

Grades 9-12

Big Pacific, Part 4 - "Passionate"

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.

See how the quest to multiply has spawned a stunning array of unusual behaviors and adaptations. View forest penguins with a tenuous marriage and the secret rendezvous of great white sharks, and hear the tale of male pregnancy.

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

Question Box 1

- How has the quest to multiply spawned a stunning array of unusual behaviors and adaptations in the animal kingdom?
- Why are the forest penguins marriages considered tenuous?
- What is the secret rendezvous of great white sharks?
- Retell the tale of male pregnancy.
- Why do great white sharks mate in the fall?
- Is there a time during the day when great white sharks mate?
- What is pairing for life?
- Why do the yellow eyed penguins reproduce in green areas?
- Explain induced ovulation of the otter?
- What is the kiss of death?

Question Box 2

- Why must animals adapt to their environment?
- How are claspers used in great white reproduction?
- How do eel eggs seem to grow faster in water temperatures around 40 degrees?
- How does the brood of eel eggs get its nourishment?
- How are penguins able to leave and return to their mates every year?
- Why does an octopus die after laying their eggs?
- What piqued your interest the most in this episode? Why?

Question Box 3 (Tasks)

Continued on the next page...

- Explore Hollywood's portrayal of animals in the Pacific - i.e. Jaws, Mega, Finding Dory how do they compare to the true events of such creatures?
- Describe the role behavior plays in natural selection?
- Create a visual showing important points in this episode – poster, infographic, PowerPoint or other visual
- Is there a relationship between the number of white sharks, the distance traveled for mating, the length of pregnancy, and the number of live births? Is there a relationship between the number of forest penguins, the distance traveled for mating, the length of pregnancy, and the number of live births? Is there a relationship between the number of wolf eels, the distance traveled for mating, the length of pregnancy, and the number of live births? Justify your reasoning using mathematics and complete sentences.

Question Box 4 (Enrichment)

- How much force does an eel jaw generate in order to break the shell of a crab?
- Make a PPT of various sharks and their reproductive cycle and mating rituals? (ELD) *Present the PPT orally to your family.*
- Select a Pacific Ocean organism that displays unusual behavior and make a claim of how that behavior gives the respective organism an evolutionary advantage...in other words, how does that behavior provide that organism a better chance of spreading their genes to a future generation?

Question Box 5 (Extend/Real-Life)

- Research the various rituals of a variety of marine organisms.
- Why do some marine animals engage in monogamous relationships and not others?
- Explain the similarities and differences between marine courtship and mating to human courtship and mating.
- Read the National Geographic article: “Wanna be a Marine Biologist? Here’s How”. http://www.oceanconservation.org/index_page_pdf/Wanna_be_a_Marine_Biologist_Nat_Geo_9-5_2013.pdf
- List three important pieces of information shared in the article that you could apply to any career choice.
- Identify your dream career. How would the three pieces of advice you gained from the article influence how you would pursue that career?