

## **FUN WITH FORCE**

**Objective :** Simple activities can help children to understand different concepts. The activity in this session, for example, helps children to joyfully learn that force is required for any type of movement, and that the resultant of two equal and opposite forces is zero.

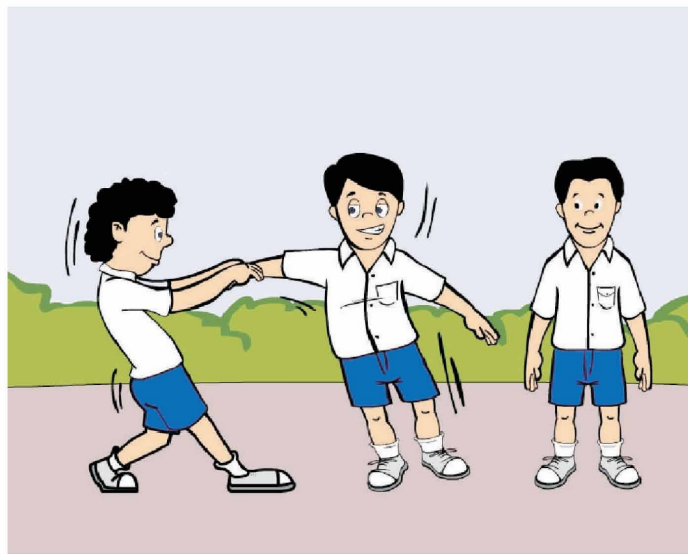
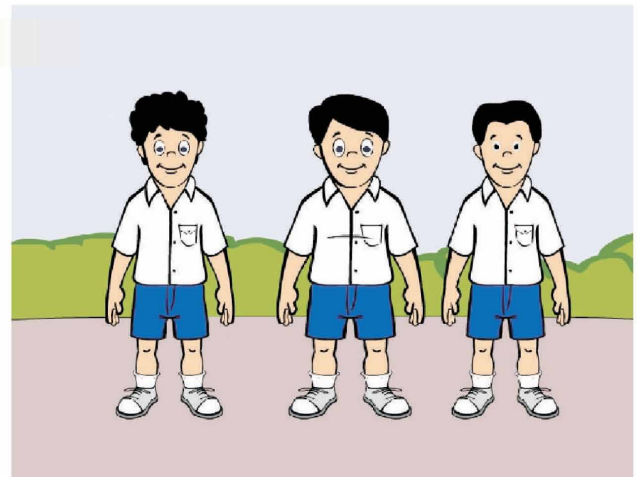
### **Methodology:**

**How to conduct the activity in class:-**

#### **Game 1 - Why isn't he moving?**

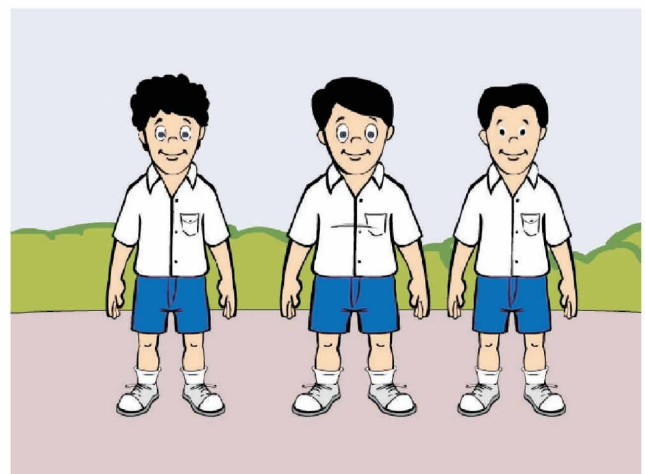
##### **Step 1:**

Make different teams, each consisting of three children and ask them to stand next to each other as shown in the figure.



##### **Step 2:**

Ask the child standing on the left side of the team to pull the child standing in the middle by pulling his arm, towards him (as in figure). Ask the children-what happens? Yes, the child in the centre 'moves' towards the child pulling him.

