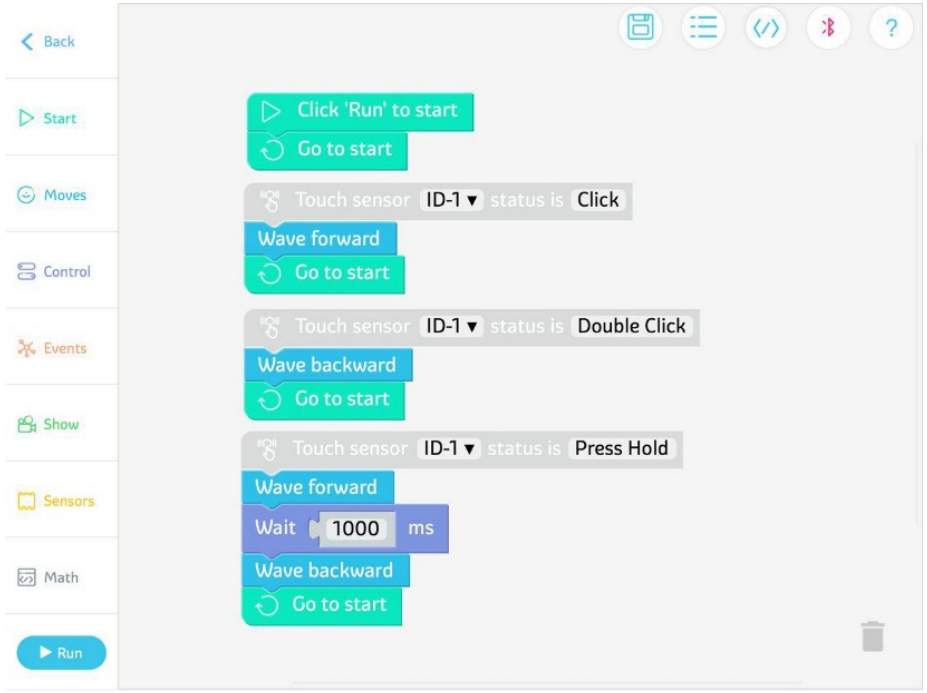
Jimu Educational Kit – Advanced Level v1.0

1. Product Positioning and Configuration

- Grade 5 to 6
- 479 plastic parts
- 4 Highly Torque Digital Robotic Servo
- Smart Module（Infrared Sensor, Touch Sensor, LED Lights, Bluetooth Speaker）
- 13 Online Courses
- Blockly Graphical Programming



2. Product Usage

Age	:	K5 - K6
Participants	:	20-30 people
Teaching Personnel	:	Teacher（1 person）+Assistant（1 person）
Equipment Quantity	:	20-30 Sets（1 Set /Person）
Venue Size	:	50-60 Square Meters
Duration	:	1 Hour and 10 Minutes
Sessions	:	16 Sessions
Teaching Objective	:	To “observe” and “change”, demonstrate creativity, form end product basic requirement, improve hands on ability.

3. Jimu Education Product Manual

- ✓ 13 official teaching models while users can also create their own model without limits.
- ✓ Free Jimu APP includes product building, movement creation, movement replay, programming, and e-tutorial, etc.

