

Stream Observations

Scientist:

Date:

A. Native Stream Ecosystem

1. Stream Locations

a) Where does the water come from that makes Hawaii's streams?

b) Describe the factors that contribute to rainfall going to Hawaii's streams.

c) Which islands have high enough mountains to capture the rain clouds that create streams?

d) On which side of the island are most streams in Hawaii located and why?

2. Stream Flow

a) Does the water run fast or slow in Hawaii's streams compared with streams elsewhere?

b) How steep are Hawaii's streams relative to streams in other places?

c) What kinds of floods are typical in Hawaii streams (how fast do they rise? How fast do they flow?) compared with floods elsewhere?

3. Stream Habitats

Which of the following types of stream habitat is most prevalent in Hawaii (please circle)?

Cascade/riffle

Run

Pool

4. Stream Biota – Plants and Animals

a) What kinds of plants form the basis of the food web in Hawaii's streams?

b) Draw a picture of the stream labeling an upper stream, middle stream, and lower stream / estuary. Write the Hawaiian name, scientific name, and sketch a picture of the stream animal next to its corresponding stream location. Don't forget to draw the stream animal's food source.

c) What is the importance of the “mauka-makai connection” in Hawaiian stream life? How are the native stream animals adapted to a stream that flows to the sea?

d) How are the native stream fishes, o’opu, adapted to the rocky, steep, fast-flowing nature of Hawaiian streams?

e) How are native prawns, ‘opae, equipped to crawl upstream as young adults?

B. Disturbed Stream Ecosystem

1. Human Activity

What human activities can affect a stream ecosystem?

2. Impact on Stream

a) What kinds of changes can happen in a stream as the result of human activities?

b) In Hawai'i, what might cause the flow of the stream from the mountains to the sea to be impeded (blocked)?

3. Disturbance to Ecosystem

a) How has the biota (living things) of Hawaiian streams changed as the result of human activity?

b) List the scientific name and common name of each of the common introduced species in Hawaii's streams.

c) For each introduced species, identify ways that it might be harmful to the native stream ecosystem.