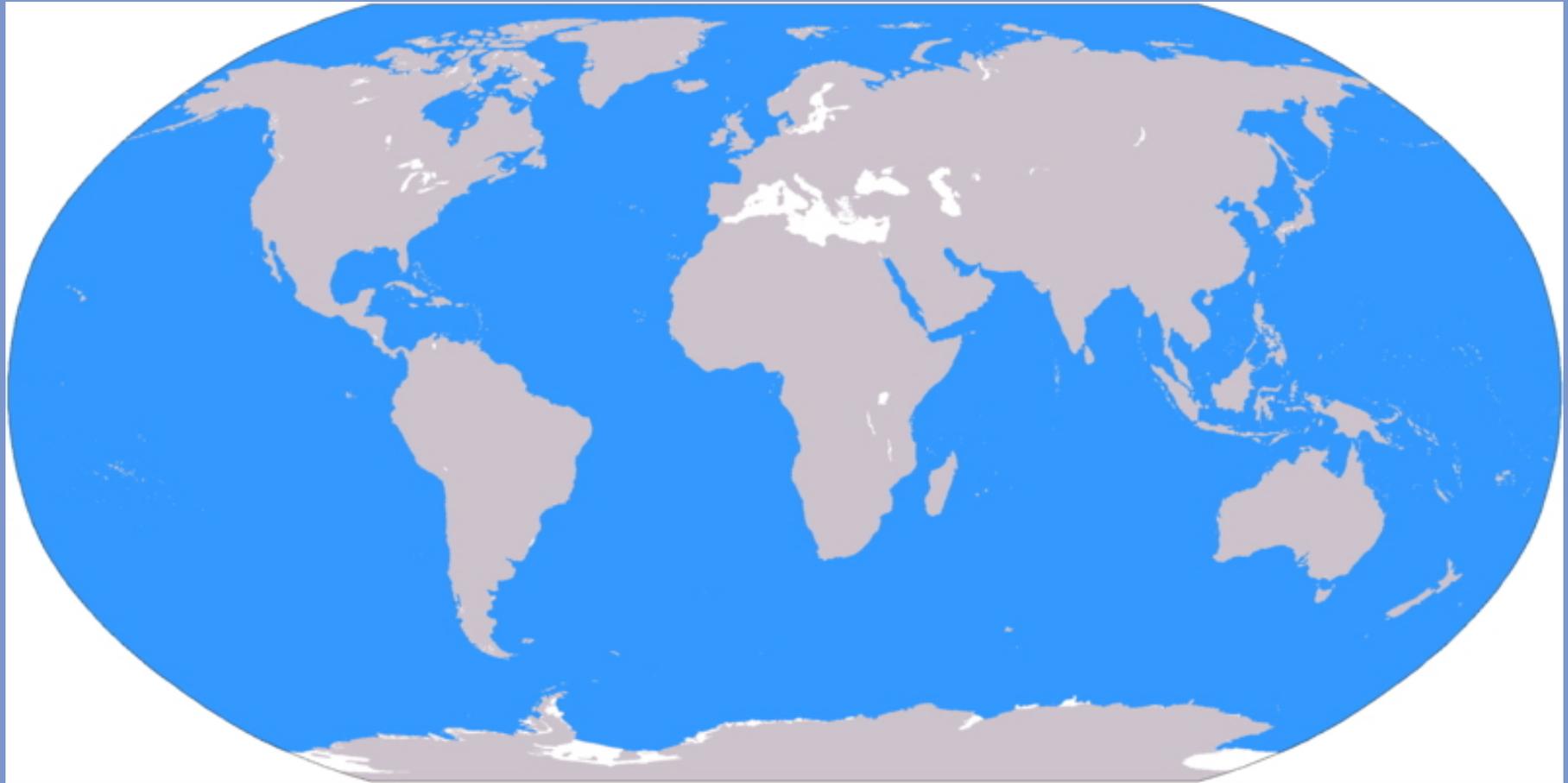


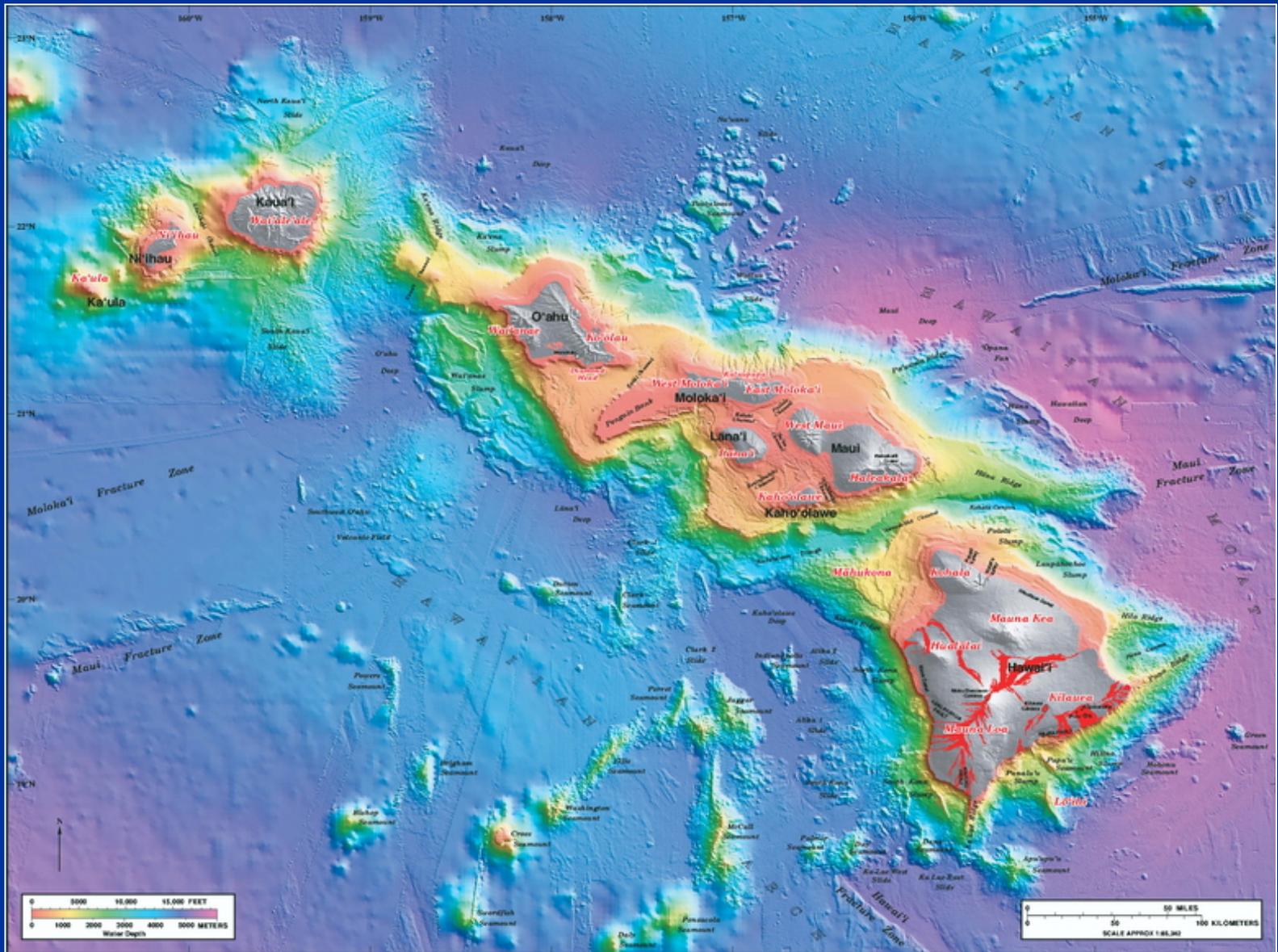
# THE OPEN OCEAN

Grade 3 Unit 2 Lesson 1

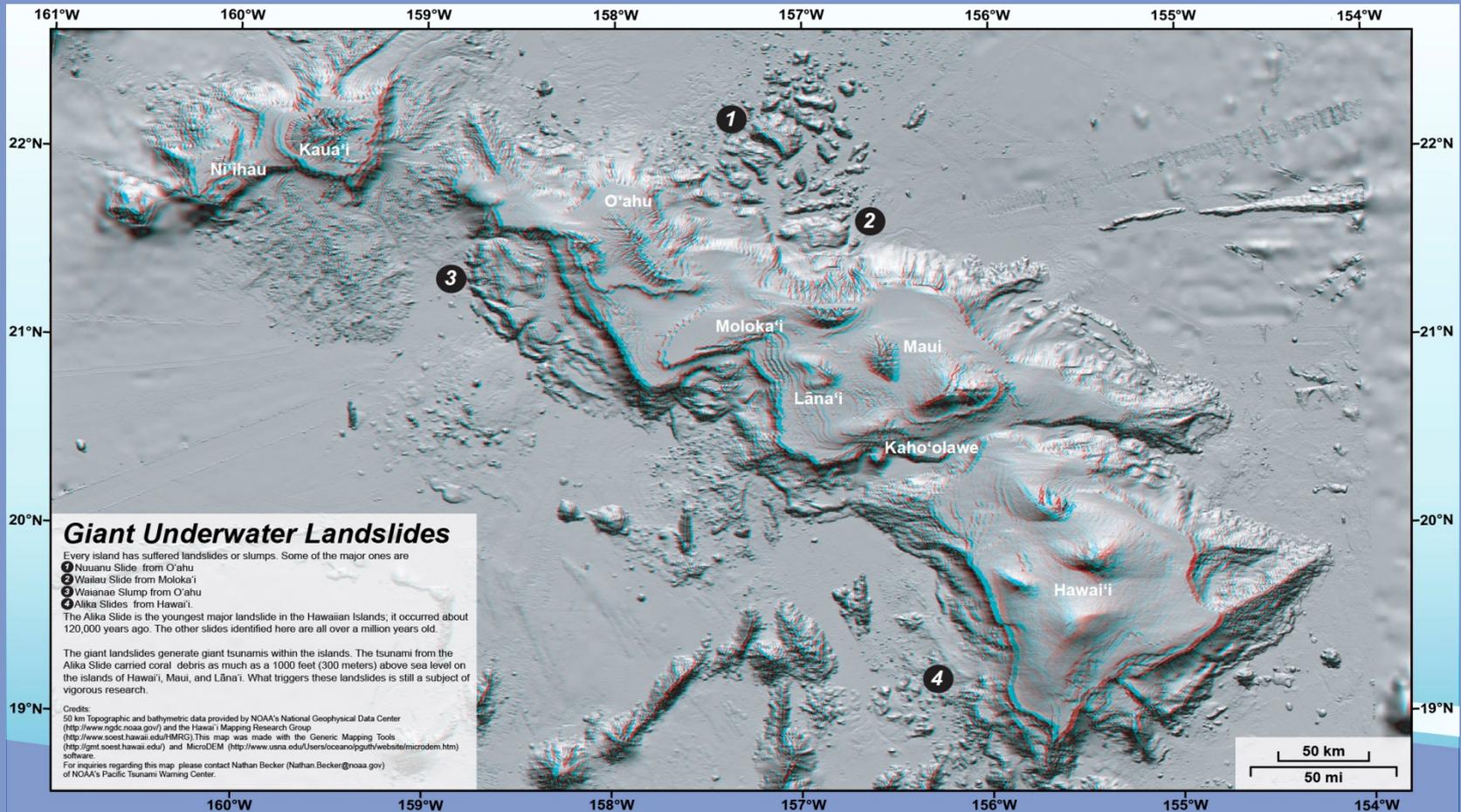


