

Name: _____ Date: _____ Class: _____

Problem, Research and Hypothesis Handout

Exploring the Electromagnetic Spectrum and Phosphorescence with Design Intent

Problem: To create a phosphorescent bioplastic by using the following reaction scheme:

corn starch + water + vinegar + glycerin + phosphorescent powder -> polymer bioplastic

Objective/Design Challenge: You want your bioplastic to glow, but also have structural integrity.

What does structural integrity mean to you?

Procedure: The class will be divided into groups. Each group will be in charge of manipulating one of the reactants in the scheme by increasing its concentration from a provided standard/control bioplastic procedure.

The reactant that your team will be manipulating: _____

Reactant Research

Hypothesis

independent variable	dependent variables
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Using your research and prior knowledge, construct a hypothesis that includes both your variable and how it will change in the experiment: