

Calculating the Diversity of a Community

1. Follow given directions for seining in the Bay and dip-netting in the tidal pool. By using the identification sheet, identify each species found.
2. Count and record the total number of individuals of each species in each community.

Species	Bay (number found)	Tidal Pool (number found)

3. Calculate the species richness of each community. This is the simplest of all the measures of diversity and is found by simply counting the number of species found in a community.

Community 1 (Bay)

Community 2 (Tidal Pool)

4. Calculate the relative abundance (species evenness) of each species in each community:

Relative abundance (species evenness) is the proportion (or percentage) of each species represented in the community. Record in data table below.

$$\text{Relative abundance} = \frac{\text{\# of individuals of a species}}{\text{total \# of individuals in the community}}$$

Species	Bay (relative abundance)	Tidal Pool (relative abundance)

5. Calculate the distribution (or frequency) of each species between each community. This helps determine how individuals are spread between ecosystems. You can calculate distribution (or frequency) by counting the number of communities in which each species is found.

Species	# of communities found in

Are all species found in each community? (yes or no) _____

6. REFLECTION & DISCUSSION:

Which of the communities have the most species diversity? _____

Which of the communities have the least species diversity? _____

Which community shows the most even relative abundance? _____

What can you tell about the biodiversity of each community?

What aspects of the ecosystem help maintain greater biodiversity?