**The ocean is the world's largest habitat.  
It covers about 70% of the Earth's surface.**





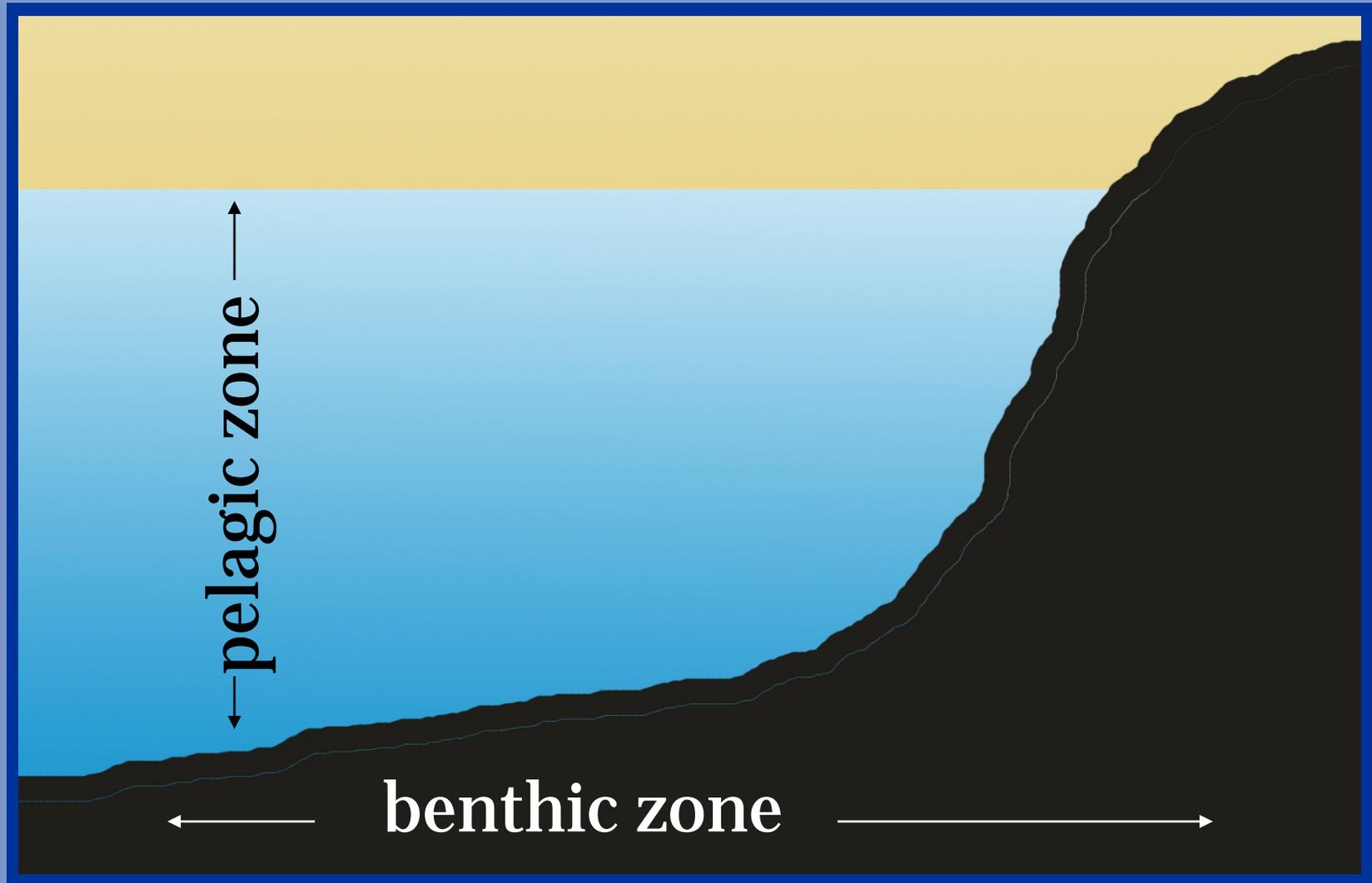
The ocean floor is not flat; it has valleys (canyons) and mountains (seamounts) just like those on land.



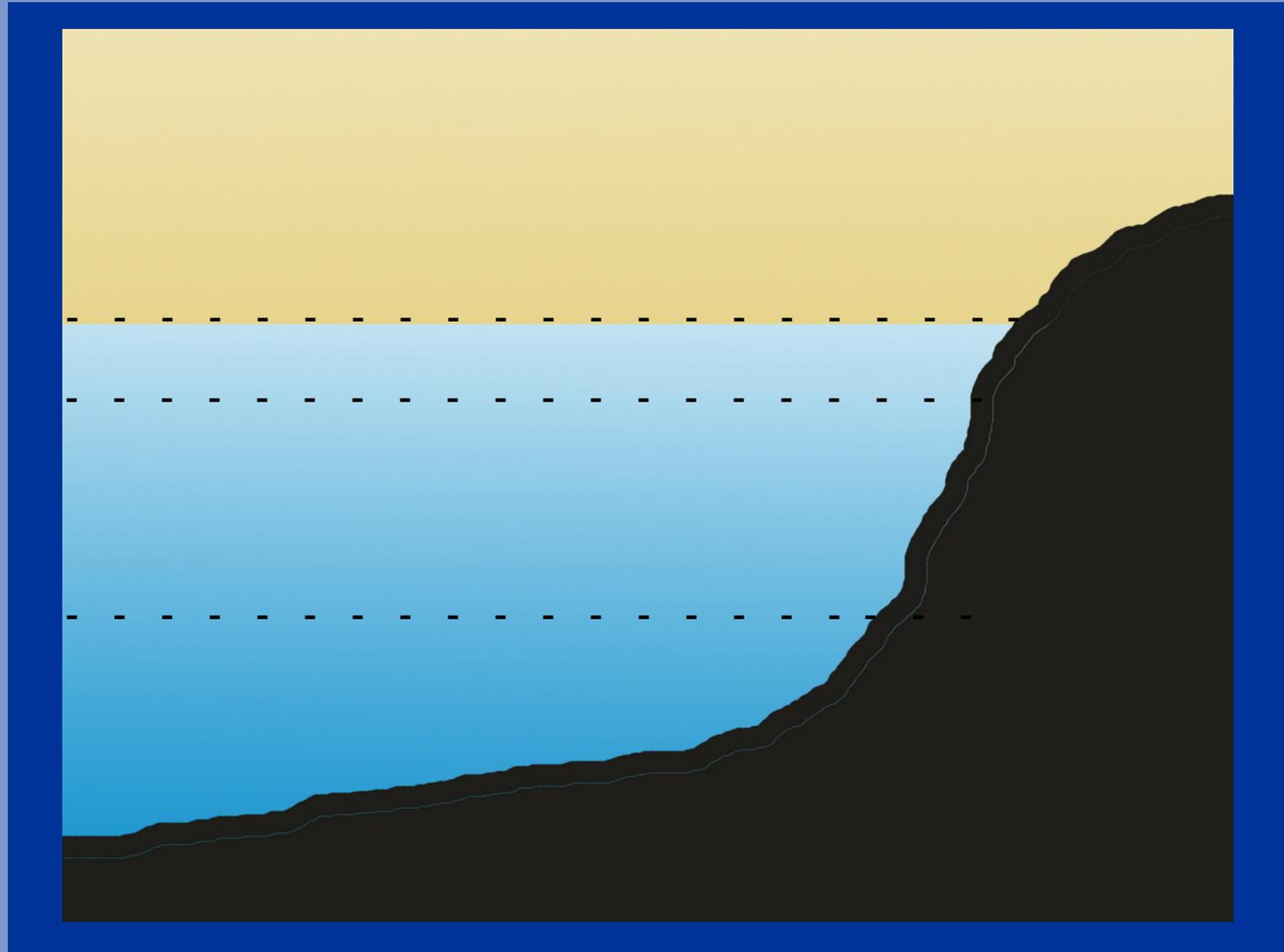
The ocean floor is not flat; it has valleys (canyons) and mountains (seamounts) just like those on land.

