

An aerial map of San Juan, Puerto Rico, showing the route for the 2017-2018 triathlon. The route is marked with four points: A (Playa Ashford), B (LA PUNTA SURF CLUB), C (Condominio Saint Mary's Plaza), and D (Playa). The map includes labels for various landmarks such as Ashford Presbyterian Community Hospital, Medical Center, Ashford Ave, Saint John's School, Robinson School, and Condominio Torre del Mar. A 'Start / End' box is located near Robinson School.

Question 1 continues on the next page.

D. Briefly discuss TWO specific methods by which the city government of San Juan or the territorial government could encourage people to leave less waste on the beach or to promote recycling on the beach.

method 1 _____

method 2 _____

E. Briefly discuss TWO specific methods by which the city government of San Juan or the territorial government could increase opportunities for people to use the beach without causing harm to local wildlife or environmental damage.

method 1 _____

method 2 _____

F. What was the pH level of the seawater you tested? _____

In what way can human activity affect the pH of seawater? Be as specific as possible in the space provided.

Section Score

Question 2 [20 points] – Birds and Human Impact

A. Identify the TWO most common types of birds you saw on the beach. If you only saw one type of bird or no birds please indicate that.

type 1 _____ type 2 _____

B. Choose ONE of the following two questions to answer.

1. If you DID see a bird or birds, what did you observe them doing? How were they responding to the human presence on the beach? Did the humans on the beach seem to affect their behavior in any way? Be as specific as possible in the space provided. _____

2. If you DID NOT see a bird, why do you think that is? Do you think that humans and human activity is to blame for the lack of birds on the beach or some other reason? Be as specific as possible in the space provided. _____

Question 2 continues on the next page.

C. Briefly discuss TWO specific methods by which the city government of San Juan could protect the habitats of birds on this beach while still allowing human use.

method 1 _____

method 2 _____

Section Score

Elementary students STOP here! DO NOT answer question 3! Middle and High school students continue to the next question.

Section 3 – Coastal Erosion and Hurricanes [30 points]

A. Explain in the space provided why Puerto Rico, and San Juan in particular, is vulnerable to the effects of hurricanes.

B. Explain in the space provided how climate change has affected hurricane formation, frequency, and intensity in this region.

C. Briefly discuss TWO specific methods by which the government could protect the beach you visited from further erosion.

method 1 _____

method 2 _____

Section Score