

## II. Teaching Modes:

The Neuron product is a smart product designed for STEAM education. It can be used in many teaching areas such as science, technology, art, engineering and other fields. For lessons having different teaching contents, the teaching modes can be slightly adjusted. Teachers can plan their teaching activities and teaching steps according to such teaching modes as problem-based learning, 5E and design thinking teaching modes.

### Creation and Exploration (5E)

In this teaching mode, there are five stages of thinking: engagement, exploration, explanation, elaboration, and evaluation. Students have enough space at each stage to develop their creativity, reasoning ability, and flexibility, etc.



Demonstration lesson for this teaching mode is on page 108.

## Problem-Based Learning

### Problem-Based Learning Process



The problem-based learning mode is an active and exploratory learning method that emphasizes the "student-centered" and "problem solving oriented" approach. Under the guidance of the teacher, students start from the question itself, work together through teamwork to explore resources and finally come up with solutions. With this teaching mode, the students can develop the following skills: problem-solving skills; analyzing and summarizing the knowledge points covered in the problems; teamwork ability, including collecting information separately and appreciate diversity; and the ability to obtain and evaluate information.

Demonstration lesson for this teaching mode is on page 110.

## Design Thinking

Design thinking is a methodology to discover problems in life and find solutions from the perspective of socialization. This methodology can cultivate students' sense of social citizenship and abilities to solve social problems from a practical perspective. Design Thinking emphasizes the understanding, focusing, conceiving, and executing processes. In the teaching activities, the process of design thinking is composed of five steps: empathy, requirement defining, ideating, prototype production, and actual testing.

