Tissue Engineering Model

= ECM (structural protein)

= Scaffold

= Cell

= Body Environment (enzymes, signaling molecules, H2O)

1. What three components were needed to produce the Tissue Engineered tissue?
   a. ____________________
   b. ____________________
   c. ____________________

2. What happened to the scaffold? What implication does that have on the body it is implanted into?

3. What is the scaffold replaced by? What importance do you think the cell has in this role?

4. What would be the advantage of having an implant made of living tissue produced by cells rather than a man-made material?

5. When would such an implant be required. What types of concerns would need to be considered in developing such an implant?
What We know…

Alginate (blue)  

Monovalent Solution (red)  
Divalent Solution (yellow)

+M  
+D+
Handout #3

*Investigation... (Tissue Engineering)!*  Name: __________

What do you know…

Develop a model for what you think will happen when mixed…

Plan an experiment to test the model…

Data:

Interpret the data…

Does your initial model need to be modified? Do you need more testing?