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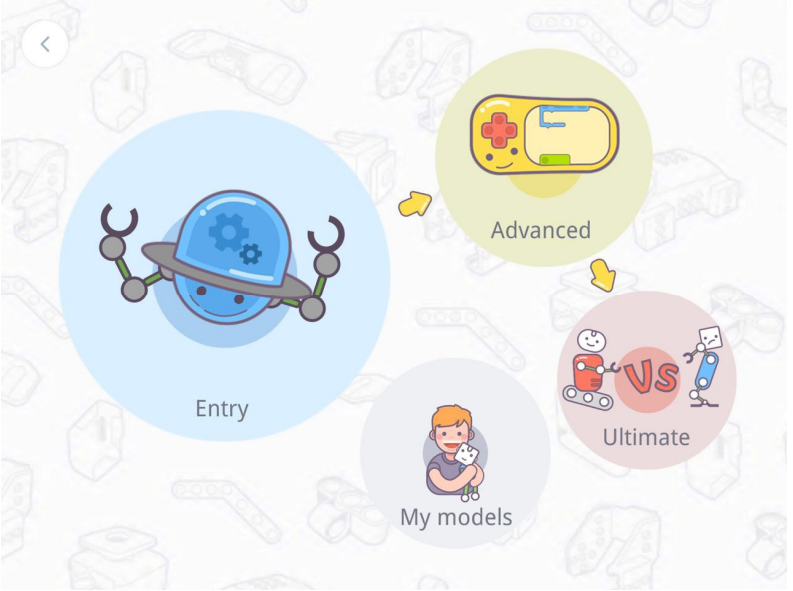
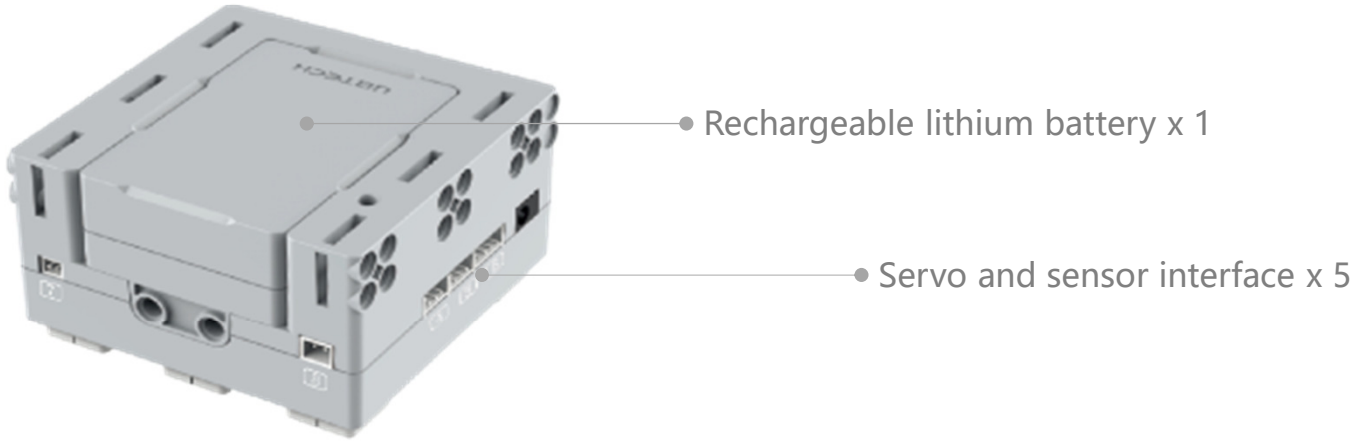


4. Hardware Introduction

1.1 Controller

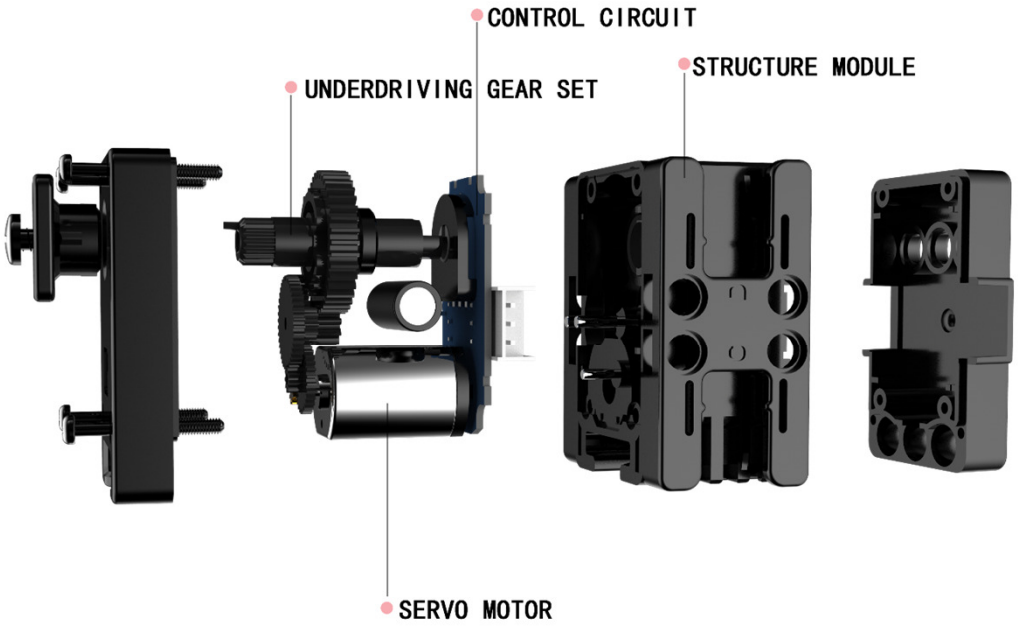
Controller is the brain of the robot. It receives eternal orders or message and provides feedback accordingly.



