Studio One - Junior STEM and Robotics

Week 1 - March 28th to April 1st

Date	STEM (Defying Gravity, or is it?)	Drones
28/03/22	Walking Paper Horse Design and create a paper structure that mimics a walking mechanism	Angry Man Explore the working of propellers with this fun activity
29/03/22	Balancing Bird Explore the centre of gravity of objects with this seemingly magical activity	Propeller Car Design and create a car that is powered by propellers. Explore how the direction of propellers affect the movement of the car
30/03/22	Marble Run Design and create a track for a marble that works on gravitational pull.	Hovercraft Using the propellers, design a vehicle that hovers on the land. Manoeuvre it to move around the given path
31/03/22	Defying gravity with magnet Using magnets create a force on objects that will oppose the gravitational pull	Drones Explore the working, propulsion system and motion of the drones
01/04/22	Weighted Catapult Design a catapult that works on gravitational potential energy	Air manoeuvres Experiment different stunts in the air with drones

STEM for kids

Week 2 - April 4th to April 8th

Date	STEM (Light and Shadows)	Robotics (WeDo 2.0)
04/04/22	Fun with Shadows With this fun experiment, explore how shadows are affected by the angle and intensity of light	Moving Satellite Design, build and code a satellite; design and build a skater that uses similar mechanism
05/04/22	Shadow Puppets Design a shadow puppet for a shadow theatre. Create puppets using opaque, transparent and translucent materials	Windmill Design and build a windmill that works on gear mechanism
06/04/22	Shadow Art Learn how to play with light to create a shadow art with simple items	Aeroplane Design, build and code an aeroplane that works on a joystick made from tilt sensor
07/04/22	Spectroscope Light experiments are fun when they involve rainbows! Discover spectral patterns of different light sources	Mine Railway Design a track and mine rail that is controlled by tilt sensor joystick
08/04/22	Kaleidoscope Explore how reflections from one mirror into another mirror create beautiful patterns	Smart Recycle Bin Design, create and build a recycle bin that opens when it detects an object