GRAVITY

**GRAVITY Test Plan**

**Roles:**

1. Test Engineer
2. Ground Support Engineer
3. Project Engineer

**Flight Test Instructions:**

Test Objective: Determine effect of airplane weight (need to build a DART or GLIDER using the attached heavy weight paper)

1. Test Engineer:
   1. Do three flights for the heavy paper Airplane
   2. Do three flights for the copy paper Airplane
2. Ground Support Engineer:
   1. Measures flight distance
   2. Returns the Airplane to the Test Engineer
3. Project Engineer:
   1. Times and records flight duration
   2. Record the flight distance
   3. Report results to the Customer (class)

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| --- | --- | --- | --- | --- |
| **FLIGHT LOG** | | | | |
| HEAVY PAPER | COPY PAPER | FLIGHT DURATATION (Seconds) | FLIGHT DISTANCE (count number of paces by ground support engineer) | REMARKS |
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THRUST

**THRUST Test Plan**

**Roles:**

1. Test Engineer
2. Ground Support Engineer
3. Project Engineer

**Flight Test Instructions:**

Test Objective: Determine effect of Dominant or Non-Dominant Thrust on either the DART or GLIDER

1. Test Engineer:
   1. Inform Project Engineer if you are right or left handed
   2. Do three flights with your right arm
   3. Do three flights with your left arm
2. Ground Support Engineer:
   1. Measures flight distance
   2. Returns the Airplane to the Test Engineer
3. Project Engineer:
   1. Record if Test Engineer is left or right handed
   2. Times and records flight duration
   3. Record the flight distance
   4. Report results to the Customer (class)

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| --- | --- | --- | --- | --- |
| **FLIGHT LOG** | | | | |
| RIGHT ARM | LEFT ARM | FLIGHT DURATATION (Seconds) | FLIGHT DISTANCE (count number of paces by ground support engineer) | REMARKS |
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LIFT/DRAG

**LIFT/DRAG Test Plan**

**Roles:**

1. Test Engineer
2. Ground Support Engineer
3. Project Engineer

**Flight Test Instructions:**

Test Objective: Determine effect of wing shape

1. Test Engineer:
   1. Fly the DART three times
   2. Fly the GLIDER three times
2. Ground Support Engineer:
   1. Measures flight distance
   2. Returns the Airplane to the Test Engineer
3. Project Engineer:
   1. Times and records flight duration
   2. Record the flight distance
   3. Report results to the Customer (class)

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| --- | --- | --- | --- | --- |
| **FLIGHT LOG** | | | | |
| DART | GLIDER | FLIGHT DURATATION (Seconds) | FLIGHT DISTANCE (count number of paces by ground support engineer) | REMARKS |
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Schedule (plan for 1.5 hours)

5 min Pass out paper, introduce yourself

15 min Introduction to what Engineers do

20 min Introduction to how Airplanes fly

15 min Make DART and GLIDER together with Class

20 min Form teams and Test Airplanes

5 min Competition for longest duration and distance

10 min Lessons Learned and Prizes