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| **Cell Communication**  Describe paracrine signaling.  When the signal molecule changes the protein receptor, what process begins? |
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| Describe the signal-transduction pathway in animals.  What is a BIOFILM? |
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| How does one rotting piece of fruit affect the ripening of others?  How is synaptic signaling different from hormone signaling? |

1. Describe how these cell surfaces can aid in cell to cell communication: Plasmodesmata, Gap Junctions, ECM
2. There are 3 steps to signal transduction: Reception, Transduction, and Response. Describe what happens in each and what chemicals are responsible for each phase.
3. How are hormone receptors different from other receptors?
4. Fill in the chart below:

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| **Type of Cell Junction** | **Description** | **Function** | **Plant cell, Animal Cell or both** |
| Gap Junction-General |  |  |  |
| Gap Junction-Plasmodesmata |  |  |  |
| Tight Junction |  |  |  |
| Desmosome |  |  |  |

4. How can a second messenger help with signal transduction?