1.2 Servo

Servo is the joint of Jimu Robot and can be used to perform various movements. There are 2 available types of movements can be controlled via the APP :

- Angle mode – at the accuracy of angle rotation of 1°.
- Wheel mode – Supports up to 360 degrees rotation for operation control.



1.3 Infrared Sensor

Infrared sensor helps the robot to detect eternal changes. With the use of infrared sensors and Jimu APP programming,the robots can avoid obstacle, tracing and other functions.

1.4 Bluetooth Speaker

Bluetooth speaker is the robot’ s voice. It supports third party software such as QQ music.

1.5 Touch Sensor

The touch sensor allows the robot to feel the pressure outside, and perform actions.

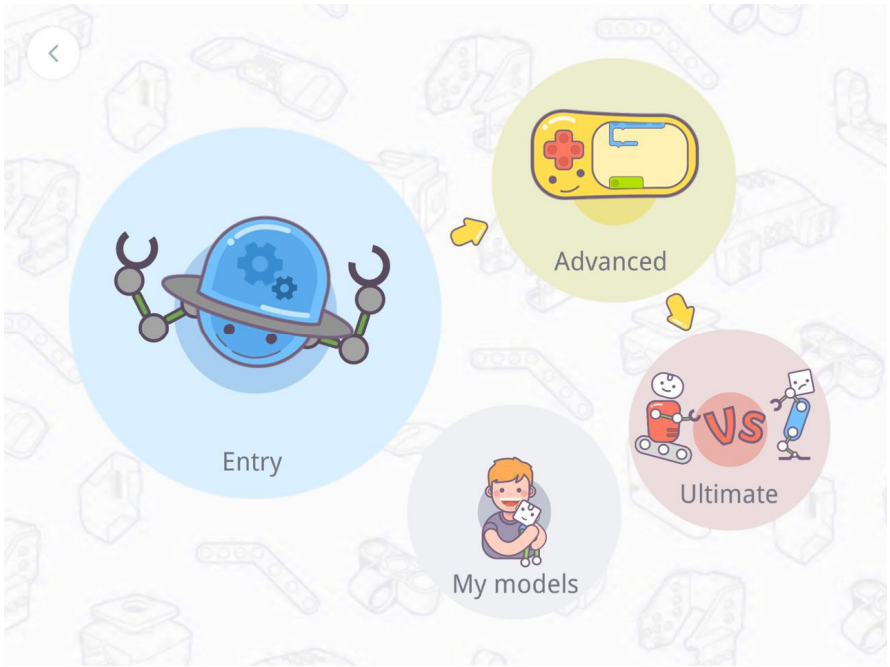
1.6 LED Lights Module

LED Light module is the robot’ s eyes. Jimu APP displays official or new robot expression created by the users.

