

Student Name: _____ Class: _____ Grade: _____

FIELD TRIP #2 WORKSHEET - BLACK'S BEACH

Observations and Analyses of Coastal Wave and Currents

Observations of the Weather Conditions:

1) **Observe and Record the Coastal Weather Conditions for Today**

Time Air temp Wind (speed & direction) Humidity Clouds Sea temp

Observations of the Offshore Swell:

2) **Observe and Record the Local Swell Conditions for Today:**

Swell #1: Swell height Swell direction Swell period

Swell #2: Swell height Swell direction Swell period

3) If there are two or more swell running, how can you tell by the wave patterns?

4) Does the CDIP Wave Model appear to match the locally observed swell conditions? _____

Observations of the Surf Zone:

5) Compare the difference in swell height (offshore) to the surf height (when wave starts to break)

6) Why is the surf height roughly twice as much as the swell height?

7) Describe the shape and form of the surf today. Plunging or spilling? Clean, "OK" or sloppy?

Nature and Observations of the Tides:

8) **Observe and Record the Tide Conditions for Today:**

	<u>Time</u>	<u>Tidal height</u>
First High Tide:	_____	_____ feet
First Low Tide:	_____	_____ feet
Second High Tide:	_____	_____ feet
Second Low Tide:	_____	_____ feet

9) Which type of tide do we have in San Diego? Diurnal, Semidiurnal, or Mixed? _____

10) Is the present tide conditions an ebb, flood, or slack tide? _____

11) What part of the lunar cycle is occurring now? _____

12) Are we in a neap tide or spring tide part of monthly tidal cycle? _____

Nature and Observations of the Surf Zone Currents:

Observe and Record the Longshore Current Conditions for Today:

13) Do you observe a longshore current? _____ If yes then record the direction and speed:

Direction: _____ Relative Speed: _____

14) What causes a longshore current to develop inside the surf zone?

15) What is the prominent direction of the longshore current in Southern California? Why?

16) What is the longshore *drift*? What causes it? Where does it ultimately end up?

6. Observe and Record the Rip Current Conditions for Today:

17) Do you observe a rip current? If yes, then record the number, spacing and intensity:

Number: _____ Spacing: _____ *meters apart* Intensity: Strong/Moderate/Weak

18) Which direction does the rip current(s) move through the surf zone? _____

19) What causes a rip current to develop in the surf zone?

20) What are the tell-tale signs for spotting a rip current?

21) What do you do if you are caught in a rip current and need to escape it?

POST TRIP REFLECTION:

22) What did you learn on this trip? _____

23) What did you find most interesting, enjoyable and/or important? _____

24) What did you find most difficult or challenging? _____
