North Pocono Engineering Process

Event:_____

Name (s):_____

_____

Step 1. What is the Problem:_____

_____
_____
_____
_____
_____

Step 2. Generate Concepts:_____

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
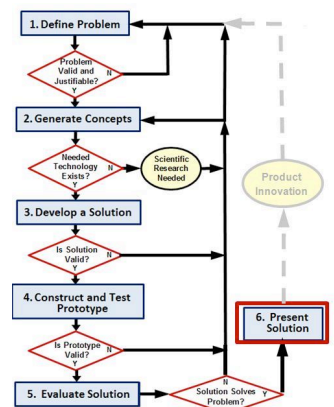_____

Step 3. Develop Solution:
Vision Statement of Solution:

Create a vision statement for your project. Envision where you want the group to go. What will it look like when you get there? Remember – You are expected to realize your vision by completing the goals you set forth. Goals should move you towards your vision.

Our Group Vision:

_____
_____
_____
_____
_____
_____

GOALS:

Create goals that will move your group towards your vision. The goals should be SMART (specific, measurable, attainable, relevant and timely).

Leaders Name: _____

Group #:_____

GOAL NUMBER:_____

SMART Goal Description:

_____
_____
_____
_____
_____

Who does this involve?_____
_____

What does this involve?_____
_____

Where will it take place?_____
_____

How (describe subgoals required to complete the goal) and When (target dates)

1. _____   _____

2. _____   _____

3. _____   _____

4. _____   _____

5. _____   _____

Why do you want to do this? _____
_____
_____

How will completion be verified?_____
_____

When will it be done?_____
_____

Approvals:

_____
Teacher

Leaders Name: _____

Group #:_____

GOAL NUMBER:_____

SMART Goal Description:

_____
_____
_____
_____
_____

<u>Who</u> does this involve?_____
_____

<u>What</u> does this involve?_____
_____

<u>Where</u> will it take place?_____
_____

<u>How</u> (describe subgoals required to complete the goal) and <u>When</u> (target dates)

1.   _____   _____

2.   _____   _____

3.   _____   _____

4.   _____   _____

5.   _____   _____

<u>Why</u> do you want to do this? _____
_____
_____

<u>How</u> will completion be verified?_____
_____

<u>When</u> will it be done?_____
_____

Approvals:

_____
Teacher

Leaders Name: _____

Group #:_____

GOAL NUMBER:_____

SMART Goal Description:

_____
_____
_____
_____
_____

<u>Who</u> does this involve?_____
_____

<u>What</u> does this involve?_____
_____

<u>Where</u> will it take place?_____
_____

<u>How</u> (describe subgoals required to complete the goal) and <u>When</u> (target dates)

1. _____   _____

2. _____   _____

3. _____   _____

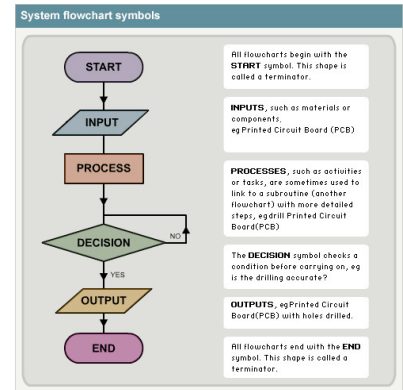4. _____   _____

5. _____   _____

<u>Why</u> do you want to do this? _____
_____
_____

<u>How</u> will completion be verified?_____
_____

<u>When</u> will it be done?_____
_____

Approvals:

_____
Teacher

Flow Chart

System flowchart symbols

START — All flowcharts begin with the **START** symbol. This shape is called a terminator.

INPUT — **INPUTS**, such as materials or components, eg Printed Circuit Board (PCB)

PROCESS — **PROCESSES**, such as activities or tasks, are sometimes used to link to a subroutine (another flowchart) with more detailed steps, eg drill Printed Circuit Board(PCB)

DECISION — The **DECISION** symbol checks a condition before carrying on, eg is the drilling accurate?

OUTPUT — **OUTPUTS**, eg Printed Circuit Board(PCB) with holes drilled.

END — All flowcharts end with the **END** symbol. This shape is called a terminator.

Step 4. Construct and Test Prototypes

Progress   **Name / Date**

Day _1_ : _____   _____

Day _2_ : _____   _____

Day _3_ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Day ___ : _____   _____

Construct and Test Prototypes

Progress	Name / Date

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Day ___: _____   _____

Step 5. Evaluate Solution

What went right:

_____

_____

_____

_____

_____

_____

_____

_____

_____

What went wrong:

_____

_____

_____

_____

_____

_____

_____

_____

_____

What would we try next time:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____