



UniKL
UNIVERSITI
KUALA LUMPUR



Marine Coastal and Delta Sustainability for Southeast Asia (610327-EPP-1-2019-1-DE-EPPKA2-CBHE-JP)



MARINE AND COASTAL ENVIRONMENT

*The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein



Co-funded by the
Erasmus+ Programme
of the European Union



Marine & Coastal Environment

Introduction

Facts of oceanic proportions:

1. Covers 70.8% of Earth's surface.
2. <0.5% is freshwater.
3. Main reservoir of O₂.
4. Earth's thermal reservoir and regulator.
5. Major reservoir for CO₂.
6. Constitutes 5 major oceans.



5 Major Oceans

Facts of oceanic proportions:

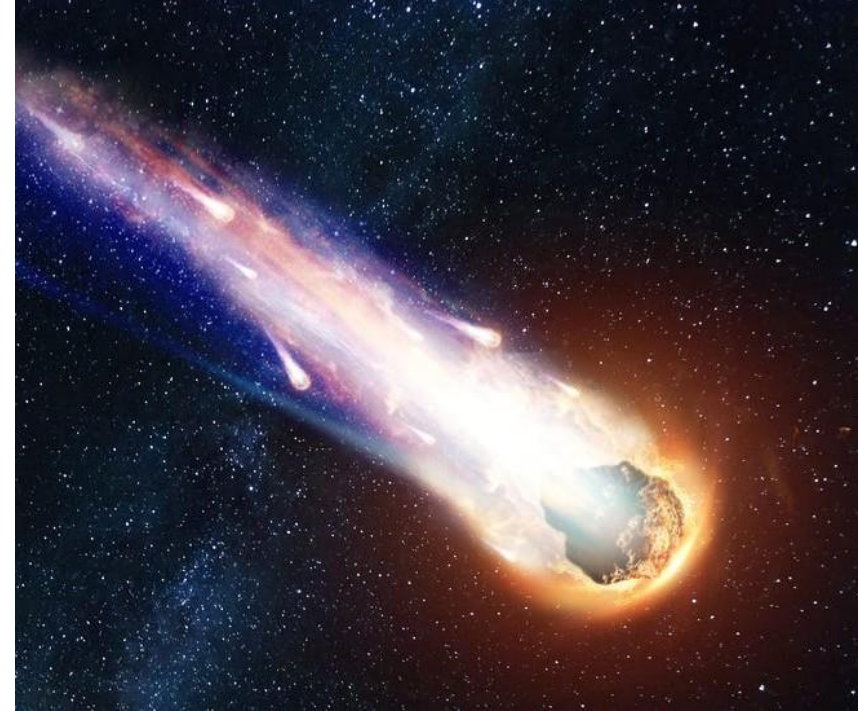
1. Pacific
2. Atlantic
3. Indian
4. Arctic
5. Southern



