

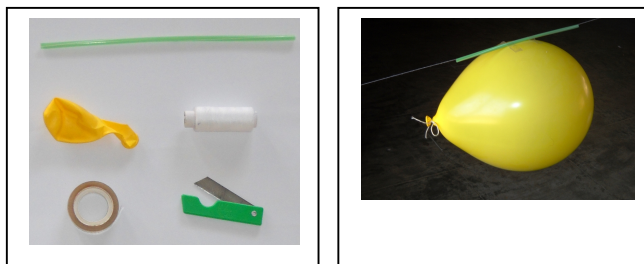
## EXPERIMENT - 2

### NEWTON'S THIRD LAW

**Aim** : To verify Newton's third law by using Balloon rocket.

**Required** : Thick thread, Straw, Balloon, Cell tape, Cutter (Blade)

**Formula** : For every action , there is equal and opposite reaction. This is Newton's third law of motion.



**Procedure:**

- (1) Tie the thread to the window which is at some height in the room.
- (2) Send the other end of the thread through a straw and tie the other end to the window at opposite side in the room. (Tie at lower part of window)
- (3) Inflate the balloon and press its neck with fingers to prevent air escaping from it.
- (4) Keep the balloon under the straw and stick with cello tape.  
(In this situation the mouth of the balloon is towards the second window).
- (5) Now remove the fingers from the balloon.
- (6) Observe what is happening there.

#### **Observation :**

- When we release the neck of the balloon to allow the air to escape from the balloon, we observe the air escapes from the balloon in one direction as well as the balloon accelerates in the opposite direction.
- Here Action : Air comes out from the balloon  
Reaction : Motion of balloon along with straw

#### **Precautions :**

- Affix the cello tape in the particular small area where ever needed.
- Don't use too small balloon . (It may travel less distance.)

#### **Result :**

- Newton's third law is verified by using Balloon rocket.