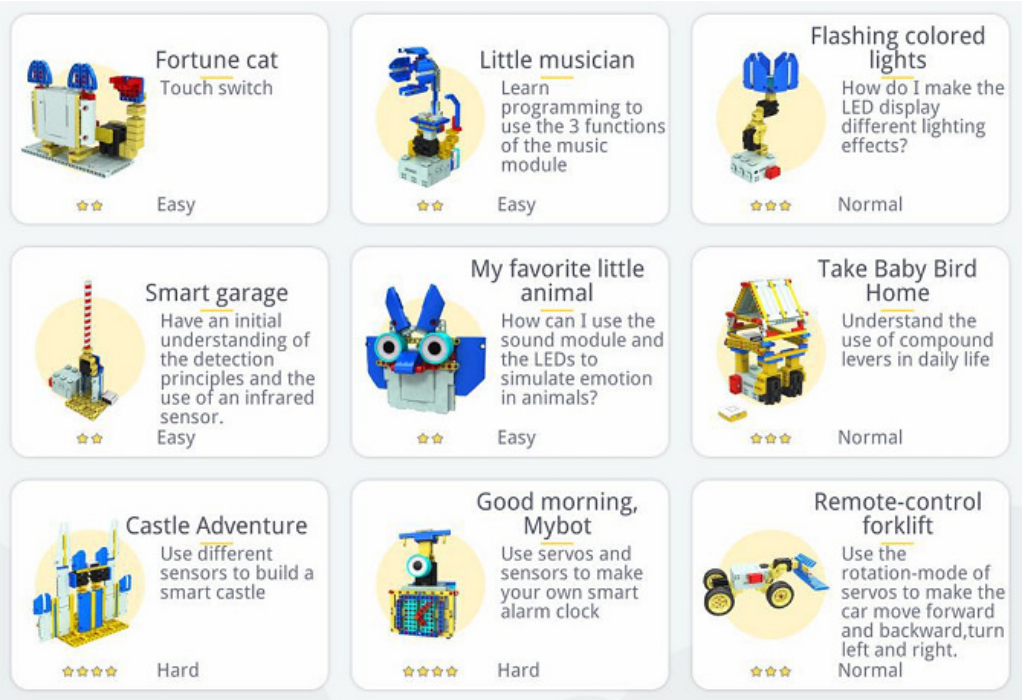
1.7 Plastic Parts (Decorative Parts and Connectors)

5. Software Introduction

- APP Interface



Course Content



Course Structure

Research | Prepare | Build | Act | Logic program | Expand

Knowledge Objectives

1.Science
- To understand the concept of swing
- To understand the relationship between distance, time and speed
- To understand the control variable method

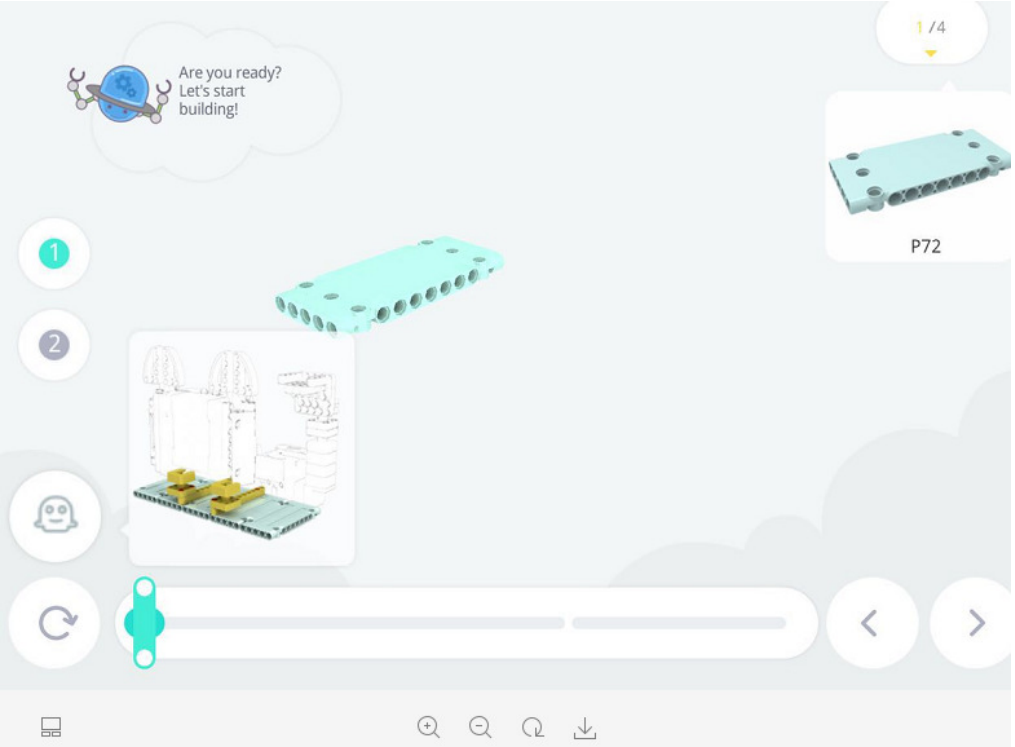
2.Mathematics
- To understand the concept of angles
- To understand the unit of time

3.Technology
- Learn to use touch switch.

