Educational System for Enhancing Students’ Creativity: 
— A Case Study of a Science Class —

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Our research group engages in activities for promoting science education among children. This is because experience to children's science is decreasing. A characteristic of our science curriculum is that it comprises two parts. In the first part, students are divided into small groups to conduct various experiments. In our science class, students must complete all experiments and collect all stamps before proceeding to the second part, a handcrafting activity. To elaborate, a requirement of our science curriculum is that before proceeding to a handcrafting activity, students take part in experiments and observe the physical phenomena related to the object that they construct in the second part. Attending our science classes gives students the advantage of learning the underlying principles and structure of the object they create. Moreover, the objects they handcraft are not all identical. Although the fundamental part of their work is kept the same, the remaining parts are constructed in accordance with the students’ predilections, in order to encourage their creativity. Fig. 1 shows a scene from our science class where students are conducting experiments; Fig. 2 shows example objects (in this case, kaleidoscopes) created by students.

We believe that our science class, which comprises two distinct parts, can further stimulate students’ interest in science because they not only engage in handcrafting of objects, but also learn the underlying principles and structures of these objects.

Figure 1. Experiment on light reflection

Figure 2. Kaleidoscopes crafted by students