VIOLET THE PILOT

Synopsis

Violet is very good at inventions and making airplanes but she has no friends and longs to be recognized. One day, as Violet is on her way to an airshow with her newly invented plane, she sees a group of scouts drowning in the river. She saves them but misses the airshow, and her opportunity to show her inventions. However, her heroic act is soon recognized by the whole town.

Lessons and objectives

Be true to yourself and prioritise kindness.

Materials Needed

- Plane templates
- Scissors
- Pencil Crayons
- Ice cream sticks
- Boxes
- Toilet Rolls
- Skewers
- Duct tape
- Scrap paper
- Straws
- Clear glue
- Turning pins
- Glue Stick
- Thin rubber bands
- Packing tape or other strong tape
- Cotton balls
- Single hole punch

Discussion Questions

1. What are the machines that Violet invent's? Which is your favourite one?
2. What is Violet's talent?
3. Does she have any friends? Why?
4. Why does Violet want to go to the airshow?
5. Why does she miss the airshow?
6. Do you sometimes get bullied at school?
7. How do you think Violet feels in the end?

Activities:

1. Maths - Target
2. Paper Planes
3. Flying Machines
4. Cotton Ball Launcher

PAPER PLANES

Lesson Focus and Goals

Today the children will need to follow careful instructions to make a paper plane. Ask them to decorate and you can judge the best one! Ask the children to bring a box for their flying machines next time they come.

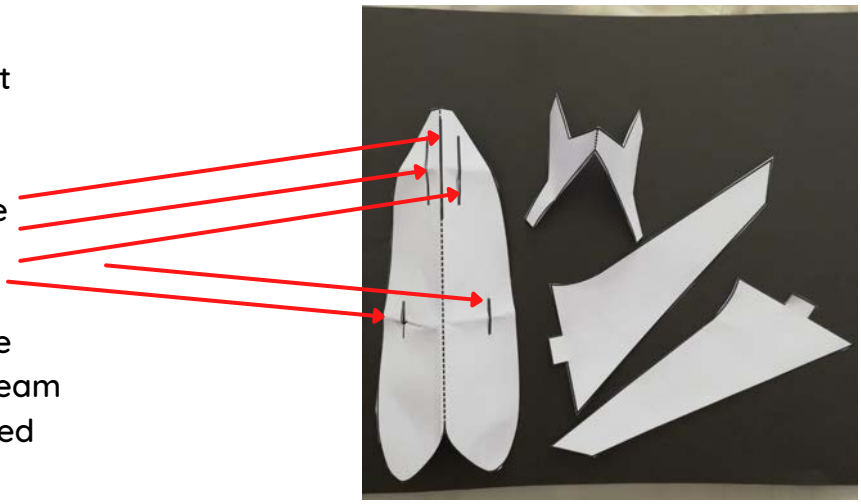
Materials Needed

- Plane templates
- Scissors
- Pencil Crayons
- Ice cream stick
- Tape

Structure/Activity

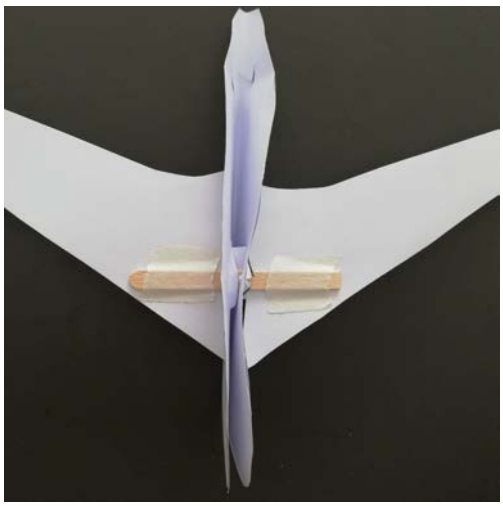
Step 1: Cut the paper plane shape out following the solid lines.

Step 2: Cut out the the slits where the solid line is



Step 3: Place the wings in the slits.The plane body has slits where the ice-cream stick can be pushed through and taped under the wings

Step 4: Fold the tail piece at the dotted line and push through the slit at the end of the plane body



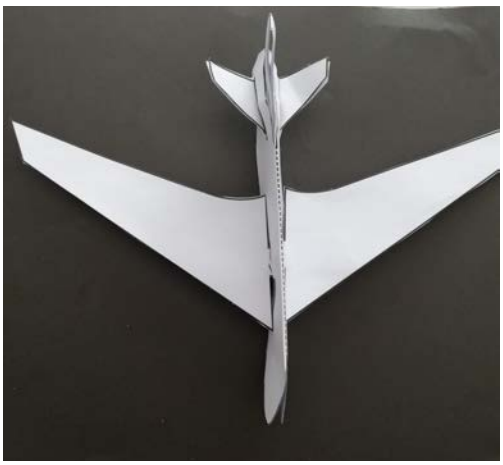
Step 5: Bend up the two wide tails into each slit and fold

reference: https://www..okdolls.com

Step 4: Fold the tail piece at the dotted line and push through the slit at the end of the plane body

Step 5: Bend up the two wide tails into each slit and fold

Step 6: Now you can decorate your plane:)



FLYING MACHINE

Lesson Focus and Goals

Today divide your group into two. Using the boxes and recycling material let the children design their own flying machine. Encourage good teamwork and creativity.

