Learning Series

Flashlight



This robotics kit is a building block programming robot developed by Joinmax. The kit is equipped with various sensors such as sound sensitivity, color, touch, photoelectric, lantern, ultrasonic, camera and a wealth of building blocks. Students can use their imagination to build a variety of building block robots, and use graphical programming software to program the robot and experience the joy of hands-on creation.

Learning Target

01

Knowledge goal

Flashlight focusing, magnifying glass focusing principle.

02

Ability goal

Learning the method of collecting light, learning the method of magnifying glass imaging and collecting light

03

Emotional attitudes and values

Have the idea of invention and creation, and contribute to mankind.

Learning Target

01

Learning focus

Spotlight and focus

02

Learning difficulties

Focus on the use of light.

Contents

01 Course Introduction

02 Teaching New Knowledge

03 Task Practice

04 Test Effect

Course Introduction



Course Introduction



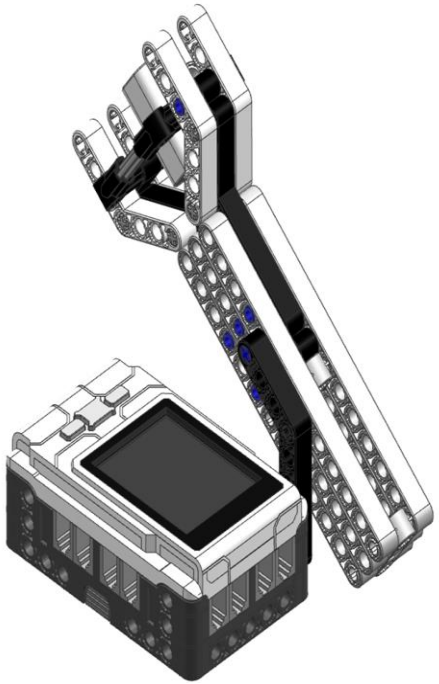
Let's look at a picture. Thinking?

1. What is the principle of light focusing on flashlights?

2. What is the principle?

A magnifying glass is a convex lens used to magnify an object, and a prototype of a microscope. Usually used to observe object details. The magnifying glass is a converging lens with a focal length much smaller than the eye's apparent distance. More than a thousand years ago, transparent crystals or transparent gemstones were ground into "lenses" that magnified the image. Also becomes a convex lens.

Course Introduction



Flashlight

Know about the Flashlight

The flashlight is a hand-held electronic lighting tool. A typical flashlight has a battery-powered light bulb and focusing mirror and a hand-held housing for hand.

In this lesson, a flashlight will be built, which is called a flashlight robot. Can be used for lighting.

Teaching New Knowledge



Teaching New Knowledge

Design is the process of conveying a vision through reasonable planning, careful planning, and through various forms of perception. Human beings transform the world through labor, create civilization, create material wealth and spiritual wealth, and the most basic and main creative activity is creation. Design is a pre-planning of the creation activity, which can be used to understand the planning techniques and planning processes of any creation activity.



Teaching New Knowledge

Various forms of flashlight



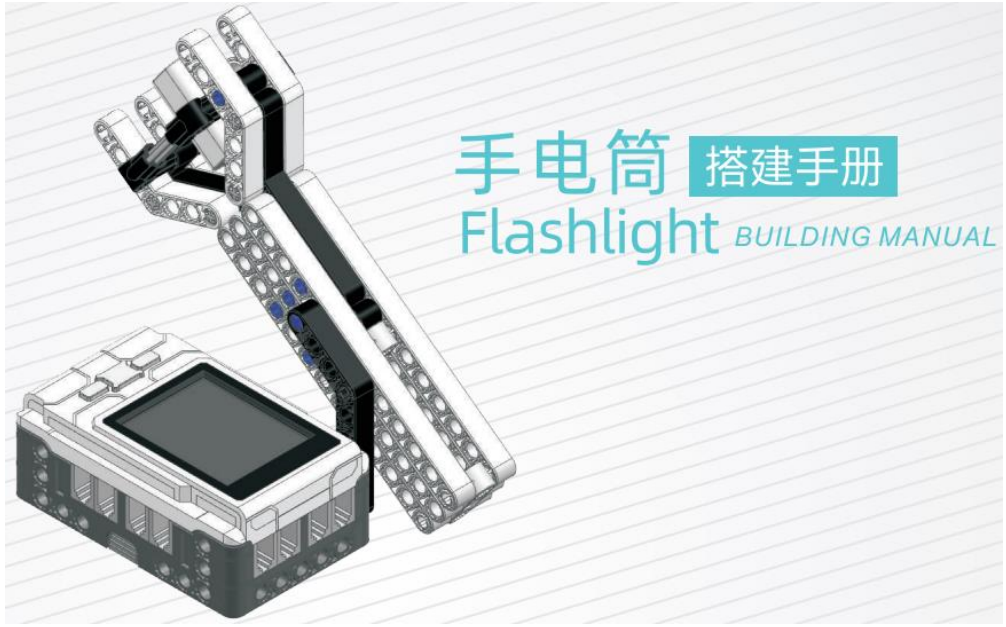




Task Practice



Task Practice



Assembly requirements

1. stable structure
2. focus is right
3. shape match

Checkin g Effect



Test Effect



Review the learning content and deepen your impression.

Question 1 Students explain the presentation according to their own works.

Question 2 What is the source of inspiration and what is the most satisfying design?

Question 3 Mutual reviews between works

Test Effect



Homework

1. Introduce your own robot to Mom and Dad.

2. Improve the structure of the robot.

Thank you for watching!

BE STEM READY

