

## **Essential Question for our Unit: What is Good Water?**

### **Framing Question for our Conversation: How is life on land impacting life in the world's water?**

In your PODS, please use this shared document to generate thoughtful questions regarding the topics covered in *The Sixth Extinction*, Ch 5, 6, and 7. It is totally valid for some of your questions to be informed by your research and inquiry on your water teams or your reading from the text.

Your Take 5 is your starting place, but please try to filter some of your Take 5 ideas through these questions:

- \* How is life on land impacting these issues?
- \* What are the ecosystem services that the ocean's provide? How could you ask questions to point the conversation toward these issues?
- \* The ocean is so big, so powerful - how can we ask questions that will expose its fragility?
- \* What questions could you ask, what are those that would help other citizens understand the issues and the science?
- \* What questions will help us explore our concerns, rather than letting fear drive our discussion?
- \* What questions could help guide our discussion to include some of the SOLUTIONS we need to explore?

POD A:

Water teams represented:

Brainstorm questions / points of interest here:

**How much heat can our oceans realistically take and how much time do we have before massive die off takes hold?**

**Besides calcifiers and reptiles/amphibians that are currently declining, what else will be hit by this mass extinction?**

**In reference to the coral spawning, what would life be like without our current definition and understanding of time? Would it be beneficial for life on earth to function based on our internal clocks?**

**Are humans, in a way, similar to the hydrogen sulfide producing bacteria that caused one of the massive ocean die offs? How or how not?**

**Are there more species we do not know about that have been extinct due to the CO2 levels in the ocean?**

POD B:

Water teams represented:

Brainstorm questions / points of interest here:

POD C:

Water teams represented:

Brainstorm questions /points of interest here:

POD D:

Water teams represented:

**Brainstorm questions / points of interest here:**

**Carbon dioxide is being pumped into the sea at alarming rates--is this mostly due to the lifestyle choices of individuals on land or is it the actions of a few (like large corporations)? Are there changes we can make in our lifestyles to lower CO2 levels in the ocean?**

**Are there ways to simulate a coral reef environment if one does die off? Is this a viable way to encourage biodiversity in the ocean?**

**How does the decreased biodiversity in the ocean affect people who live off of it--like fishermen, people in the south pacific with traditional ways of life, etc.?**

POD E: Stella, Addie, Alia, Madalyn

Water teams represented: Freshwater &

Brainstorm questions / points of interest here:

**(sd)Are bodies of freshwater affected by acidification from increasing CO2 emission?**

**(sd)Are there any ecosystem resources provided by bodies of freshwater that are threatened by extinction?**

POD F: Jaden, Jacob, Grace

Water teams represented:

Brainstorm questions / points of interest here:

**So much of the ocean has not been explored. What kind of species might exist in the coral reefs that the human race has not been able to reach yet?**

**How will sea life whose habitat are coral reefs adapt to the destruction of their homes?**

**Could the sea life that is extinct today have been beneficial to us as humans?**

**How has the increasingly acidic conditions of the oceans affected sea life and will they be able to adapt fast enough to survive?**

**What technology can we use to limit our carbon footprint?**

**How does glaciers melting affect the ocean so much?**

**Who contributes the most carbon dioxide (companies or normals)?**

**Why not use biodegradable plastics? Hemp for example?**

POD G

Water teams represented:

Brainstorm questions / points of interest here:

**Do storms affect acidification of the ocean?**

**Do hurricanes help filter water in some ways?**

POD H:

Water teams represented:

Brainstorm questions / points of interest here:

Pod Alek and Paolo:

**Are there creatures that have adapted to the high CO2 content of acidified ocean? How quickly will the loss of biodiversity speed up extinction?**

**Can humans filter out CO2 from the ocean?**

**Can ocean acidification be reversed?**

Pod Caleb and Quin:

**What can we do to help the acidification right now?**

**How is affecting humans directly and what does it do to the soil outside of the ocean ?**

**What habitats outside of the ocean are affected by high co2 levels within the oceans?**

**Is there any way we can save the great barrier reef?**