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

# Scientists divide the ocean into two zones:

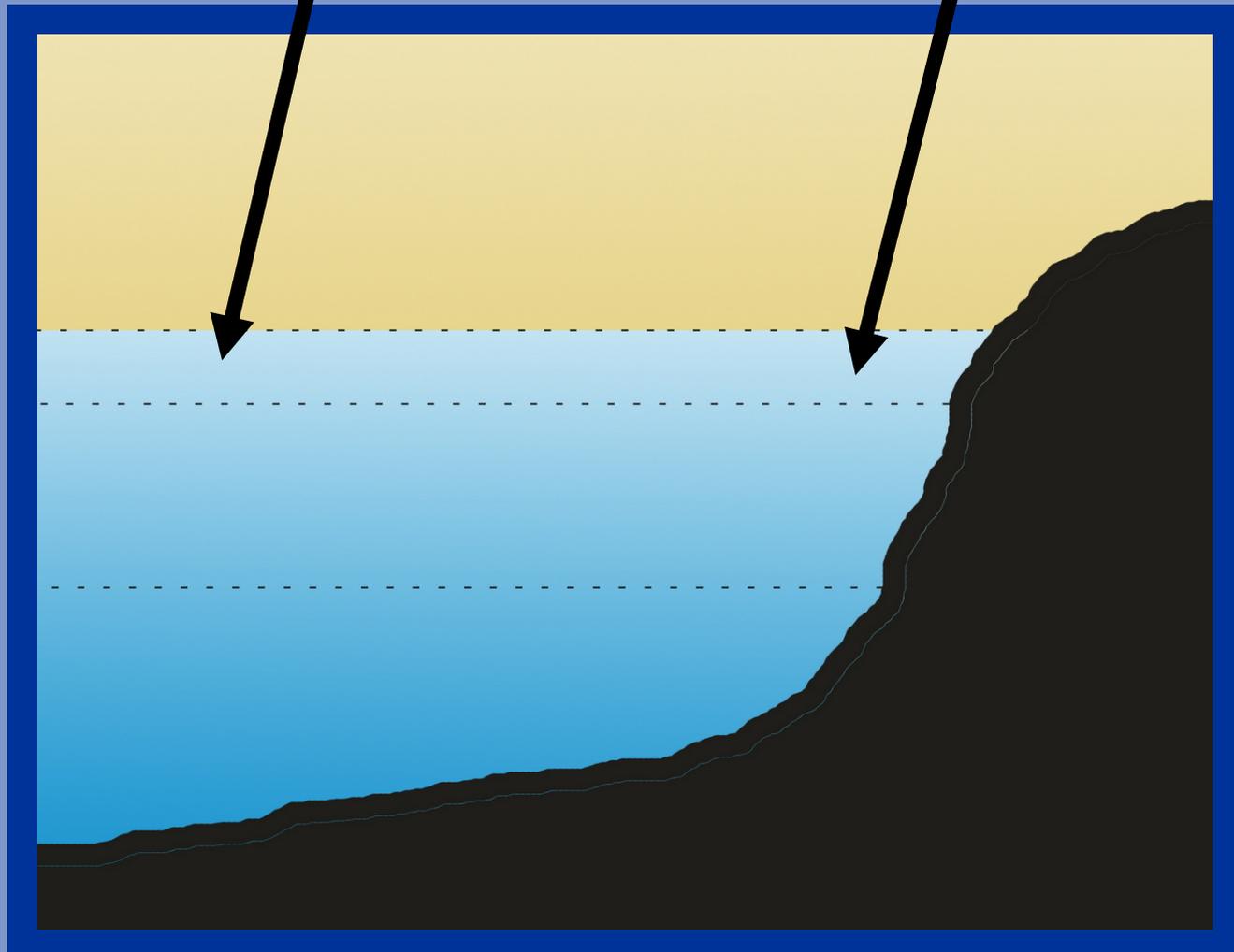


There are zones within the pelagic zone.