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

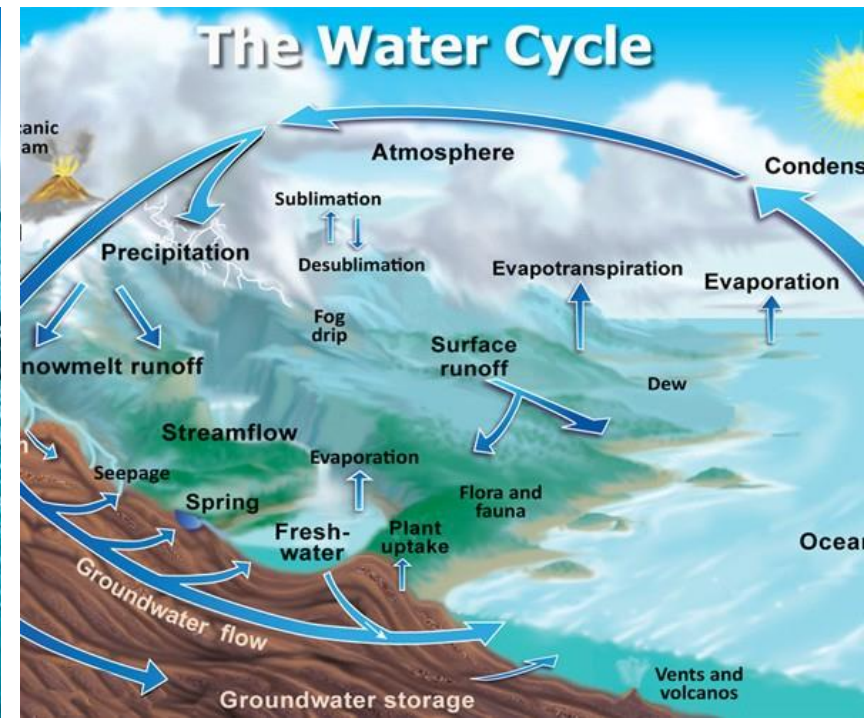
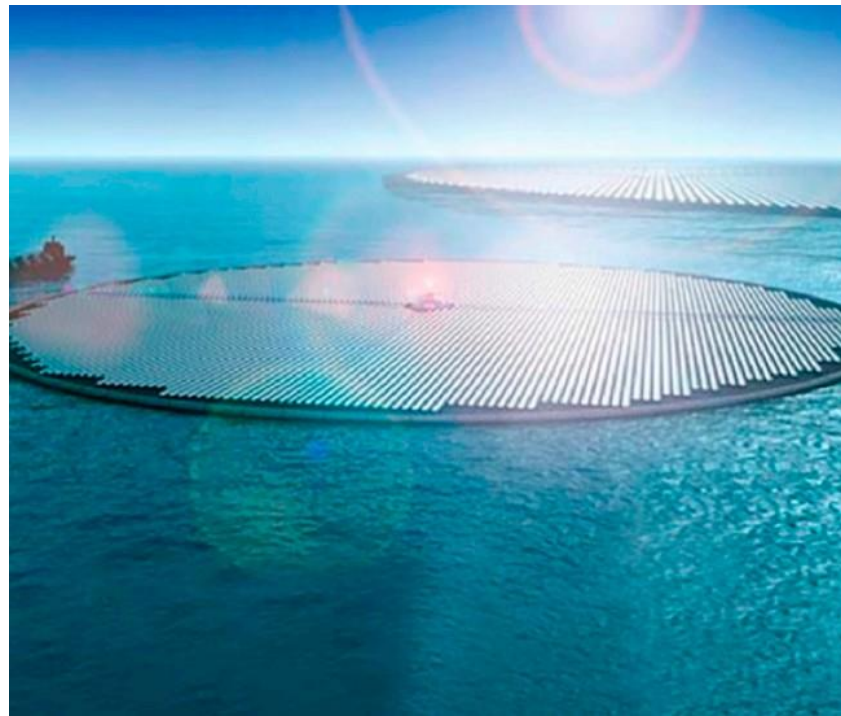
Evolution of Ocean

1. Where does Earth's water originates from?
2. Hypotheses?
 - a. Cosmic Gases
 - b. Comets
 - c. Meteorites
 - d. Wet Magma Ocean



Ocean and Humanity

1. Production Services
 - Food, raw materials
2. Cultural Services
 - Religion, Folklore, Tradition
3. Option Use Value
 - Alternative source of energy
4. Regulation Services
 - Gas & Climate Regulation
5. Supporting Services
 - Nutrient Cycling



Activity 1

List ocean resources that you use in your daily life. Discuss the positive and negative impacts of your use of two (2) of the resources.

Marine vs. Terrestrial

Similarities	Differences
<ul style="list-style-type: none">• Derive energy from the sun.	Size?
<ul style="list-style-type: none">• Occupied by inhabitants.	Physical Properties?
<ul style="list-style-type: none">• Diversity of species varies with latitude.	Temperature Range?
<ul style="list-style-type: none">• Diversity of species varies with longitude.	Light exposure? Phyla?
<ul style="list-style-type: none">• Primary biological activity happens near the surface.	Mobility? Boundary? Primary Production?



Activity 2

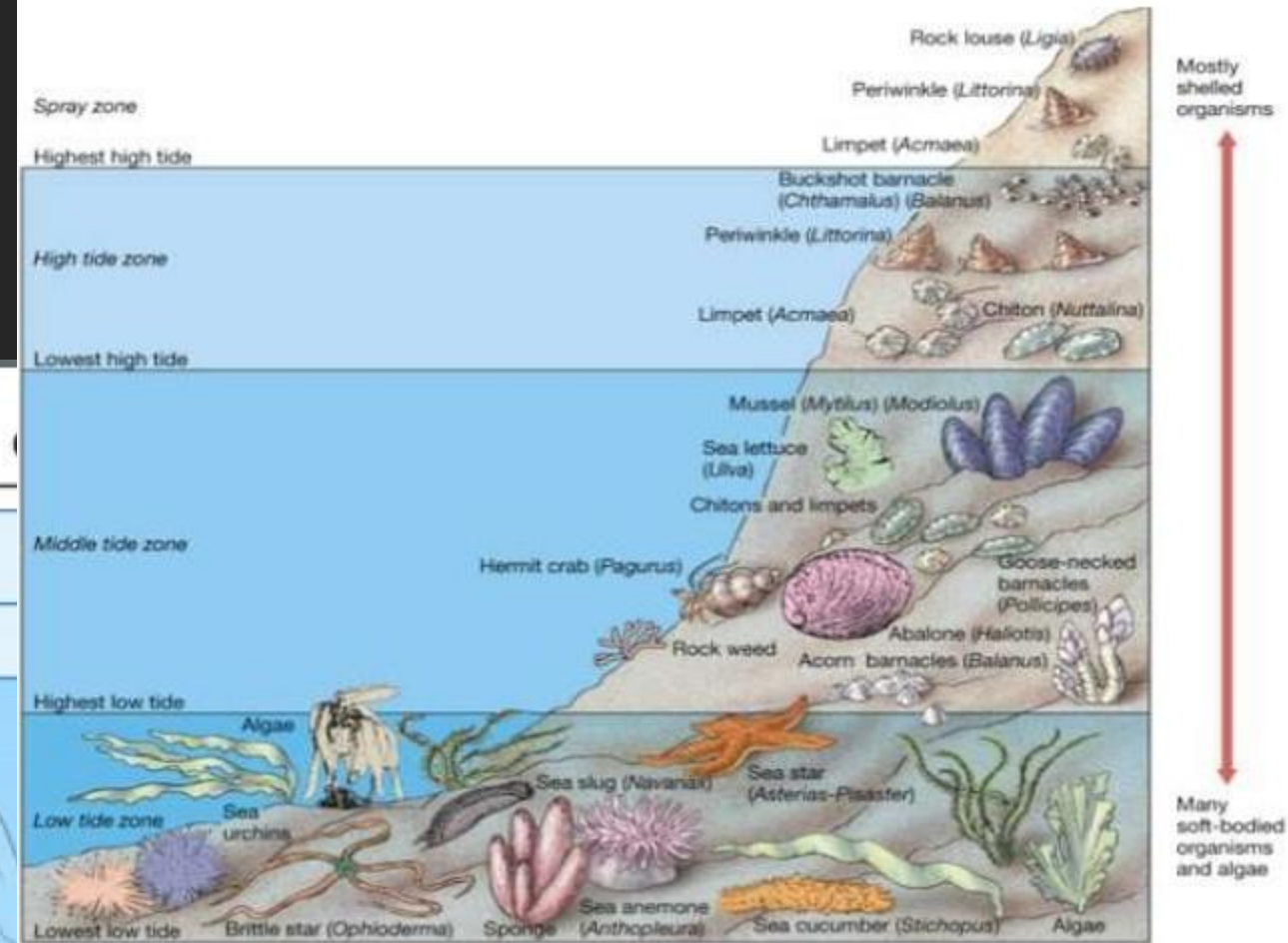
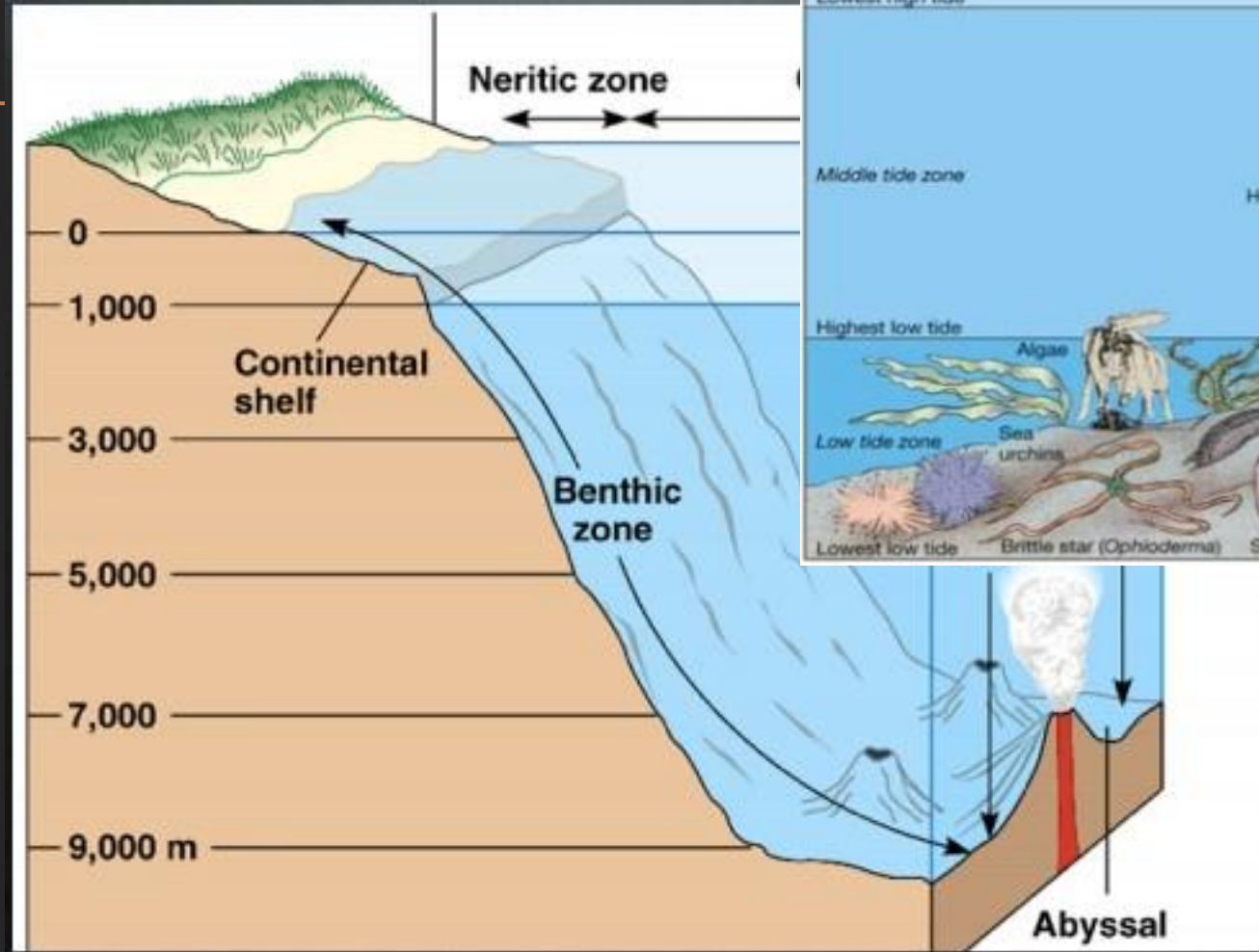
List 6 common characteristics associated to our ocean.

