

Life' happiness with the natural base on local technology .

- Learning period: 24 hour:2 hour/week

- Subject: Environment and science

- Student level: Grade 3 to 6

Learning objectives:

1. For the students to understand disaster and disaster risk reduction
2. For the students to understand global warming and global warming reduce way
3. For the students to create and do something by applying the local technologies for survival during flood
4. For the students, parents and teachers to share experience and learn how to survive during the flood

Subjects:

1. Disaster and disaster risk reduction
2. Global warming global warming reduce way
3. Research on disaster and global warming

Activities for learning: Introduced by questions

1. Questions: who has been effected by flood 2) what do you think when your house is flooded and 3) what do you do if you have to live during the flood (2 hour ; worksheet 1)
2. Research by using internet on types of disaster and presentation at the end (2 hour worksheet 2)

Activity by project based learning on constructivist theory

1. The students are divided into 4-5 people per one group
2. Each group of students brainstorms about how they will survive happily during the flood period (2 hours)
3. Each group of students brainstorms about local technologies and materials that they can apply for creating a new equipment to be used during the flood. (problem, hypothesis, experiment design) (2 hours) Students will then bring the ideas to seek advice from the parents.
4. Students and parents work together for developing their own innovative equipment for using during the flood (4 hours)
The products are such as
 - Easy water filter
 - Easy hydroponics
 - Easy oven energy (solar energy oven)
 - Living bag
5. Test the idea (4 hours)
6. Observe and data collection (2 hours)
7. Summarize and reporting (2 hours)
8. Present the products to the class mates, parents' meeting and community (2 hours) in your class and in the parent meeting's day

Evaluation

1. Comprehensive test : multiple choice and opened questions
2. Questionnaire
3. Submission of worksheet
4. Triangle evaluate
5. Attitude checking on disaster risk reduction

Materials/ supporting documents

1. Worksheets
2. Books or Manuals
3. Materials for creating the innovative equipment
4. Test
5. Observation record