

Project: Clean water

Teachers:

- Vũ Mai Lan (Chemistry teacher)
- Ngô Tiến Nhật (Physic teacher)
- Thái Thị Thanh Hòa (Maths teacher)



General questions

Does water at your home met required standards?

With water obtained from the Red river Hong, how to treat it to have enough drinking water standards



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Knowledge objectives

Water cycle on Earth - the water used in daily life

Potable water: evaluation standards - sterilization methods
- advantages and disadvantages of each method

The concept of micro-organisms - generic - the beneficial
and harmful to human life

Characteristics of some chemicals (chlorine, ozone, ...),
physical factors (temperature, light, UV, pH, ultrasound, ...)

Current environmental situation - the orientation and
measures to protect the aquatic environment



Skills to obtain



Conjecturing – Checking – Giving conclusion

Utilizing of Mindmap software

Utilizing of Microsoft Office as PPT, Word...

Collecting, archiving data

Presenting and debating



Competenices to develop

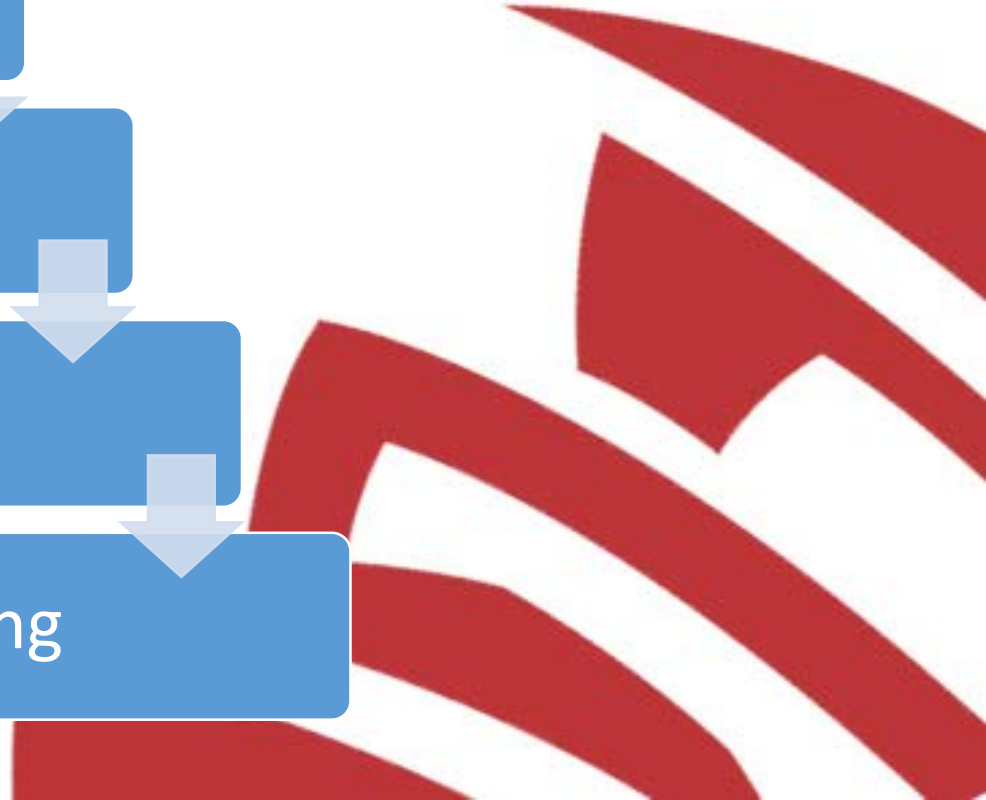
Collaborative

Self study

ICT use

Creation – Imagination

Problem solving and critical thinking



Period 1 – Project presentation

Teacher activities

- Show pictures about Project Based Learning
- Presentation in PBL
- Outcome to achieve