Activity 3

List five (5) differences between marine and terrestrial environment.


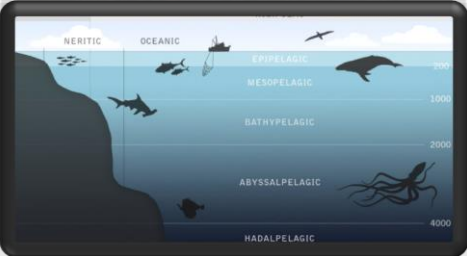
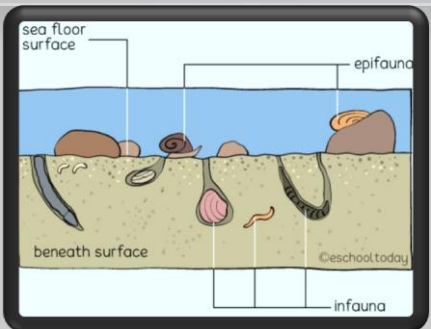
The Marine Environment

1. Pelagic & Benthic
2. Intertidal & Estuarine



Marine Biology

1. Consist of Flora and Fauna.
2. Classified according to realms.
 - a) Estuaries
 - b) Pelagic
 - c) Benthic
 - d) Deep Sea

Realm	Community Type	Example
Estuaries	Rocky Shores Corals Mangroves	
Pelagic	Fish, Marine Mammals, Marine Reptiles	
Benthic	Demersal Fish	
Deep Sea	Deep Sea Corals	