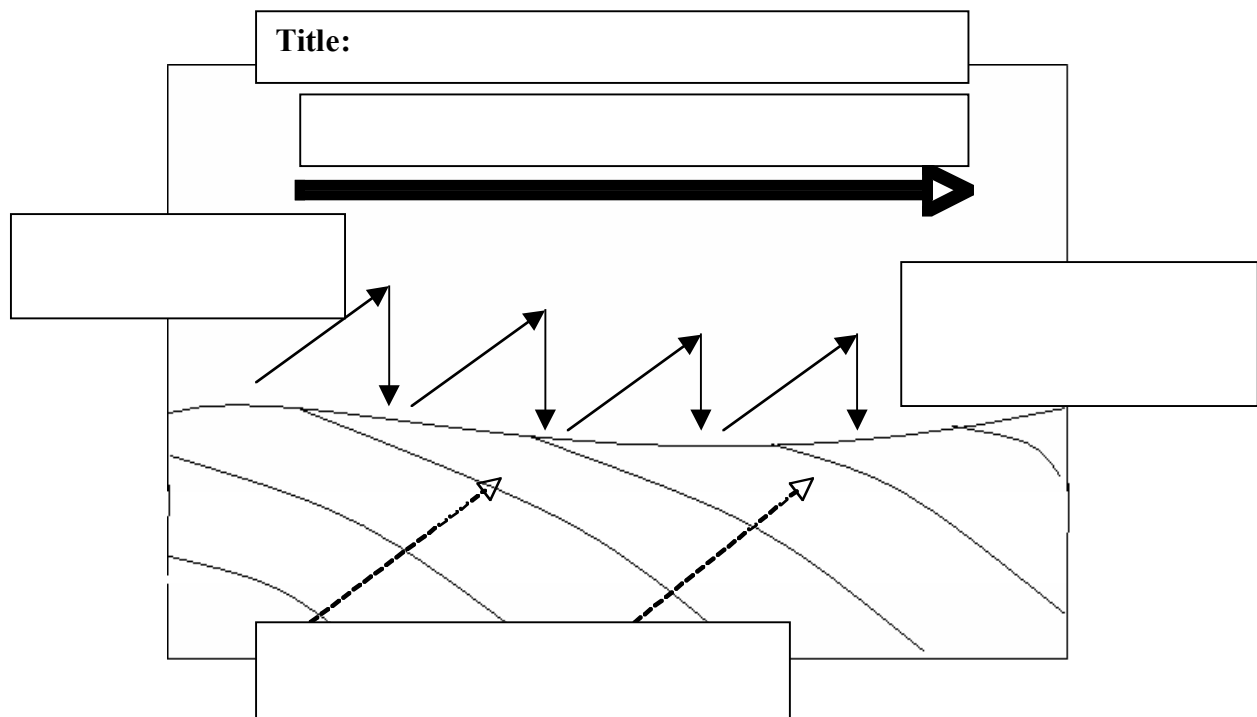


BEACH EROSION

Introduction: Water waves are one of the principal causes of shoreline changes. When waves break along the shore, they release their energy and momentum and give rise to a longshore current. The longshore current, along with the stirring action of the waves, is the primary mechanism for longshore sediment transport. The longshore sand transport rate is an essential factor determining erosion along a coast.

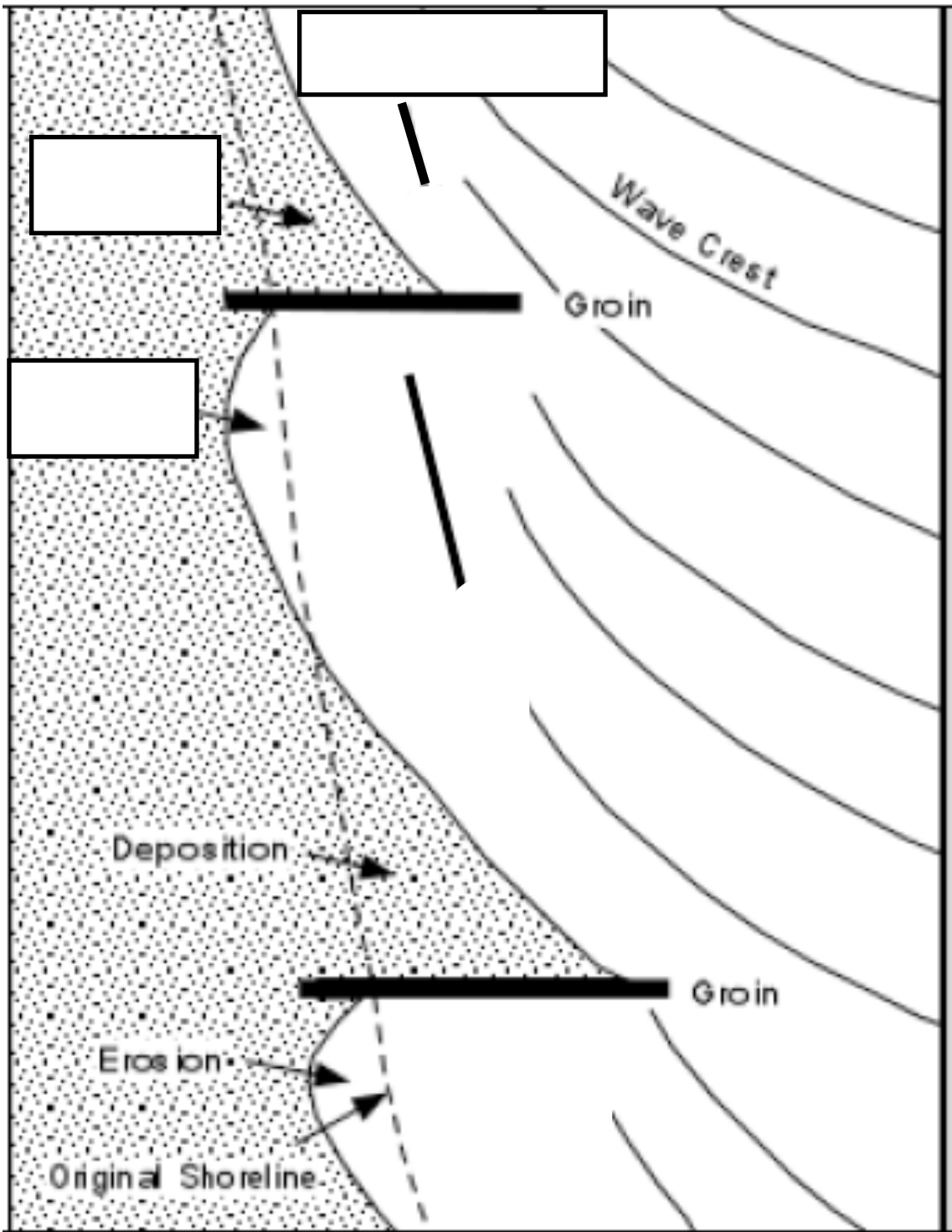
Problem: How does the direction of incoming waves effect the movement of sand along a beach and the direction of the associated longshore current?

1. Complete the diagram below showing the natural movement of sand along the coast by the process of longshore drift. After you have completed the labeling of the diagram, color the beach yellow and the ocean blue.



Write each label from the list below in the appropriate space on the diagram above:

- Title: The process of longshore drift
- Direction of sand movement along the coast
- Waves approach coast at an angle
- Broken waves, or swash, wash up the beach at an angle
- Waves wash back down the beach perpendicular to the coast



Fill in the following terms: Longshore Current; Erosion; Deposition.
Show the direction of the longshore current by placing an arrowhead on the dark lines.
Summarize the key concepts in this lab in one paragraph or less.