Lattice System Origami

<u>Directions</u>
1. Cut out the lattice system 2-D templates. Fold along the lines and use tape to make 3-D models.
2. Use the models to determine the geometries of each system. Consider the lengths of each side (a, b, and c). Are they equal (e.g., a=b=c) or unequal (e.g., a=b≠c)? Consider the angles (α,β, and γ). Are they equal to one another? to 90°? to another exact angle (e.g., 120°)? or are they less than 90°? Fill out these geometric relationships in the table below.
3. Use the models to determine the symmetries of each system. How many unique rotational axes does the system have? How many unique mirror planes? Enter these values in the table below

Lattice System	Geometry		Symmetry elements	
	Sides	Angles	Rotational Axes	Mirror Planes
Cubic				
Hexagonal				
Rhombohedral				
Tetragonal				
Orthorhombic				
Monoclinic				
Triclinic				