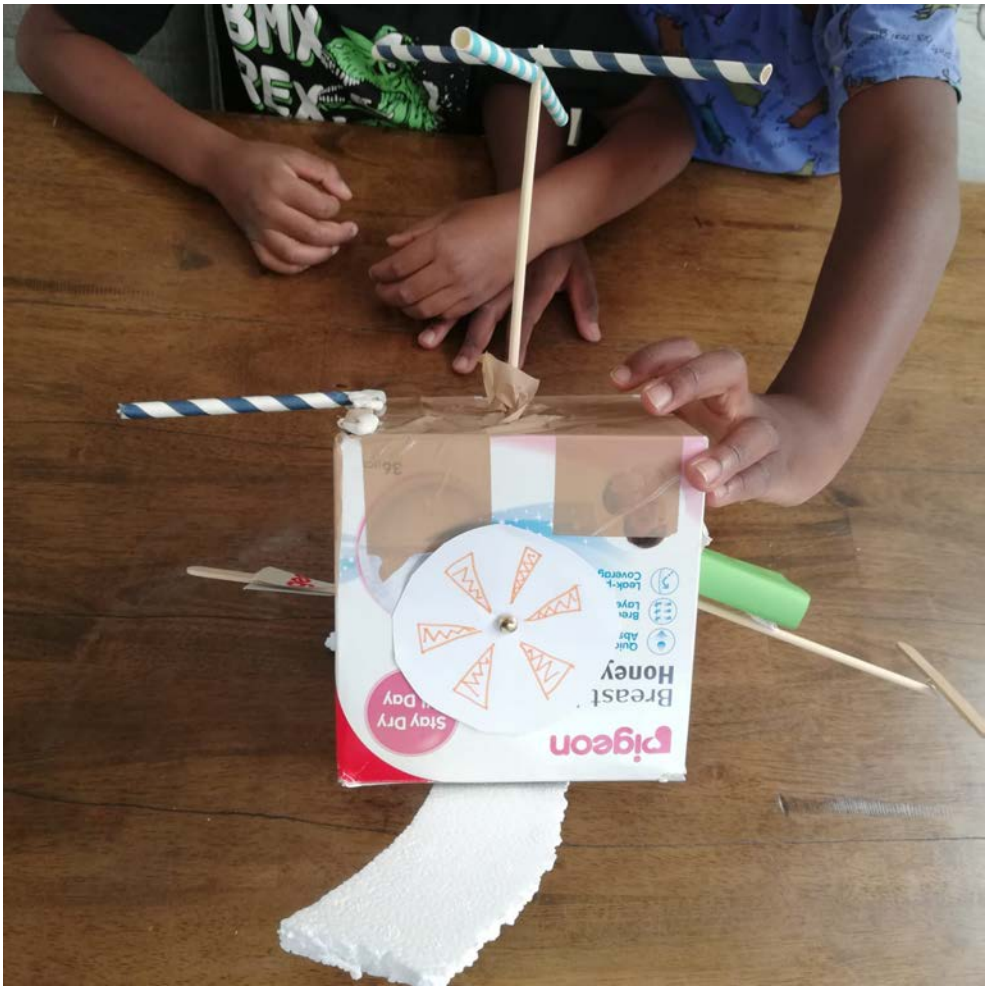
Materials Needed

- Boxes
- Scissors
- Toilet Rolls
- Skewers
- duct tape
- scrap paper
- Straws
- clear glue
- Turning pins
- Glue Stick

Activity 1 - Flying Machine

Put all the material in the middle and the two groups can take what they think they need to create a flying machine.

The teams can present their machines to each other at the end.



COTTON BALL LAUNCHER

Lesson Focus and Goals

Today the children will practise their engineering skills by making a cotton ball launcher. Let the children follow the instructions carefully.

Materials Needed

- Short pencil or popsicle stick
- Thin rubber bands (2)
- Packing tape or other strong tape
- Scissors
- Cotton balls
- Single hole punch
- Cardboad tube (2 empty toilet paper tubes or empty paper towel tube cut in half)

Activity - Cotton Ball Launcher

Step 1: Use your scissors to cut one of the toilet paper tubes in half lengthwise.

Step 2: Squeeze the roll so that it becomes narrower, about half the original diameter, then tape it to hold in place.

Step 3: Use your scissors or your hole punch to punch two holes in the skinny tube (if you are using a popsicle stick, use scissors to make narrower holes the same shape as the popsicle stick). Make the holes opposite one another, half an inch away from the end, so that you can poke your pencil or popsicle stick all the way through the tube.

Step 4: Carefully push your pencil or popsicle stick through the holes.

reference: https://www.sciencebuddies.org/stem-activities/cotton-ball-launcher?from=Blog#instructions

Step 5: On your second toilet paper tube, cut two slits into one end of the tube, about 0.5 cm inch long and 1 cm apart.

Cut two more slits on the same end of the tube, directly across from the first two

Step 6: Carefully loop one rubber band through the slits on one side, so that it hangs from the cardboard piece in the middle. Put a piece of tape over the slits to reinforce the cardboard tab.

Loop the other rubber band through the slits on the other side of the tube. When you are finished, the tube should have a rubber band hanging from each side.

Step 7: Holding the rubber band tube so that the rubber bands are at the top, slide the narrower tube into the wider one, with the pencil end at the bottom.

Step 8: Carefully loop each rubber band end around the pencil.

Step 9: Hold your launcher so that the pencil is at the bottom. Place a cotton ball on the top, so that it rests inside the narrower tube.

Step 10: Hold your launcher slightly horizontally without dropping the cotton ball. Pull back on the pencil so that the inner tube extends two inches out the back of the launcher. Carefully aim your cotton ball—away from people! Release the pencil and watch your cotton ball fly!

reference: https://www.sciencebuddies.org/stem-activities/cotton-ball-launcher?from=Blog#instructions