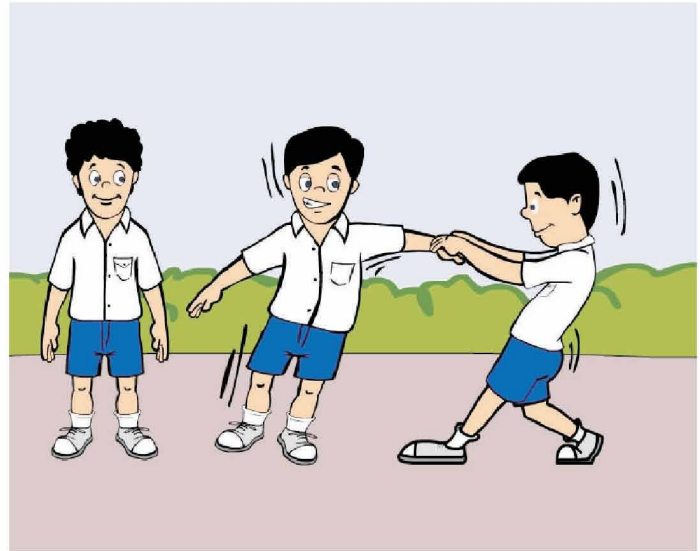
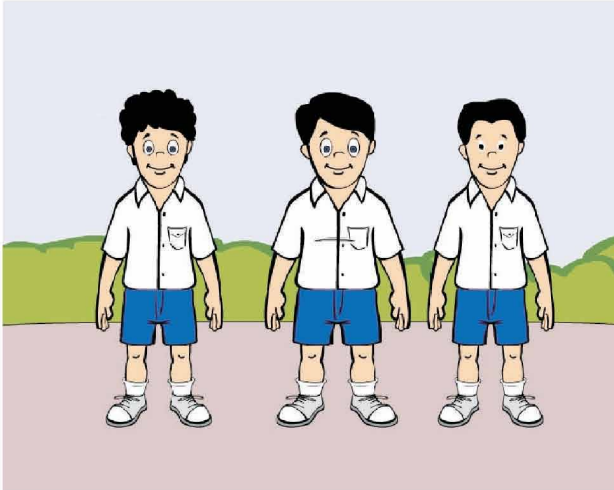


##### **Step 3:**

Now let all three go back to the original position.

#### Step 4:

Now ask the child standing on the right side to pull the child standing in the middle of the team by his arm towards him (as in figure). What happens? Yes, the child in the centre 'moves' towards the child pulling him.



#### Step 5:

Now let all three go back to the original position.

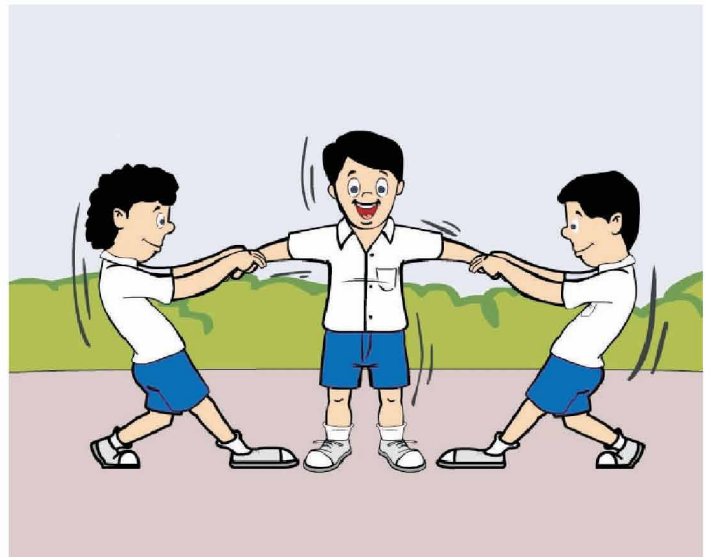
#### Step 6:

Now ask both children standing on the sides to pull the child standing in the middle.

