Leaf Classification Worksheet

Part A. Binning Fossil Leaves

Classify fossil leaves using the *Seven Simple Steps to Binning Leaves* and a *Binning Chart*. For each leaf record the leaf ID number, leaf characteristics and bin number in **Table 1**. Bin numbers appear in the lower right corner of the shaded boxes on the *Binning Chart*. Once you assign a bin number, binning is complete. However, all binned leaves should include margin type (Step 4).

Part B. Leaf Area and Size Class

1. Measure the length of the leaf in millimeters parallel to the midvein between petiole attachment and apex. Do not include the petiole. Record length in **Table 1**.
2. Measure the width of the leaf in millimeters perpendicular to the midvein where the leaf is at its widest. Record width in **Table 1**.
3. Using the formula, **Leaf area (mm^2) = Length (mm) x Width (mm) x 0.75**, calculate the leaf area. Show your work and record answer in **Table 1**.
4. Use *Raunkiaer-Webb Size Class Chart* below to assign a size class based on leaf area. Record size class in **Table 1**.

Raunkiaer-Webb Size Class Chart

Leaf area (mm^2)	Size class
Less than 25 mm^2	leptophyll
25-225 mm^2	nanophyll
225-2025 mm^2	microphyll
2025-4500 mm^2	notophyll
4500-18,225 mm^2	mesophyll
18,225-164,025 mm^2	macrophyll
Greater than 164,025 mm^2	megaphyll

Record Leaf Set Number in box. ☐

	Demo	Leaf 1	Leaf 2
Leaf ID Number			
Step 1			
Step 2			
Step 3			
Step 4			
Step 5			
Step 6			
Step 7			
Bin number			
Leaf length			
Leaf width			
Leaf area			
Size class			

Table 1 *(Leaf Classification Worksheet)*

Part C. Data Labels

Record the items in the shaded areas (leaf ID number, step 4, bin number and size class) of **Table 1** for Leaf 1 and 2 onto separate strips of scrap paper. Use paper clips to attach labels to fossil leaves.