Name: _____ **Date:** _____

Chemistry *~ Ms. Hart* **Class:** Anions or Cations

THE URBAN ASSEMBLY SCHOOL FOR CRIMINAL JUSTICE

5.9 Molecular Geometry

SHAPE 1 - Name:		3-D Picture
# of atoms connected to central atom:	# of lone pairs on central atom:	
Example (Formula / Lewis Structure):		

SHAPE 2 - Name:		3-D Picture
# of atoms connected to central atom:	# of lone pairs on central atom:	
Example (Formula / Lewis Structure):		

SHAPE 3 - Name:		3-D Picture
# of atoms connected to central atom:	# of lone pairs on central atom:	
Example (Formula / Lewis Structure):		

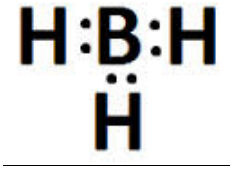
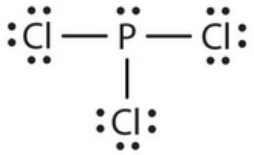
SHAPE 4 - Name:		3-D Picture
# of atoms connected to central atom:	# of lone pairs on central atom:	
Example (Formula / Lewis Structure):		

SHAPE 5 - Name:		3-D Picture
# of atoms connected to central atom:	# of lone pairs on central atom:	

Example (Formula / Lewis Structure):	

Time for some… MARSHMOLECULES!

Directions: **First,** create the **5 molecular shapes** from the tables above out of the marshmallows and toothpicks provided. **Then** draw the Lewis Dot diagram for each of the chemical formulas below. Use this, your notes on VSEPR theory, your marshmolecule structures to determine the shape each molecule will have in the third column.

FORMULA	Lewis Dot Structure	SHAPE
BH_3 (remember Boron is an exception and can be satisfied with six electrons)		
CH_4		
H_2S		
PCl_3		
HCN		

BONUS: Draw the Lewis Dot Structure for the molecules below, create the molecule with your marshmallows and toothpicks and draw the picture of what the molecule will look like.

1) C_2H_6

2) C_2H_4

3) C_2H_2

If you finish all of this early, finish your lab or begin your homework: Read pages 183-186 in your textbook. Answer questions on page 185 and 187.