

Big Pacific, Part 1- “Mysterious”

Plunge into the Pacific with researchers and cinematographers and see the ocean's rare and dazzling creatures in a way never before seen on television. Filmed in cinematic 4K, the program examines an ocean that covers a third of the Earth's surface.

Discover the mysterious Pacific-whose depths we are just beginning to explore. There are many unanswered questions we yearn to unravel, but the ocean doesn't give up its secrets willingly. Man has explored land, the ocean's surface, and large parts of the solar system...and in the 21st Century we are just beginning to explore the depths of the Pacific Ocean. We yearn to unravel the mysterious Pacific – but she does not give up her secrets willingly.

After watching this episode, choose from the following questions and/or tasks to extend your learning

Question Box 1

- What creatures have the researchers and cinematographers uncovered in their plunge into the Pacific?
- What questions still remain for researchers regarding the Pacific Ocean?
- Why has it taken so long for man to begin to explore the depths of the Pacific Ocean?
- What unanswered questions need to be unraveled?
- Why doesn't the ocean give up its secrets willingly?
- Why do scientists call the Pacific Ocean *mysterious*?
- What is the name of the deepest part of the Pacific Ocean?
- Describe the creatures that are revealed in this episode. What are some of the features that allow them to live in different depths/areas of the ocean?

Question Box 2

- Why has it taken so long for man to explore the depths of the Pacific Ocean?
- What do I know about this topic or subject?
- What have I learned so far? Explain.
- Which parts of this TV program was interesting for me?
- Why should we continue to explore the ocean?
- What are some of the unanswered questions you still have after watching this episode?

Question Box 3 (Tasks)

- As you learn about the uncharted water of the Pacific Ocean. Chart the discoveries explorers have made. As you chart them write narratives to describe and label each of those discoveries.
- List and describe the difficulties that are associated with exploring deep water

Continued on the next page...

environments. (ELD) Use sentence frames such as: *The difficulties I identified with exploring deep water environments are _____, _____, and _____.*

- Describe chemosynthesis and the role it plays with deep water ecosystems.
- Describe in terms of energy and life forms, the differences between photic and aphotic ocean environments.
- Create a poster showing the creatures and environments revealed in this episode. Write brief descriptions.

Question Box 4 (Enrichment)

- Research other areas of the earth that have yet to be explored. Why is it important to discover and explore these areas?
- Research and then draw a model of a vehicle that would be able to withstand the extreme environments of the deep Pacific Ocean. Make sure to label and describe essential components of your model. Include at least three different sources for your research, and list resources in an APA format.
- Design a model of an aphotic ecosystem making sure to list the energy source(s), autotrophs, producers and at least primary and secondary consumers.

Question Box 5 (Extend/Real-Life)

- Imagine you are a cinematographer and on a piece of paper list the skills and equipment you would need in this career. Once you have a list visit this website: <https://www.onetonline.org/find/> and search for cinematographer (top right hand corner).
- How accurate was your list?
- List three skills that you did not include on your list and that surprised you. Why do those skills surprise you?
- What additional skills would a cinematographer who films in the deep sea need?
- Revisit the website above and research occupations that are related to deep sea diving and compare the skills listed to your list.
- List three skills that you did not include on your list and that surprised you. Why do those skills surprise you?
- How common is a career as a deep sea cinematographer?
- **What if?** - Imagine you are the deep sea cinematographer. Make a detailed list of what you would pack for a long voyage at sea. Ask a family member what they would pack, compare and contrast your lists. Who packed better? Why do you feel that way?