

# Keystone Species and Trophic Cascades

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Name

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Date

**Directions:** Answer the following questions while watching the video [Some Animals Are More Equal than Others: Keystone Species and Trophic Cascades](#).

1. What is the difference between producers and consumers?

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2. The Green World Hypothesis is the idea that the number of herbivores must be controlled by both the bottom up and the top down for producers or plant life to survive. How did Robert Paine test the Green World Hypothesis with sea stars in the Pacific Ocean?

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3. What did Paine observe was at the top of the food chain? Draw a three-level food chain to illustrate your answer.

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4. What did Paine notice when he removed sea stars from the ecosystem?

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5. Why did Paine choose the term keystone species to describe his sea star observations?

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6. How did humans historically play a role in the disappearance of sea otters?

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7. What policy was created that helped the repopulation of sea otters?

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8. What is a trophic cascade?

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9. Use the example of killer whales, sea otters, sea urchins, and kelp to draw and label a food chain, and describe how the Green World Hypothesis was demonstrated in this example.

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