Materials Needed:
- Construction paper
- Colored Marshmallows (34 per student)
- Glue
- Toothpicks (36 per student)

Objective:
The purpose of this activity is to understand molecular bonding and molecular structures. How molecules are built of atoms that are bonded in a distinct way to create different molecular formulas.

Vocabulary:
Chemistry: the study of matter. Everything is composed of atoms!
Atoms: smallest unit of matter. Everything is composed of atoms!
Bonds: chemical attractions between atoms. There are many types of chemical bonds!
Molecule: a group of atoms bonded together.
Molecular structures: the arrangement of chemical bonds in a molecule.

<table>
<thead>
<tr>
<th>Marshmallow Color</th>
<th>Chemical Symbol</th>
<th>Element</th>
<th>Number of Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>H</td>
<td>Hydrogen</td>
<td>1</td>
</tr>
<tr>
<td>Pink</td>
<td>O</td>
<td>Oxygen</td>
<td>2</td>
</tr>
<tr>
<td>Orange</td>
<td>C</td>
<td>Carbon</td>
<td>4</td>
</tr>
<tr>
<td>Green</td>
<td>Cl</td>
<td>Chloride</td>
<td>1</td>
</tr>
<tr>
<td>Yellow</td>
<td>Na</td>
<td>Sodium</td>
<td>1</td>
</tr>
</tbody>
</table>

Water
Molecule Shape:

Carbon Dioxide
Molecule Shape:

Methane
Molecule Shape:

Molecule Structures
Linear: Straight Bond
Angular: Bonds with angle
Tetrahedron: Bonds with branches
Pyramid: Bonds in 3-D

Chlorine:
Molecule Shape:
Sodium Bicarbonate
Molecule Shape:

Sodium Chloride
Molecule Shape:

Acetic Acid
Molecule Shape:

Diamond:
Molecule Shape: