**Leaf Model**

1. Construct a model of the cross section of a leaf using the model parts provided on the next page. Color each leaf structure or tissue a different color using the color key below.

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| **Color Key** | |
| **Leaf Structure** | **Color** |
| Cuticle | Yellow |
| Lower Epidermis | Light Green |
| Palisade Mesophyll | Dark Green |
| Phloem | Brown |
| Upper Epidermis | Orange |
| Spongy Mesophyll | Purple |
| Xylem | Blue |
| Guard Cells | Red |

1. Cut out each of the colored cell layers. Be sure to cut along the outer edge of each group or along the dotted line. Do not cut out the inside spaces of each layer.
2. In your BILL, correctly place each of the cell layers together by laying one on top of each other. Once you have it all together, then glue them together and label each structure or cell layer.
3. Now add the sun to your diagram to show which side of the leaf collects the energy from the sun.
4. Place the symbols for CO2, O2 and H2O on your model and draw arrows to show the movement of these gases in and out of the leaf through the stomates.
5. Label the layer where the “most photosynthesis occurs”.



