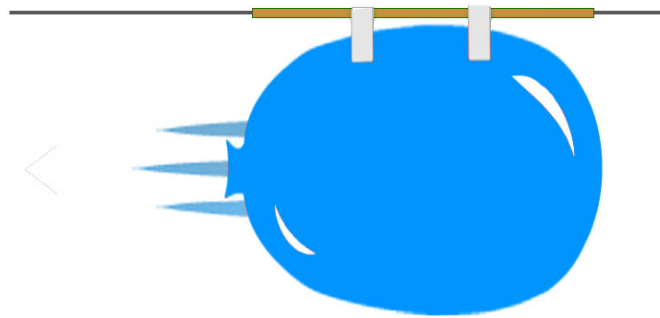




## Balloon Air Engines

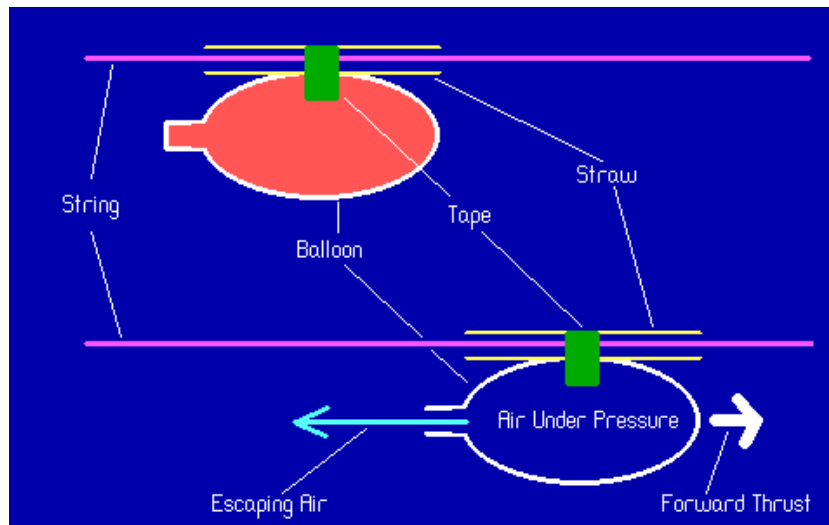
### Materials needed

- Balloon
- Drinking Straw
- Fishing Line
- Tape



### Directions

1. Thread the fishing line through the straw and tie the ends of the fishing line to 2 chairs or door knobs.
2. Blow up the balloon but don't tie off the end.
3. Tape the balloon to the straw.
4. Let the balloon go to see how far it travels!



## Lesson:

This activity represents the rocket engine. The straw represents the fuselage and the balloon represents the aircraft engine. Once the balloon is filled with air, there is a difference in air pressure between the outside and the inside of the balloon.

The inside of the balloon has higher pressure than the outside of the balloon. The air on the inside of the balloon equalizes with the air on the outside of the balloon when the balloon is released. Energy is generated as air equalizes from high pressure areas to low pressure areas.

The balloon moves in the opposite direction of the flow of the released air because every action has an opposite and equal reaction. Since the air is released from one small hole, the release of the air is focused in one direction. Because it is focused in one direction, the balloon and straw are forced to move down the string in the opposite direction.