THE STANDARD

Patterns of Interaction Across Ecosystems

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

ANCHORING PHENOMENON

The Shark and the Cleaner Fish

A shark, the apex predator of the reef, holds completely still while a tiny cleaner fish swims into its open mouth and picks parasites off its teeth and gills. The shark could eat the cleaner fish in a single snap. It never does. Students will keep circling back to this all week: why doesn't the shark just eat the helper?

> DRIVING QUESTION
> *"Why do two organisms that should be predator and prey work together instead?"*

INVESTIGATIVE 1

Lions and Hyenas Over a Kill

A pride of lions has taken down a wildebeest. Within minutes, a pack of hyenas shows up, hoping to steal the kill. The two groups face off, snarl, sometimes fight, and one side eventually walks away. Both species hunt, both eat the same animals, both want the same food. Use this one to sharpen the competition lens the anchor is pushing on: not every cross-species relationship is cooperative.

> DRIVING QUESTION
> *"When two predators want the same meal, what determines who wins and who walks?"*

INVESTIGATIVE 2

The Tick on the Deer

A deer walks through tall grass and picks up a tick. The tick burrows in, drinks blood for several days, and falls off bloated. The deer scratches but mostly carries on. Same kind of "one organism using another" the anchor showed, only this time one of them gets hurt. Use this to push the parasitism vs. mutualism distinction the anchor opens up.

> DRIVING QUESTION
> *"Why is this relationship different from the shark and cleaner fish, even though both involve one organism feeding off another?"*