

“The Good, the Bad, and the Bountiful” Narrative

Setting: the nearshore ocean

Scene 1 opens with a few microalgae, the copepods and the fish inside the square:

Under normal conditions, all the players—microalgae, copepods and fish—are swimming happily together (except for the microalgae, because, being plankton, they can only float). The microalgae have just enough nutrients and sunlight to make food. As the conditions get better, the microalgae continue to reproduce, which suits the copepods and fish just fine, since they have lots of delicious phytoplankton to eat.

More and more microalgae continue to join those already in the square, until it is very crowded. When all the students are inside the square, stop the action and discuss what might happen next.

Have microalgae players flip their cards over to determine if they have enough sunlight and nutrients or not.

Scene 2 opens with a shift in the environment:

Microalgae that do not have enough nutrients or sunlight are dying. The dead microalgae sink dramatically to the ocean floor. As they sink, they crowd the copepods, who then struggle to get oxygen and may not survive. The living microalgae are so abundant that the surface of the water turns brown and no light can penetrate it, which causes more microalgae to die and sink, and the oxygen level continues to decrease.

Stop the action and discuss what has happened to the environment. If the copepods are struggling, what will happen to the fish? Why is this scenario an example of “too much of a good thing?”