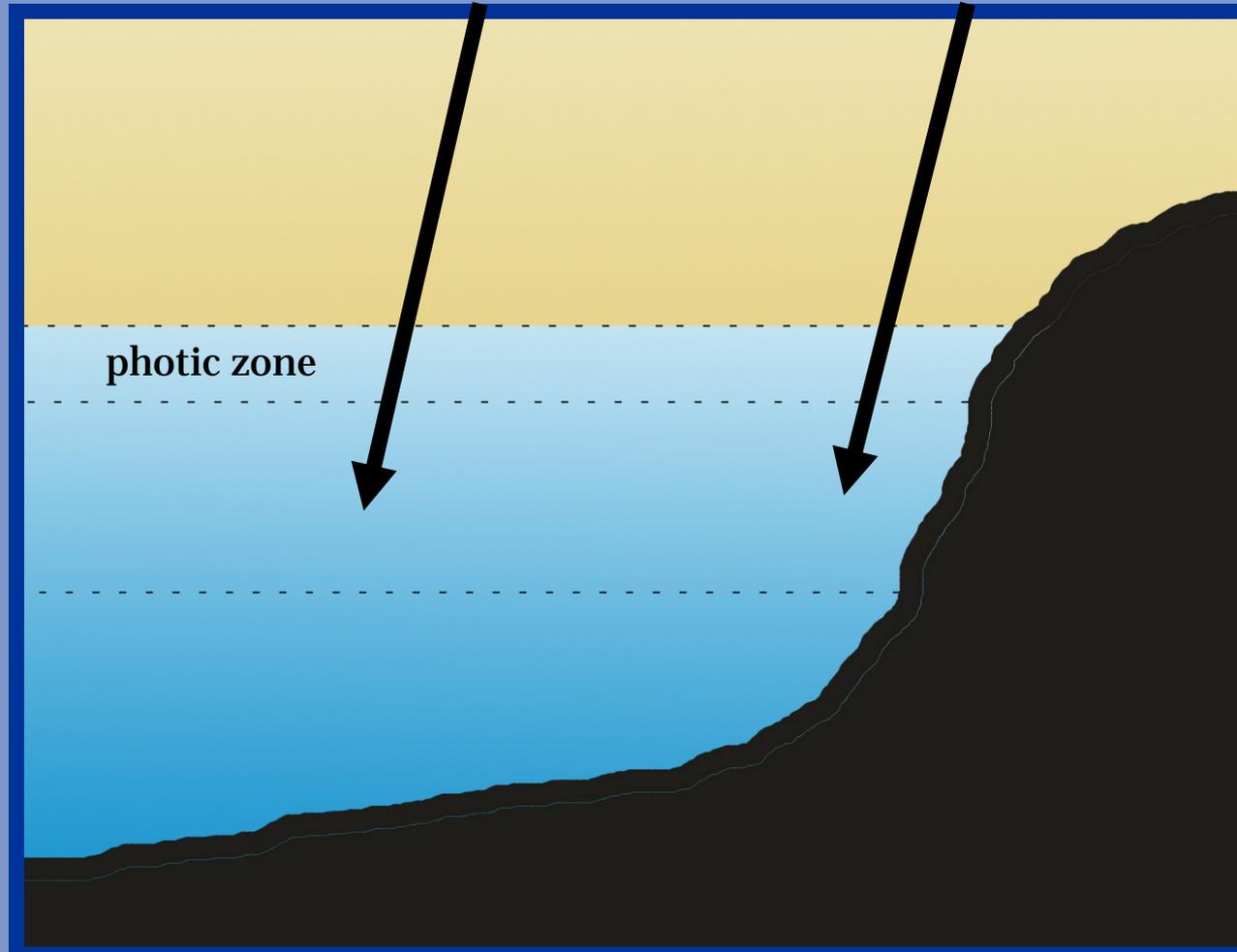
Let's learn them!

# Photic Zone



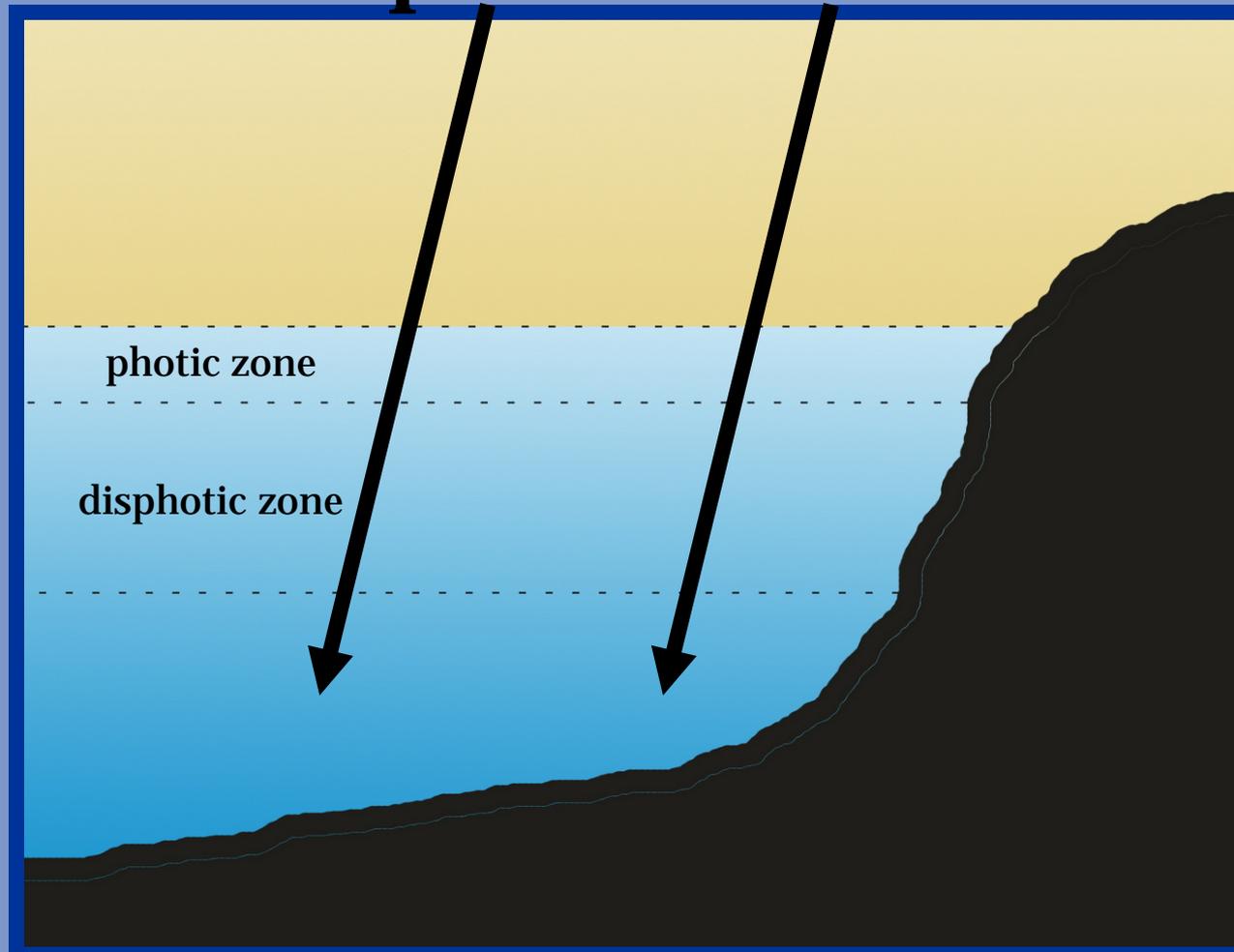
**Photic Zone** is the top layer, nearest the surface of the ocean and is also called the sunlight layer. In this zone enough light penetrates the water to allow photosynthesis.

