

LS Creative Learnings Pvt Ltd.

STEM-Robotics Education

Report for Sep 2017

S.B. Patil Public School, Pune

Grade: III

Sept 2017

First week

Topic	Helicopter
Lesson Objective	To understand about different modes of transportation like airways.
Robotic Kits used	Science And Technology kit
Activities	To build the model of Helicopter.
Learning Outcome	Students learn the different modes of transportation like airways and about simple machine – wheel and axle.

Second Week

Topic	Power Truck
Lesson Objective	To understand about different mode of transportation; the mechanism of powered vehicles.
Robotic Kits used	Science And Technology kit
Activities	To build the model of Power Truck
Learning Outcome	Students learn different modes of transportation like road ways, railways, water ways and air ways and the working of powered vehicles.

Third week

Topic	Buldozer
Lesson Objective	To understand the mechanism of spur gears
Robotic Kits used	Science And Technology kit
Activities	To build the model of buldozer
Learning Outcome	Students learn the different modes of transportation like road ways, railways, water ways and air ways. And the working of powered vehicles.

Fourth week

Topic	Pendulam
Lesson Objective	To understand about compound gear mechanism
Robotic Kit used	Science And Technology kit
Activities	To build the model of pendulam
Learning Outcome	Students learn about compound gear mechanism

Grade: IV

Sep 2017

First week

Topic	Hammer
Lesson Objective	To understand about compound gear mechanism
Robotic Kits used	Science And technology kit
Activities	To build the model of Hammer
Learning Outcome	Students learn about compound gear mechanism

Second Week

Topic	Gear Car
Lesson Objective	Students learn about compound gear mechanism
Robotic Kits used	Science and technology kit
Activities	To build the model of Lego gear car
Learning Outcome	Students learn about working of gear car and use of spur gear

Third week

Topic	Sweeper car
Lesson Objective	To understand the mechanism of gears and pulleys.
Robotic Kits used	Science and technology kit
Activities	To build the model of sweeper
Learning Outcome	To understand the Sweeper is used as a floor cleaning machine and It can also be used to measure distance. It is working using the mechanism of gears – bevel gears and gearing up, pulley

Fourth week

Topic	Trundle wheel
Lesson Objective	Understanding the working concept of Measure wheel to measure the length of an object
Robotic Kits used	Science & Technology (S & T) Kit.
Activities	Build the model of Trunde Wheel
Learning Outcome	Students learn different methods of measuring distance

Sept 2017

First week

Topic	Introduction to scratch software
Lesson Objective	To understand programming concepts
Robotic Kits used	Lego Wedo Kit
Activities	
Learning Outcome	Students learn to get familiarize with scratch

Second Week

Topic	Scratch-Motion block
Lesson Objective	To understand the commands in motion block
Robotic Kits used	LEGO-Wedo kit
Activities	Use motion block commands and make small programs
Learning Outcome	Students learnt about how to change the movement of sprite using commands

Third week

Topic	Scratch-control
Lesson Objective	To understand how to use control block commands
Robotic Kits used	Lego WeDo Kit
Activities	
Learning Outcome	Students learnt forever if,if –else,repeat commands and how to control script using these commands

Fourth week

Topic	Scratch-looks
Lesson Objective	To understand use of looks block
Robotic Kits used	Lego Wedo Kit
Activities	
Learning Outcome	Students learn how to change the appearance of sprite

Grade: VI

Sept 2016

First week

Topic	Sliding Door
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Lesson Objective	Learn Mechanism of rack gear.
Robotic Kits used	Wedo Kit
Activities	To build the model of Slidding Door
Learning Outcome	Students learn about Rack gear and spur gear mechanism.

Second Week

Topic	Escalator
Lesson Objective	To understand pulley mechanism
Robotic Kits used	Wedo Kit
Activities	To build escalator
Learning Outcome	Students learn about Polygons are the closed geometrical figures having more than three sides.Also learnt how to give name according to their number of sides

Third week

Topic	Swing
Lesson Objective	To understand the working of motor and scratch program Understand the concept to and fro motion
Robotic Kits used	Wedo Kit
Activities	To build the model of swing
Learning Outcome	Students learn how to do the scratch program to make the to-and-fro motion and repeat it for some time.

Fourth week

Topic	Ball Kicker
Lesson Objective	To build and program a mechanical leg that is motorized to swing and kick ball.
Robotic Kits used	Wedo Kit
Activities	To build the model of goal kicker
Learning Outcome	Students learn how to operate the goal kicker best,and how the energy transfers from the computer powering the motor through the leg.

Grade: VII

Sept 2016

First week

Topic	Move a Bot in circle
Lesson Objective	How to use steering option.
Robotic Kits used	NXT Mindstorm
Activities	Write the program on mindstorm.

Learning Outcome	Students learn about Steering option.
Second Week	
Topic	Move bot in Square Shape
Lesson Objective	How to use steering option.
Robotic Kits used	NXT Mindstorm
Activities	Write the program on mindstorm.
Learning Outcome	Students learn about Steering option.
Third week	
Topic	Move bot in S Shape
Lesson Objective	How to use steering option.
Robotic Kits used	NXT Mindstorm
Activities	Write the program on mindstorm.
Learning Outcome	Students learn about Steering option.
Forth week	
Topic	Move bot in semi circle, 8 Shape
Lesson Objective	How to use steering option.
Robotic Kits used	NXT Mindstorm
Activities	Write the program on mindstorm.
Learning Outcome	Students learn about Steering option.

Grade: VIII

Sept 2016

First week

Topic	Robot Arm to hit red ball.
Lesson Objective	To Build the robot arm to hit red ball.

Robotic Kits used	NXT Mindstorm
Activities	To build robotic arm and Write the program on mindstorm.
Learning Outcome	Students learn how to measure Intensity red color and how to program to hit red ball.

Second Week

Topic	Grab object
Lesson Objective	To build the simple drive base model to grab the object
Robotic Kits used	Nxt mindstorm
Activities	Build the drive base model to grab the object using jaw
Learning Outcome	Students learn how to build and program to grab object using ultrasonic sensor

Third week

Topic	Sensor bumper
Lesson Objective	Understand how to program the robot using multiple sensors.
Robotic Kits used	Nxt mindstorm
Activities	Build the drive base model using ultrasonic and touch sensor.
Learning Outcome	Students learn how to use multiple sensor and program it.

Forth week

Topic	Parking bay
Lesson Objective	Understand how to use sound, record and play blocks.
Robotic Kits used	Nxt minstorm
Activities	Build the drive base model and program it to park in the marked area, using record and play blocks.
Learning Outcome	Students learn how to avoid obstacle and follow dark line.