#### Step 7:

What happens?

Yes, when both children are pulling in opposite directions, the child in the centre remains where he is!

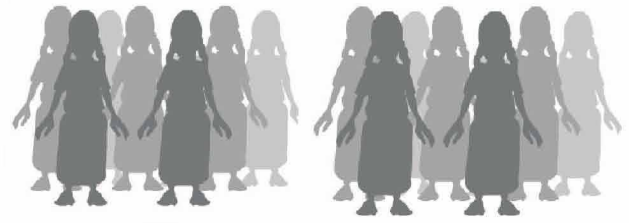


#### Note for Teachers:

- ◆ Ask the children to be gentle while pulling or pushing their team mates!
- ◆ This game can also be played in the classroom, or while seated.
- ◆ In a very broad sense, this game can help small children understand why the 'moon doesn't fall down' and what 'keeps it up there'.

## Game 2 - Fun with Rope / Tug-of-War

**Material required:** A long, strong rope.



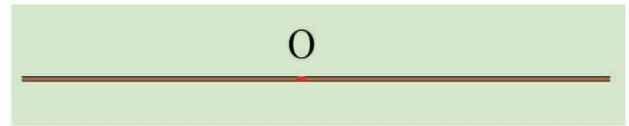
### Step 1:

Children will go to the ground and form two teams with equal number of children in both the teams.



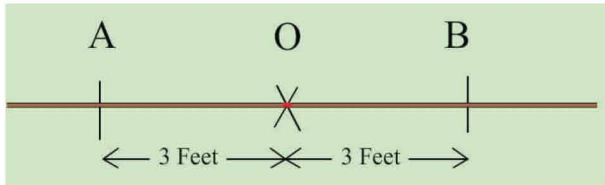
### Step 2:

Take a long, strong rope and mark its center with a marker/chalk.



### Step 3:

Keep the rope on the ground in a straight line, and mark a point corresponding to the center point of the rope (as 'O') on the ground.



### Step 4:

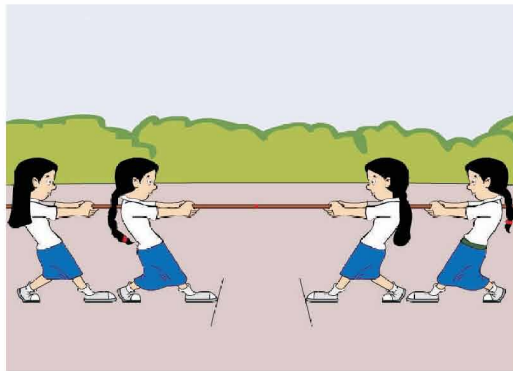
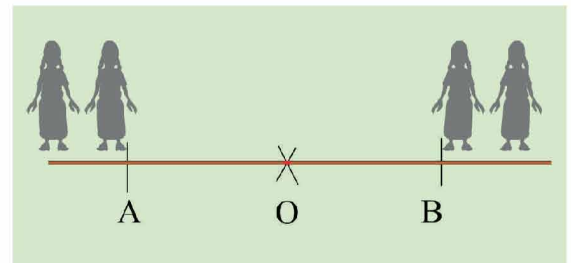
Mark lines 'A' and 'B', 3 feet from the center point ('O') on both sides. Area OA and OB are the territories of each team.

### Step 5:

The teams will take their positions opposite to each other along the rope starting from lines 'A' and 'B'.

### Step 6:

All the players of both teams will now hold the rope and take position to pull the rope.



### Step 7:

Both the teams will start pulling the rope towards their side when the start signal is given.

### Step 8:

The team which pulls the other team into its territory, will win the game.

### Note for Teachers:

- ◆ The signal to start the game can be given by the Teacher.
- ◆ Children can share their experiences of this activity with you and among themselves.
- ◆ These experiences can be associated to learning concepts related to 'Force'.
- ◆ Both the teams should be balanced as far as strength of its members is concerned.