

Lesson Plan: **Force**

Material Required: Smiley Balls, String, Basket/Football, Tennis ball. Laptop, Internet

Objectives:

- Understand that PUSH & PULL are forces & to be able to arrive at the definition of the term 'force'
- To establish a relationship between force and state of motion (activity)
- To investigate the effect of forces on 'State of Motion, direction, shape, speed'
- To know of the different types of forces
- To develop scientific skills such as observation, hypothesizing (predicting), articulation of scientific understanding with evidence

**Student Activity:** This is a whole class activity

1. A soft smiley ball/any small thing is tied to a string and hung from the top in the classroom
2. The students are asked to take turns to come forward and try different ways of making the object move in all possible ways [speed & directions] (pushing/ pulling/ picking/ hitting/ lowering/ f lying/ kicking / throwing/ shutting/ flicking/ blowing/ tapping etc.)
3. Two students are asked to make note of the various actions used by their peers

After a list of 15 to 20 actions has been made, the class is asked to classify each of these actions into “PUSH / PULL ACTIONS”

**Teacher Activity:** Starts discussion with students on use of forces in daily life. Then ask students to observe activities around their surrounding and note in the following table:

(An Example is shown in the first line)

Activity / Situation around the Environment	How is the Force Applied	Change in the State of rest/ motion	Change in Shape	Change in Direction	Change in Speed
Playing Carrom Board	Sticking the Stricker	The Carrommen moves from its position	No Change in Shape	Yes	Yes

Explore:

Based on their Observaions Students are asked to Categorize the Force into different types in the following Table:

Sl	Activty	Type of Force	Category
1	Typing on Keyboard	Muscular Force	Contact Force
2	Ball Falling from a heing	Gravitational Force	Non-Contact Force

Create with Technology:

Work in Group or Pair to select any one type of Force and plan to design a Game or Quiz around it, and share the plan with your teacher.

Create the game using any application like Scratch / mBlock, PowerPoint, Quiizz, etc