

15 Multiple choice questions

Term

What hypothesis relates to oxygen availability in polar gigantism?

1 of 15

 High oxygen coupled with lower metabolic rates. **The phenomenon of larger body sizes in polar organisms.** **Stable oxygen with fluctuating metabolic rates.** **Variable oxygen with increased metabolic rates.**

Term

What is the term for the invasion of polar seas by giants from the deep sea?

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 Abyssal gigantism **High sea-ice years** **Digging and bioturbation** **Benthic-Pelagic Processes**

Term

What type of sediment is found in Arctic benthic communities?

3 of 15

 Giant kelp **Ice** **Soft sediment** **Hard bottom**

Term

What is a primary factor for macrofauna in Arctic environments?

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 Digging and bioturbation **Benthic-Pelagic Processes** **High sea-ice years** **Low sea-ice years**

Term

What is the coupling between surface and seafloor in polar regions called?

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 Benthic-Pelagic Processes **Low Sea-ice Years** **High Sea-ice Years** **Abyssal Gigantism**

Term

What favors krill in the Antarctic Ocean?

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 High sea-ice years **Low sea-ice years** **Fish** **Hard bottom**

Term

What type of bottom is found in Antarctic benthic communities?

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 Bikini bottom **Hard bottom** **Vegetated soft bottom** **Unvegetated soft bottom**

Term

Are Antarctic food webs dependent on krill?

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- True**
- Ice**
- Krill**
- Fish**

Term

What is the role of brine channels in pack ice?

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- They stabilize the ice structure.**
- They create a variable substrate for communities.**
- They regulate ice melting rates.**
- They provide a uniform habitat for life.**

Term

What affects calcifying organisms in polar waters?

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- More soluble CO₂ in colder waters.**
- Increased calcium carbonate levels in colder waters.**
- Reduced CO₂ Absorption in polar waters.**
- Higher salinity in warmer waters.**

Term

What favors salps in the Antarctic Ocean?

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- Soft sediment**
- High sea-ice years**
- Fish**
- Low sea-ice years**

Term

What are Arctic food webs based on?

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- Mammals**
- Fish**
- Insects**
- Ice**

Term

What are Antarctic food webs based on?

13 of 15

- Plankton**
- Krill**
- Jellyfish**
- Fish**

Term

What is polar gigantism?

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- The phenomenon of larger body sizes in polar organisms.**
- The increase in polar organism diversity over time.**
- The phenomenon of smaller body sizes in polar organisms.**
- The adaptation of polar organisms to warmer climates.**

Term

What is a major disturbance factor in polar communities?

15 of 15

- Salt Water**
- Fish**
- Hot Springs**
- Ice**