## **Crystal structure Worksheet**

1.	Draw the crystallographic planes (221) and (101) in the cubic unit cell.
2.	NaCl has a has a face centered cubic (fcc) structure.  a. How many (a) Na atoms per unit cell, Cl atoms per unit cell and (c) total atoms(Na plus Cl) per unit cell for NaCl?
	b. What are the basis positions for NaCl?
	c. Draw the unit cell for NaCl.
3.	Construct a 3-D unit cell for NaCl using marshmallows and toothpicks a. Identify the (101) and ( $1\bar{1}0$ ) planes. Include a drawing.
	<ul> <li>b. What is the # of nearest neighbors and arrangement of each Na atom in the structure? Repeat for Cl.</li> </ul>