Name: _____ Date: _____ Class: _____

Dyeing to Design Student Packet

Engineering Design Plan

EDP Step #1: Ask - Identify Needs and Constraints
KWL Chart

K: What I Know	W: What I Wonder	L: What I Learned

EDP Step #2: Research

Divide your team into 2 research teams to investigate questions you have from the "W" section of your chart above. Write what you find in the "L" section.

Name: _____ Date: _____ Class: _____

EDP Step #3: Developing Possible Solution to Problem

1. Visual description of up to four different colors in fabric sample.

2. Desired color for dye:

3. Solute (material) to be used:

4. Solvent to be used:

5. Method to be used for extraction:

6. Concentrations:

Group Member	Amount of Solute (g)	Amount of Solvent (mL)	Concentration (mL)

Name: _____ Date: _____ Class: _____

Name: _____ Date: _____ Class: _____

EDP Step #4: Select Best Possible Solutions

7. Fabric Sample RGB Values:

Location	Visual Color	R-value	G-value	B-value

8. RGB values of each concentration:

Concentration	R-value	G-value	B-value

Name: _____ Date: _____ Class: _____

EDP Step #5 & 6: Select the best possible solution(s) & Test and Evaluate

9. RGB values of each material in each concentration:
Place a * beside the materials that you will be using on your design pitch board.

a. Concentration #1: _____

Material	Visible color	R-value	G-value	B-value

b. Concentration #2: _____

Material	Visible color	R-value	G-value	B-value

c. Concentration #3: _____

Material	Visible color	R-value	G-value	B-value

d. Concentration #4: _____

Material	Visible color	R-value	G-value	B-value

EDP Step # 7: Redesign

10. How would your group change your methods (extractions, concentrations, applications, materials, etc.) to improve on your results?