

Bond Angle Inquiry with Marshmallows

In this inquiry lab, you will make marshmallow and toothpick models of various compounds. The goal is to model the VSEPR theory well. The key is that since bonds (toothpicks in our models) are made of electrons, they will repel each other and maximize the angles between the bonds.

Instructions:

1. Wipe down your desk with disinfecting wipes.
2. Get a paper towel or two.
3. Get 25 marshmallows per table.
4. Get about 20 toothpicks.
5. Starting with two domains attached to the central atom, build atoms with 2,3,4,5 and 6 domains.
6. Once you have created a model, use a protractor to estimate the bond angle between the toothpicks.
7. Each model will have only ONE bond angle (meaning all angles are equal). The exception is 5 domains which has two different angles.
8. Complete the table including the 3D drawing of your models.
9. On the board, write your estimate for the bond angle of 4 domains. We will find the class average and see how close we are!
10. Finally, name the shape that you have made. It doesn't have to be scientific, but the name must reflect the shape that you see.

[Type here]

Number of Domains	3D drawing	Measured Bond Angle	Name of Shape
2			
3			
4			
5			
6			

[Type here]