# 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

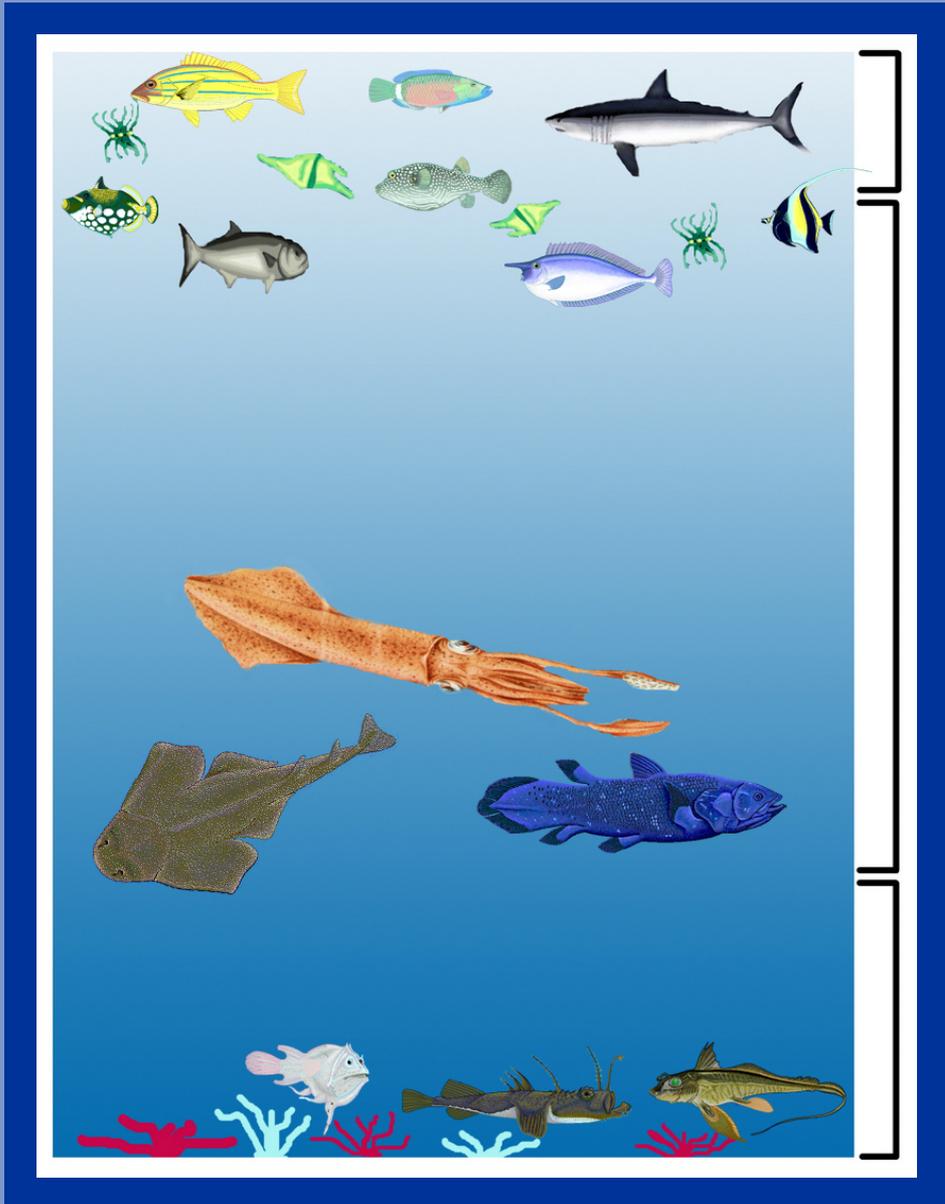
Image courtesy of New Zealand-American Submarine Ring of Fire 2005 Exploration,  
NOAA Vents Program



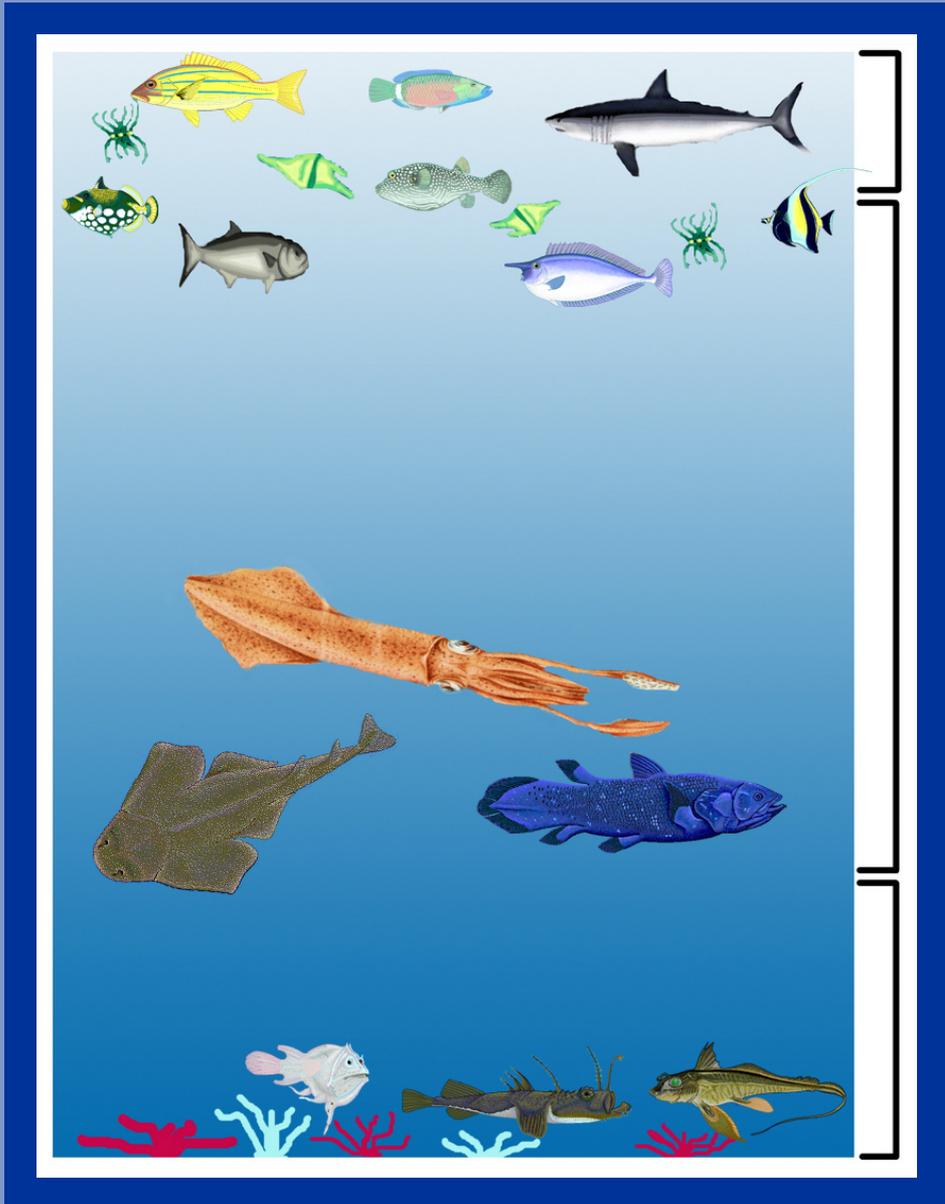
Animals that thrive in the ***aphotic zone*** are used to living without light!



