Name:______________________________

James Bonded

Task #1
Stage car wrecks that represent two atoms bonding. Your team will work together to create a film of the collisions. It is up to you how you plan to represent each collision. Be creative! You will have access to several different sized cars, all of which represent atoms with different electronegativities. Use sticky notes to label the cars as different elements from the periodic table. Your instructor will check these for accuracy. The table below indicates the electronegativity range of each car size:

<table>
<thead>
<tr>
<th>Car size</th>
<th>Electronegativity range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big</td>
<td>3.1 – 4.0</td>
</tr>
<tr>
<td>Medium</td>
<td>2.1 – 3.0</td>
</tr>
<tr>
<td>Small</td>
<td>1.1 – 2.0</td>
</tr>
<tr>
<td>Shrimp</td>
<td>0.1 – 1.0</td>
</tr>
</tbody>
</table>

Your film should represent each of the following types of reactions:

a) Ionic bonding
b) Polar covalent bonding
c) Non-polar covalent bonding
d) Metallic bonding
e) Hydrogen bonding

Task #2
Take a photo of your cars set up in order of least to greatest atomic radius. (The electronegativity table above still applies!) The photo needs to include a label with your team names.

Task #3
Take a photo of your cars set up in order of least to greatest ionization energy. The photo needs to include a label with your team names.

At the end of class, your team will submit your video and two photos.