

STEM Applied Learning Programme

Lesson Outline

STEM Theme	Urban Design and Innovation
Module	1 (Vertical Farming)
Total Hours	12

No.	Topic
1	Systems Thinking & Vertical Farming – An Introduction
2	Energy Conversions & Water Wheel - Part A
3	Energy Conversions & Water Wheel - Part B
4	Introduction to Drive Mechanisms - Gears
5	Introduction to Drive Mechanisms - Sprocket & Chain
6	Introduction to an urban farming system – ‘A’ Frame
7	Blinking LED – Arduino I
8	Automatic Light - Arduino II
9	Moisture Sensing – Arduino III
10	Project Work I
11	Project Work II
12	Project Work III

