

# Astronaut Challenge Space Mailbox Competition



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# General Rules and Regulations

## Student Astronaut Challenge

### Space Mailbox Design Competition

#### **INTRODUCTION:**

Blue Origin **Club for the Future** currently sponsors the “**Postcard into Space Program**”. Any student can write or draw their vision on a postcard for what they think the future of life in space will look like or any other message they would like to send to space. Postcards are sent to **Club for the Future**, that will support its launch it to space and back on a New Shepard rocket, and return stamped with "Flown to Space." Students can send them as many postcards as they like and Blue Origin will fly them all. <https://clubforfuture.org/missions/>

In this challenge, students will design a mailbox for their school to receive the postcards so they can be gathered and sent to **Club for the Future**. Student’s will then create a life size prototype of the mailbox and place it in their school to actively support student participation in this program. The winning school High school team for this event will have their design constructed, according to their specifications, and placed on active display at the Kennedy Space Center Gift Shop near the Blue Origin Display .

#### **ENTRY GUIDELINES**

Student must design a mailbox according to given specifications provided for the competition and the design must incorporate the given theme and supporting organizations.

#### **THEME**

- A. This year the visual appearance of the mailbox must encompass the subject “**Return to the Moon**”. Students may select whatever artistic expression they feel best demonstrates this concept.

#### **PROTOTYPE**

- A. Each team must construct a **functioning life size prototype** of the mailbox (using inexpensive material), place the mailbox inside their school and provide photographic evidence of its placement and use for their presentation.
- B. The mailbox presented is to be designed to be placed outside and must incorporate the appropriate materials that can withstand the Florida elements and protect the postcards inside. Floor plates, attachments or fasteners to secure the mailbox to the ground are not required in the design.
- C. The mailbox must be easy to use, all materials in the design must be generally available and the cost of construction must be taken into consideration. The security of the postcards within must also be considered and the ease of mailing and mail retrieval. The mailbox must be designed to closely approximate the following specifications 15"W x 15"D x 40"H within the limitations of the artistic design chosen. The mailbox must also incorporate in its design the following logos:
  - a. The participating School’s emblem or logo
  - b. Blue Origin / Club for the Future logo
  - c. Student Astronaut Challenge Logo

## **DESIGN PLAN**

- A. Comprehensive design plans must be provided that could be used to replicate the mailbox. This includes specific design components, dimensions, and various colored perspective drawings as necessary.
- B. The actual type, size, and estimated costs of the specific material that would be used must be included. It is important that the student consider the manufacturing process that will be needed to replicate the mailbox design as that is a consideration of the overall cost of production. For example: If you used a 3D printer to produce the mailbox you would need to consider the costs associated with using a commercial 3D printer and the material(s) chosen.

## **PRESENTATION**

Students will include a hard copy of the design plans for the Blue Origin judges review. The presentation should include detailed pictures of the prototype (see rubric). Students will have 20 minutes to present their design to the judges using Power Point with 10 minutes for questions. Internet service may be limited so students should bring a copy of their presentation on a flash drive.

## **PROTOTYPE RESTRICTIONS**

- A. Chemicals and any liquids (including household cleaning products and outdoor/pool chemicals), soils, food, gases, bleach, batteries, open flames, and explosives may not be used.
- B. Controlled or illegal substances, including over the counter drugs, prescription drugs, alcohol, or tobacco, may not be part of the prototype.
- C. Knives, syringes, or any sharp objects are not to be used  
Any item that can be easily pulled off and swallowed cannot be used.