FY26 Visuals Spring Challenge

FY26 Spring Challenge One Pager

Stay Fly

Students will design and construct a device capable of achieving the longest flight distance after being launched. The device must successfully clear the designated minimum length.

Rubric

Starter Supply Kit

📣 Updates 📣

Flow updates:

- The judges will be retrieving the devices after each launch, not the students.
- Students can stand on the sides of the tables, they do not have to stand in a line behind the table.
- The device should be some semblance of a flying device or glider as stated in the document.
- Devices cannot be thrown by hand.
- Students must launch their device by pulling their device along with the rubberband fully to the opposite end of the table.
- Students can pull the rubberband past the end of the table but they can not pull less than the length of the table.

Materials:

The supplies we provided in your Spring Challenge kits are the approved materials for the challenge. If it's not on the "supplies" list, then it is not permitted to be used; meaning no to 3D printed materials, special ordered items, etc.

- If your teams have used all their materials trying to come up with a device and you have scrap cardboard, paper, hot glue laying around that is totally fine! As long as it is a type of material on the supplies list we are good.
- We are very happy that students are excited and engaging with the challenge however want to maintain the integrity of the challenge. However, we want to maintain the integrity of the challenge.
- If your students are excited and have already created/want to create another glider that goes outside of our approved supplies list, they are welcome to do so and bring it to show it off! We will have some open court time for launches just for fun, but these launches won't be eligible for competition.

Overview:

1. **Teams of 2–4 students**
    a. Teams do **not** need to be the same as their year-long project groups.
    b. This challenge takes place **after Spring Break** and is designed to be completed over a few chapter meetings leading up to MESA Day.
    c. Students must manage their time between this and their year-long project.
2. Teams will have **3 minutes total** to compete.
3. Teams must build a glider/flying device that can clear a minimum **distance of 10ft**
    a. Challenge lane has a max distance of **50ft**
4. Teams will have **5 attempts** to launch their device. *Retrieving the device is included in the 3 minutes*

Competition Flow:

- Each team will be given **60 seconds** to set-up and practice launching their device.
    - **Not** included in the three minute competition time.
- The device's first first landing place will be marked by the judges.
    - The decision of the judges on the location of the first landing place is final and not up for debate.
- Judges will give the device back to the team immediately after they have marked the initial landing place of each launch.
- The best attempt of all five launches will be used to determine the final score.
- **In case of a tie**
    - We will be using the second highest score to determine the winner.

Design Considerations:

- The device can only be made from approved materials in the supply list.
- There are no restrictions on size or weight, however the device MUST be capable of:
    - Clearing the minimum distance,
    - Not breaking when launching
    - Not breaking when landing
- Note for additional power source(s):
    - Remote-control (electronic) devices of any kind may not be used.
    - **Meaning** if you had some form of propeller that can be manually wound up to help propel your device that is acceptable (example), but if it's an electronic form of a motor then that is not.
        - Same for wings (example).
- Only team members can repair their device. There will be tape available to repair devices.
    - Repairs are also included in the three minutes

Final details:

- Flying over the 10ft line **WITHOUT** losing pieces of the device during flight **or** upon landing.
    - For devices that
        - do not fly over the 10ft line
        - do lose pieces of the device during the flight or upon landing, the launch is considered incomplete.
    - Incomplete flights will not be scored.
- If the device lands before the 10ft line teams are allowed to launch as many times within the timeframe to clear the 10ft line.
    - Only once the 10ft line is cleared can it be considered one of their five attempts.
    - ***Meaning** a team could launch their device a total of 10 times but only have five complete flights that counted towards their score.**

Rubric (back to the top)

Topic	Description	Score
Successful (Complete) Launches	Flying over the minimum distance of 10 ft. **WITHOUT** losing pieces of the device during flight or upon landing.	**Launch 1**_____ **Launch 2**_____ **Launch 3**_____ **Launch 4**_____ **Launch 5**_____
	Section 1 total:	/5
Goin' the distance	**First landing place** after clearing the minimum distance of 10 feet. **1 point for every foot** after clearing the minimum distance.	**1)**_____**ft**_____**in** **2)**_____**ft**_____**in** **3)**_____**ft**_____**in** **4)**_____**ft**_____**in** **5)**_____**ft**_____**in**
	Section 1 ___ **+** **Highest Score from Section 2** ___	**=** _____/55 pts

Starter Supply Kit (back to the top)

Material	No. of items	Per team/Per chapter
Cardboard	20 sheets	Chapter
Hot glue sticks	~10	Chapter
Painter's Tape	1-2 rolls	Chapter
Large Rubber Band	1	Chapter
Clamps	2	Chapter
String/yarn	~3 yards	Team
Paperclips	10	Team
Balsa Wood Sheet	2	Team
Balsa Wood Sticks	20	Team
Foam Board	2	Team
Rubber bands (assorted sizes)*	10	Team