Student understanding about PBL and about project

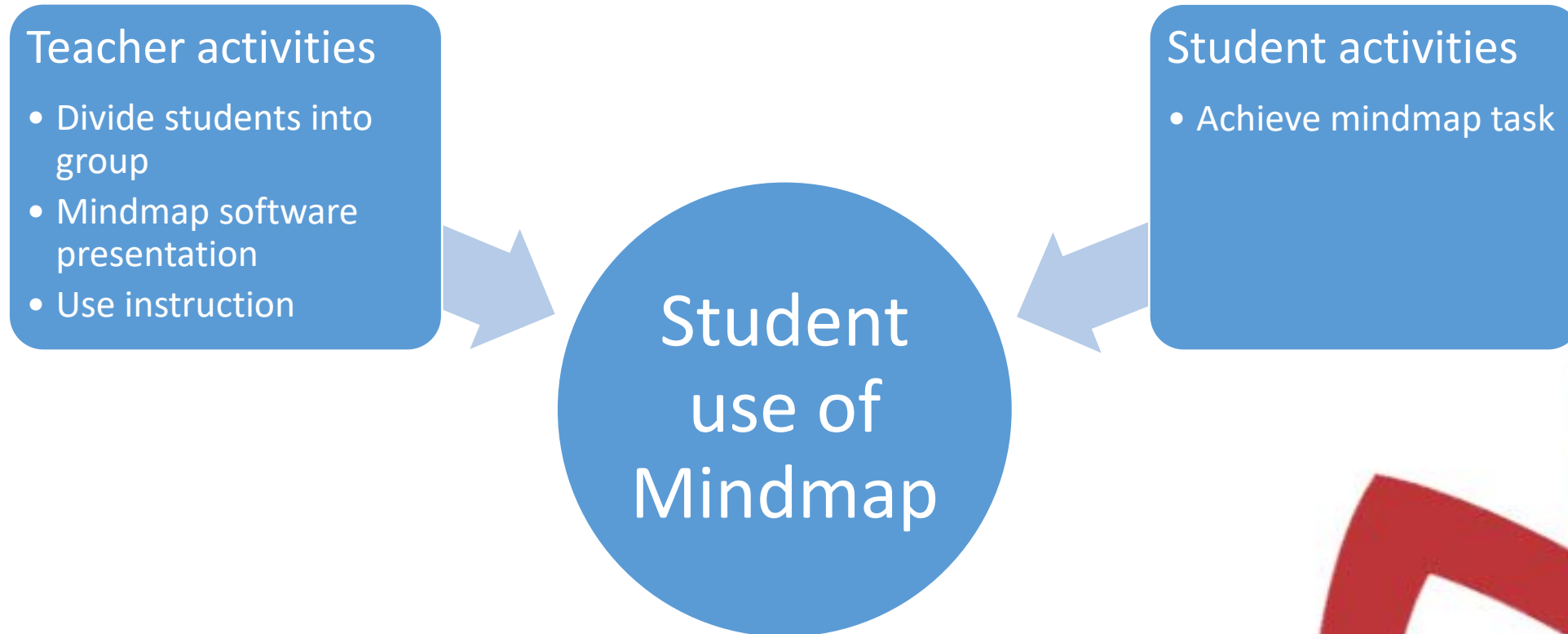
Student activities

- Learning about PBL process



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Period 2+3: Usage of Mindmap to present and discuss about an idea



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Period 4 – Field trip experiment

Organize students into groups - recording the group's activities

Water sampling in different areas within the city of Hanoi and through analysis of water quality

Compare results of two samples of water along with the safety data of domestic water supplies that students have learned.

Resolve some questions about the phenomenon encountered during the actual experience



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Period 5 – Practice in laboratory about water disinfection process

Teacher activities

- Preparation of Lab, experience
- Divide the work for each group to prepare some materials needed for practice sessions

Student activities

- Preparation about task
- Experimentation

Student practice
in laboratory for
water
purification with
chlorine, ozone
.....



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Period 6 – Project result presentation

Results of comparing the safety of the water in the Hanoi area and compared with the standard

The cause of water pollution and how to fix it

How to disinfect drinking water; Influences on people life



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