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STUDENT/TEAM WORKSHEET | GRADES 3-5 | POST-ACTION DATA-TREES AND SHRUBS

NAME/TEAM: _____

Biological diversity can be quantified in many different ways. The two main factors taken into account when measuring diversity are richness and evenness. **Richness is a measure of the number of different kinds of organisms present in a particular area.** For example, species richness is the number of different species present. However, diversity depends not only on richness, but also on evenness. **Evenness compares the similarity of the population size of each of the species present.**

Example: Both samples have the same richness (3 species) and the same total number of individuals (30). However, the first sample has more evenness than the second. This is because the total number of individuals in the sample is quite evenly distributed between the three species. In the second sample, most of the individuals are boxwoods, with only a one oak and one maple present. Sample 2 is therefore considered to be less diverse than sample 1.

TREES AND SHRUBS	NUMBERS OF INDIVIDUALS	
	SAMPLE 1	SAMPLE 2
OAK	10	1
BOXWOOD	12	28
MAPLE	8	1
TOTAL	30	30

A community dominated by one or two species is considered to be less diverse than one in which several different species have a similar abundance.¹

¹ “Simpson's Diversity Index.” *Simpsons Diversity Index*, www.countrysideinfo.co.uk/simpsons.htm.



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5. Create a graphic, chart or graph showing tree and shrub richness and evenness. Compare it to your baseline graph/chart/infographic. Were there changes in the data? Explain and support your answer with evidence.