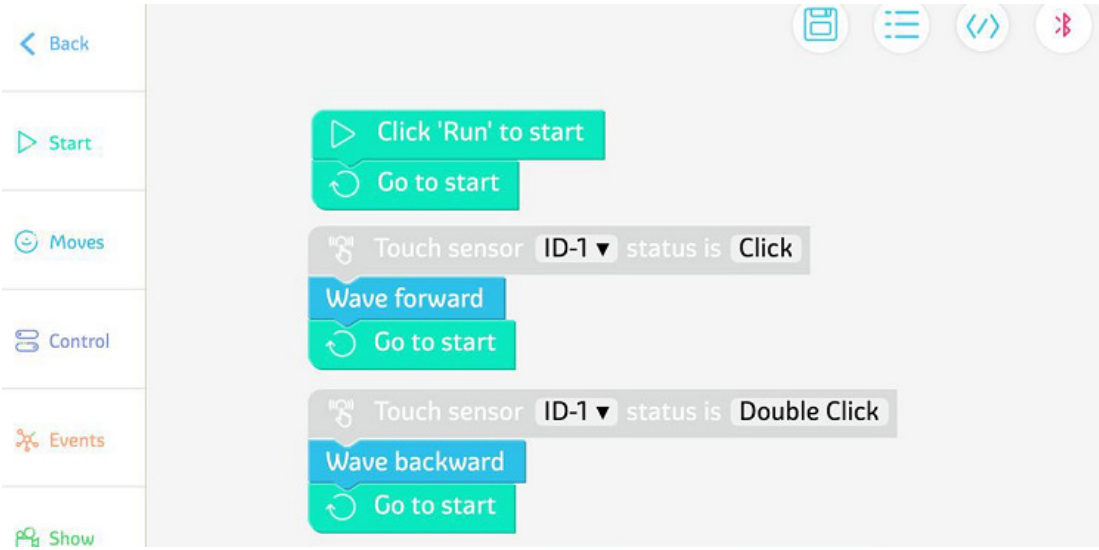
4.Engineering
- To master the three execution modes of touch switch
- To get familiar with three programming statements

5.Art
- To be able to demonstrate designed actions, and to improve students' language ability and cooperation and communication ability

◆ 3D Dynamic Building



◆ Blockly Coding



6. Course Introduction（1）

1. Fortune Cat

Basic operation touch sensors/ Learn to write 3 programming languages.

2. Little Musician

Sound is generated by the vibration of an object, and code a piece of music.

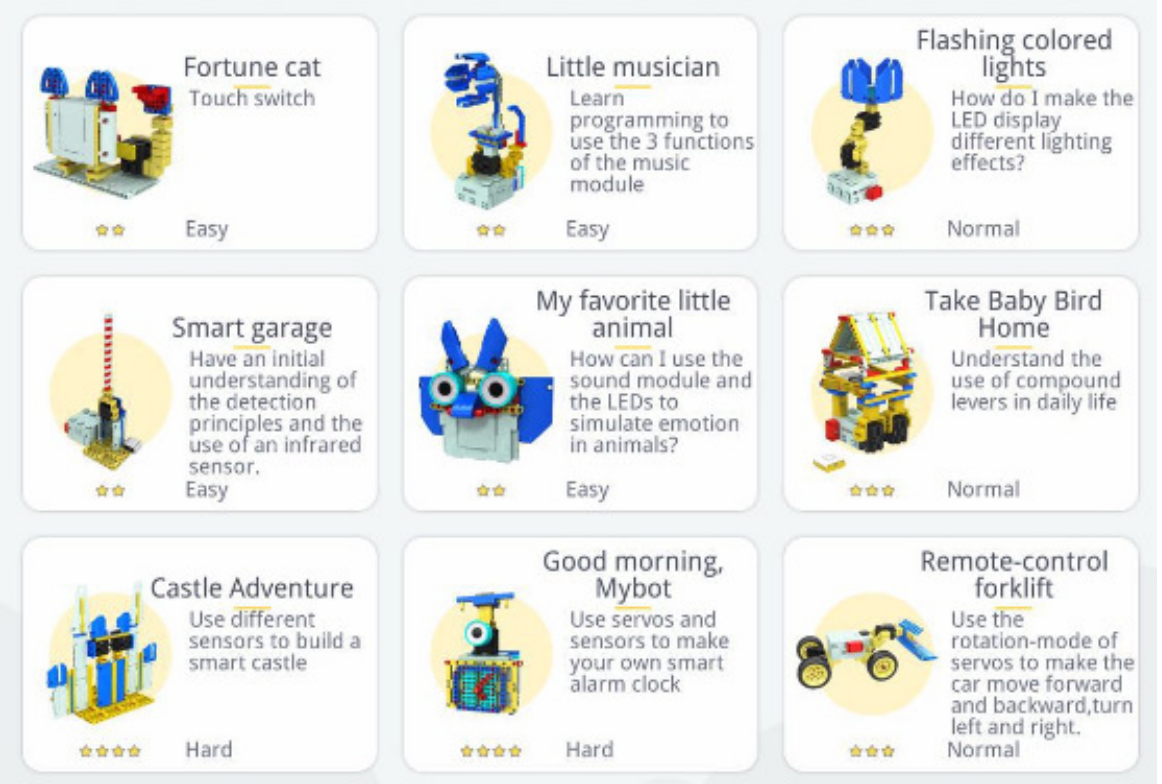
3. Colorful Flashing Lights

Structure and principle of LED Lights

Principle of reflection and refraction.

4. Smart Garage

Learn the principle and usage of distance infrared sensor.



6.Course Introduction（2）

5. My Favorite Little Animal

Learn LED module’ s preset emoji and built-in sound effects.

6. Take Baby Bird Home

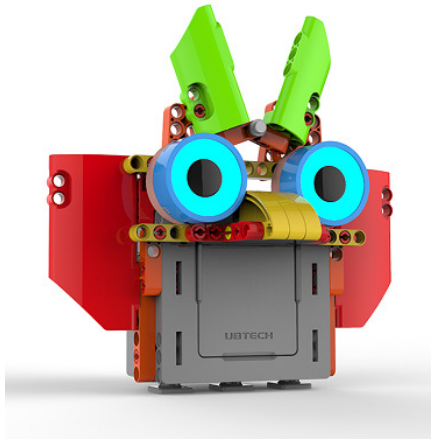
Application of lever and composite lever, and code by using infrared sensor and touch sensor.

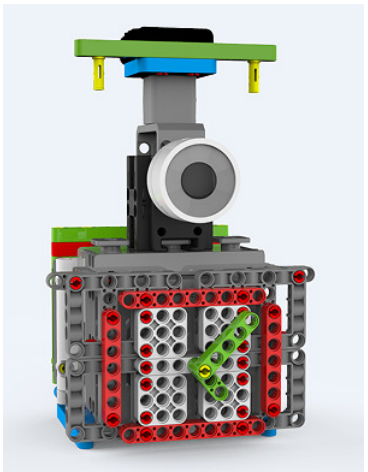
7. Castle Adventure

Complete application of multi sensor integrated, learn loop programming... (repeat...until...) command

8-9. Good Morning, Mybot

Learn the coding logic, timer function, conditional statements, and repeat command.

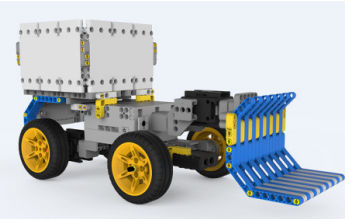




6. Course Introduction（3）

10. Remote Control Forklift

Understanding reference concept programming of forklift moving forward, reverse, turn left and right.



11. Forklift Transformation

Maneuver sensors, create your own vehicle. A comprehensive study of students' current understanding and knowledge level.

12-13. Secret Weapon——Robotic Arm

Adapt principle of infrared sensors, to achieve the functions of grip, identification, sorting of the robotic arm. Then, build tracking car with the principles.

14-16. Jimu Final Challenge

Review, prepare and build, competition and graduation awards. The course cultivates students' team spirit and problem solving skills.

THANK YOU

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