Learning about Possible Solution:

Before designing solutions it is important to better understand the parts of the system and the problem. Research and collect information about the problem and the system you defined in Phase A. There are many ways to research, but you will use the internet, observe the system, and talk with fellow classmates.

*According to the internet…*

*After looking over the system…*

*After discussions with the class…*

Using your research, develop a solution that you think will address the problem you described.

*According to (research)... I think a solution would be...*

Solution Ideas:

1. Draw a picture that:
   1. describes the system.
   2. describes your solution.
   3. includes labels of the problem, parts of the system, and your solution.

|  |
| --- |
|  |

1. Describe, in written sentences, the solution(s) you developed and how you think it will address the problem.
2. Testing your solution(s):

Perform several tests of your proposed solution. If you have more than one solution proposal you will need to test them one at a time. Be sure to collect evidence (observations and measurements) that you can use to justify the effectiveness of your solution(s).

|  |  |  |
| --- | --- | --- |
| **Solution Being Tested:** | **Problem Addressed:** | **Observations and Measurements:** |
|  |  |  |
|  |  |  |
|  |  |  |

Now that you have collected some initial data, test your solution(s) again under different conditions. Be sure to collect evidence that you can use to justify the effectiveness of your solution.

|  |  |  |  |
| --- | --- | --- | --- |
| **New Condition for Test:** | **Solution Being Tested:** | **Problem Addressed:** | **Observations and Measurements:** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Sometimes a design solution changes in the testing process. This can happen because the designer makes changes when testing conditions change. Describe, in written sentences, your current solution(s) to the problem.

In the space below, make a detailed sketch (with labels) to describe:

* your system
* the problem
* your current solution(s)

**Peer sharing Session**

As a class, discuss the identified problem(s) and the different solutions that were tested. You should pay close attention to the solutions that were similar to your solution(s) and the solutions that were different. You can use the space below to write or draw your discussion notes.