# Name That Open Ocean Zone!



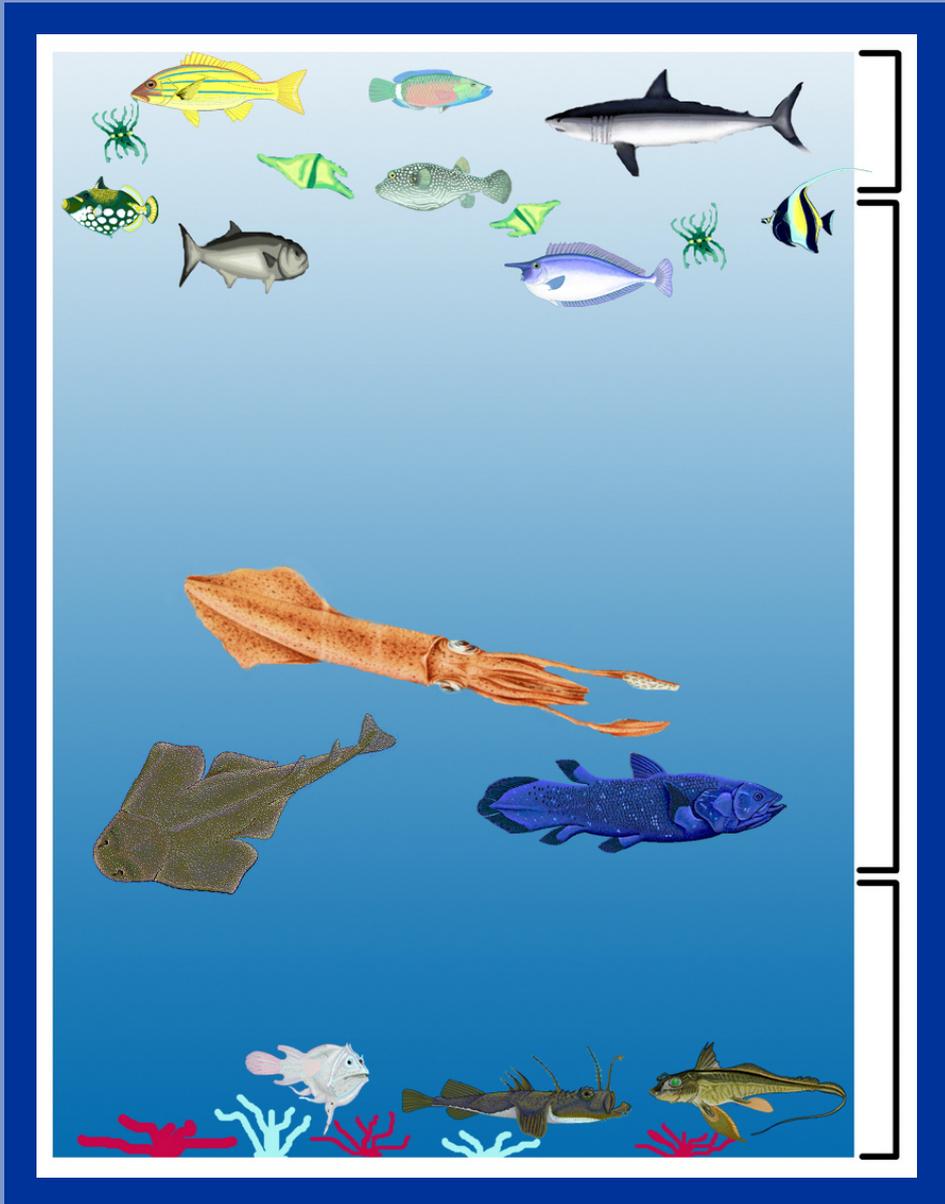
# Name That Open Ocean Zone!



Photic zone  
(sunlight zone)



# Name That Open Ocean Zone!

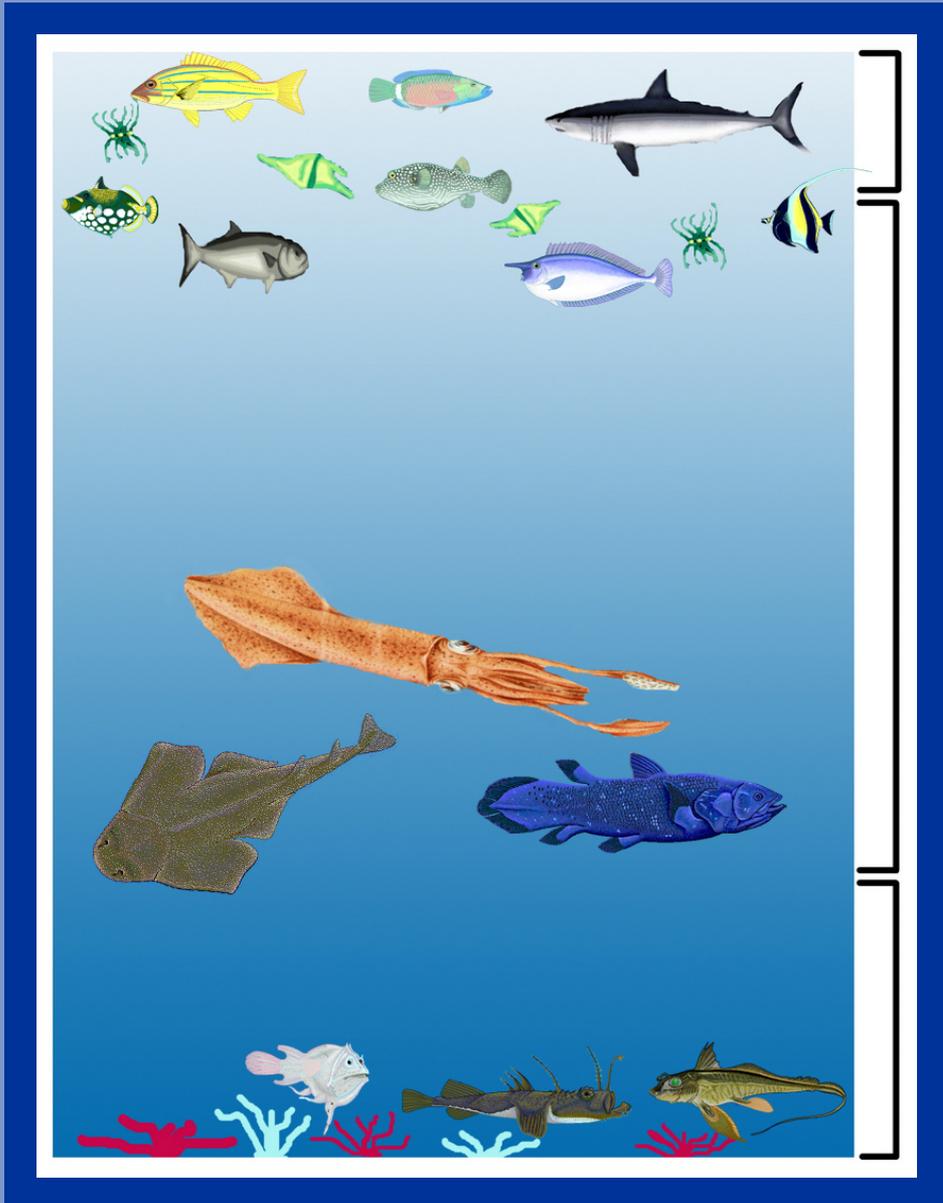


Photic zone  
(sunlight zone)

Disphotic zone  
(twilight layer)



# Name That Open Ocean Zone!



Photic zone  
(sunlight zone)

Disphotic zone  
(twilight layer)

Aphotic zone  
(darkness layer)

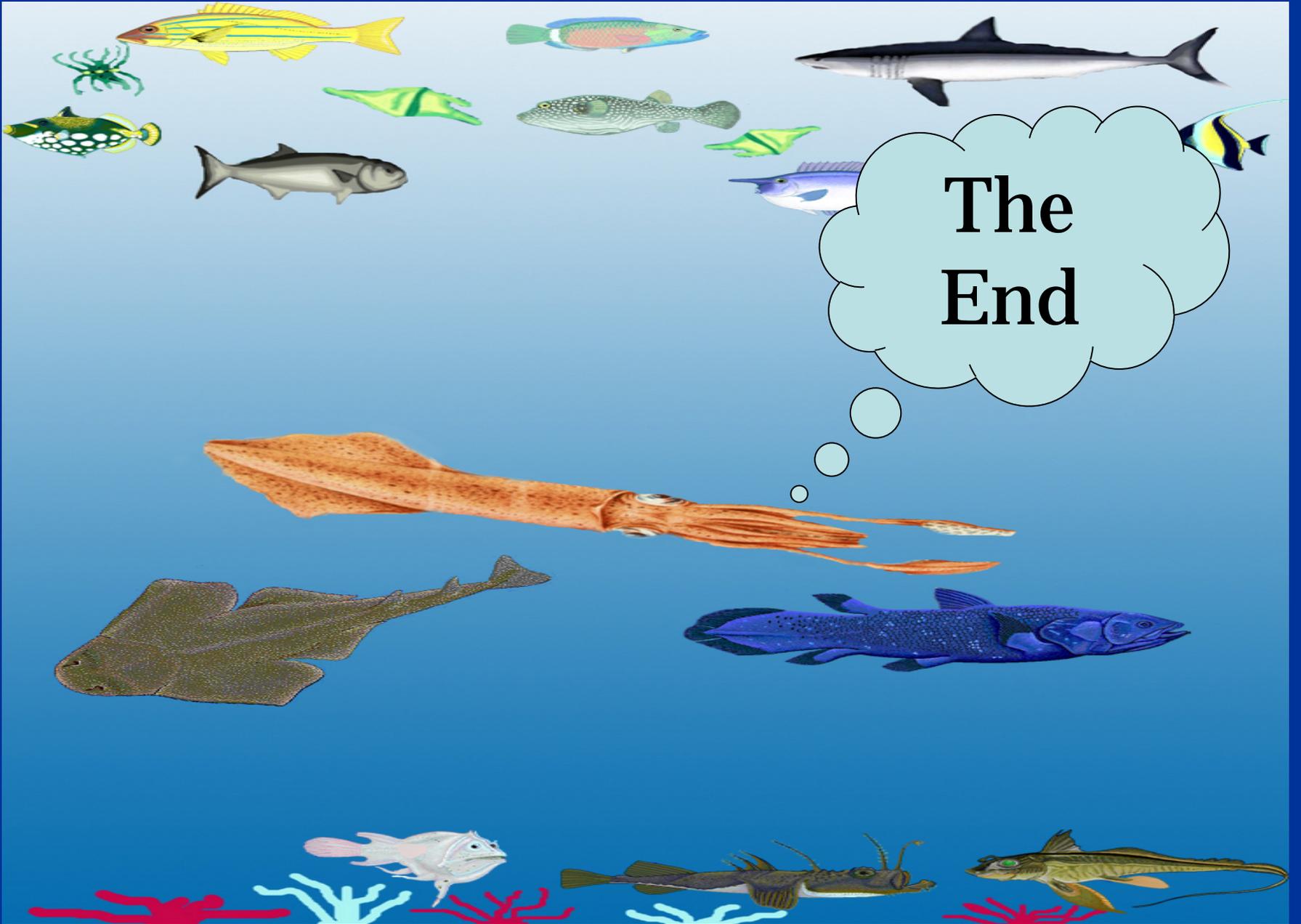
# Name That Open Ocean Zone!



Photic zone

Disphotic zone

Aphotic zone



The  
End