YSLP Week 2022 Activity

Future of Space: Make a Spaceshuttle

Introduction: Future of Space

The technology that we have to explore and investigate space gets more and more sophisticated with every passing year. From the James Webb Space telescope giving us views of ever further away, to the Perseverance Rover testing for signs of life on Mars, we are learning more each day and there are so many amazing discoveries still to be made about space in the future.

In order to investigate space more fully, we need to be able to send things there, be that people, robots and rovers or satellites. In this activity, your participants will make a space shuttle and rocket launcher and see if you can get your shuttle to space.

Activity Set Up

What you will need:

- A4 Paper
- Elastic bands
- Stapler

Keeping Safe

Before you create and lead your activity, complete the Staying Safe section of the Create badge, or the Risk Assessment template, in your Log.

Risks to consider:

- Cuts from scissors
- Paper cuts from cards
- Injuries from elastic bands

How it works

This file folder paper airplane launcher propels the plane forward with the tension of a rubber band. Pull the sides of the launcher to release the rubber band, and the plane shoots forward!

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Leading the Activity - instructions for participants

Creating the aeroplane

1. Fold A4 paper along a diagonal line so one vertical edge is touching the other. This should make a triangle with a rectangular bit left over.
2. Cut off the rectangle and unfold your paper and you should be left with a square.
3. Fold the square in half to create two rectangles. This will mark out the centre point of your square.
4. Fold two corners into the centre creating a triangle on top of your square.
5. Fold the furthest edges of the paper into the centre again creating a longer pointier triangle.
6. Fold along the middle and then fold the wings back down towards the edges and you have your aeroplane.
7. Your participants may want to experiments with different aeroplane designs to see what works best e.g. folding the very tip of the nose of the plane up slightly, different wing shapes, adding blue tack for weight etc.

Creating the launcher

1. Cut the paper into a 20cm x 20cm square
2. Fold the square in half, creating two rectangles.
3. Fold the paper back towards the edges on each side so you have four rectangles on top of each other in a concertina.
4. Staple an elastic band at the edge of the paper in the centre fold.
5. Stretch it around the outside of the paper from the bottom to the further away top corners.
6. Place your aeroplane inside the middle fold, pull the paper edges apart and watch it fly.

Twitter Challenge
How far did your space shuttle travel?
Tag us in your photos and videos of your super space shuttles and let us know the furthest distance from your group @YoungSTEMLeader #YoungSTEMLeaderWeek

Enter by 8pm for the chance to win a prize for your centre!