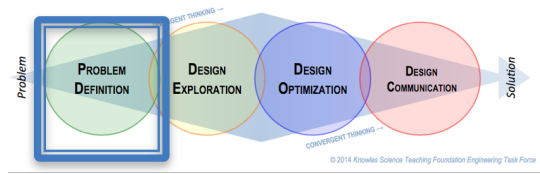




Name:
Company:
Period:

4 Phase Engineering Design Process



Solar Energy Phase I: Problem Definition

Brainstorm:

What could a solar charger be used for? Grow your brainstorm by thinking outside of the box.

Company:

Create a company name for your group's Engineering team. Be creative!

Stakeholders:

Who are you making this design for? Who will you present the final design to?





Constraints:

Your design **MUST** do these to be successful.

- You must use no more than four solar cells, one USB step-up.
- You must communicate your findings in an instructions manual
- You must sketch your final design

Criteria:

Your design could get better and better toward this goal, but it might still be a successful design if it doesn't do the criteria as well as possible.

(1) Maximize power output from the USB

AND...

(2) _____

Criteria Measurement:

How will you measure your **success** towards your major criterion?

(1) To measure our success towards maximize the power output, current and voltage will be measured. The equation $P=IV$ will be used to calculate power.

(2) To measure our success towards _____, ...

Refined Problem Statement:

Fill in the blanks to complete a problem statement sentence.

This will guide your engineering design process moving forward.

We as _____ *company name* seek to **create a solar** _____ *design challenge*

in order to maximize the power output and _____ *criterion*

for _____ *Stakeholder*.

