**Materials needed in partnership:**

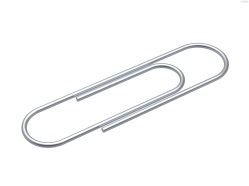
* 4 strands of liquorice (2 of one colour and 2 of another colour)
* 24 mini-marshmallows (6 pink, 6 green, 6 yellow, 6 peach)
* 2 lengths of yarn at least four finger widths longer than two strand of liquorice)
* 12 paperclips
* 1 baggie to store materials (your names need to be on the baggie)

**Instructions:**

* Cut each strand of liquorice into 12 pieces approximately equal in length.
* Thread alternate colours of liquorice into a chain until you have 24 pieces total. Tie your yarn in a knot at each end piece of liquorice so that the chain stays together. You can use tape also.
* [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=5YEdNVlh1u92OM&tbnid=4C89x5mgVSgQYM:&ved=0CAUQjRw&url=http://library.thinkquest.org/28599/experiment_making_a_candy_model.htm&ei=w843UamcDueEygGx24DwDw&bvm=bv.43287494,d.aWc&psig=AFQjCNHTB_IxtXS9XnkWWFSMfnn-o0EVwg&ust=1362698292621408)Repeat to create your second chain.
* Line up the two chains side by side so opposite pieces are the same colour.
* Pair your pink and green marshmallows together.
* Pair your yellow and peach marshmallows together.
* Attach your marshmallow pairs between the liquorice chains with the paperclip (straighten it and fold it in half to use as a pin). These pairs attach on the second link of the liquorice chain. Repeat process until all marshmallow pairs are attached to the chains.

[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=4eW8h0oBloSA5M&tbnid=iMKVrkU8lEDNEM:&ved=0CAUQjRw&url=http://www.candywarehouse.com/flavors/licorice-candy/products/twizzlers-rainbow-licorice-twists-packs-18-piece-box/&ei=Usk3Uf76C5GCyAGKkYDoBg&bvm=bv.43287494,d.aWc&psig=AFQjCNGZ9es0jFNfsxwxPEyfcCEeE3dpmA&ust=1362696908385695)**DNA Model Guiding Questions**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **What does one colour of liquorice represent?**
2. **What does the other colour of liquorice represent?**
3. **What does each colour of marshmallow represent?**
4. [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=jBami4ZEyOBlOM&tbnid=ATzZrS9dcD-G8M:&ved=0CAUQjRw&url=http://allergyfree.wordpress.com/2011/11/22/stained-glass-marshmallow-roll-dairy-peanut-free/&ei=k8k3Ue2gB8qhyAGQ1YDwBw&bvm=bv.43287494,d.aWc&psig=AFQjCNE8orfh6FndPcZAus05bE3Qhepq2w&ust=1362696972161776)**Green**
5. **Pink**
6. **Yellow**
7. **Peach**
8. **Why is green only attached to pink marshmallows?**
9. [](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&docid=_ERhcldImfVSiM&tbnid=8Pk9Zhzy6Ok4hM:&ved=0CAUQjRw&url=http://www.psdgraphics.com/3d/paper-clip/&ei=C8o3Udf9MaPuyAHFyYCYCA&bvm=bv.43287494,d.aWc&psig=AFQjCNFzidqrw_Ck6QQfcMloCtYeF0EGEQ&ust=1362697089869880)**Why is yellow only attached to peach marshmallows?**
10. **What do the paper clips represent?**
11. **What is a nucleotide and what are its components?**
12. **DNA is the short form of this word:**
13. **Describe the double helix structure of DNA.**
14. **Who discovered this double helix structure?**
15. **What are chromosomes?**