1.       Introduction

a.       Terms/definitions

i.      Zones of the ocean- defined how? (i.e. what is considered the “Deep Sea”?)

1.       Average depth

2.       Other topological features

a.       Trenches vs

b.      Abyssal plain, etc

2.       Environment: physical/chemical conditions

i.      Light (or lack there-of)

ii.      Pressure

iii.      Oxygen (or lack there-of)

iv.      Nutrients (or lack there-of)

3.       History: when/how was it determined that there was life in the deep sea?

4.       Ecosystems- what supports life?

a.       Alternative sources of energy

i.      Vent communities

b.      Detritus (small organic matter)

c.       Whale falls

i.      Sporadic and temporary

5.       Evolutionary Adaptations! (cool animals)  Animals need to adapt to:

a.       No sunlight for photosynthesis (usual basis of food chain/web)

i.      Bacteria that produce food from Hydrogen Sulfide

ii.      Bone-eating worms (Osedax)

b.      Pressure

i.      Increased size? Jelly?  (I don’t know what should go here)

c.       Finding a mate with small population sizes

i.      Angler Fish (females absorb males)

d.      Finding Prey (and escaping predators)

i.      Bioluminescence

e.      Other cool organisms!

i.      Giant isopods!

6.       The Deep Sea in the news!

a.       New discoveries every time they go down there!

b.      James Cameron and the Challenger Deep explorer