**Initial Design Worksheet**

**Rocket Fins**

1. Rockets and arrows always have fins (or feathers) at the tail end.   
   Why do you think this is so? What are the fins for?
2. How do you think the fins work?

**Rocket Design: Weight and Propellant**

1. In the “design matrix” below, circle the design you think will make the rocket fly STRAIGHT and FAR.

|  |  |  |
| --- | --- | --- |
| **Propellant🡪** | **Air (A)** | **Water (W)** |
| **High Center of Mass (H)** | **AH** | **WH** |
| **Low Center of Mass (L)** | **AL** | **WL** |

**Justification: Why did you choose this design?**

1. The rocket should have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ center of mass because:
2. Using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as propellant will make the rocket go further because: