Name: **Date:** **Section:**

Molecule Mania Activity: Biological Macromolecules

Organizing Life's Molecular Diversity

Phase 1: ENGAGE (5 minutes)

Getting Started:

Open peebedu.com and navigate to Biological Molecule Structure Organizer

Examine the molecular structures available.

Initial Observations:

1. Number of molecule types: _____
2. Visual differences noted: _____

Hypothesis:

What structural features best distinguish the four macromolecule classes?

Phase 2: EXPLORE (20 minutes)

Part A: Carbohydrate Classification

Identify and sort all carbohydrates.

Structural Analysis:

Pattern Recognition (identify 3):

1. _____
2. _____

Part B: Lipid Diversity

Categorize lipid molecules by type.

Lipid Classification:

Function ---------- _____ _____ _____ Steroid

Primary _____ _____ _____

Sugar _____ _____ _____

Glucose Enzyme _____ _____

Monomers _____ _____	

1. **Clinical Connection:**

Lactose intolerance involves:

- Molecule type: _____

- Structural issue: _____

1. **Model Evaluation:**

This tool best demonstrates:

Evidence: _____

Critical Thinking:

Why did life evolve to use these four molecule classes and not others?

Investigate non-standard biomolecules:

- Modified amino acids
- Unusual lipids
- Synthetic nucleotides
- Novel carbohydrates

Research proposal: _____