



Supplementary Material

Figures, text, and additional materials contained in this document represent supporting material for the Interactive Qualifying Project & Interactive Science and Social Project:

Building Scientific Literacy Among Thai Youth

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Table of Contents

Background on Planning an Event	3
Survey Questions	4
Event Flyer	5
Electroplating Lab Manual	6
Soap Boat Lab Manual	7
Judging Rubric	8
Sample Event Certificate	9
Event Website	10

Background on Planning an Event

Knowing how to properly structure our event was key to its success. In order for these principles to be effective during the event, it was important that our team stayed organized, comprehensive, well-versed in these concepts as well as utilized the iterative design process. It was essential that the materials we developed for the students were displayed in an engaging and well-organized way to attract students. Additionally, since we were attempting to attract students to complex scientific concepts, it was ideal that we as educators were well-versed in the concepts and explained the material in a comprehensive and clear manner. Ultimately, in order for us to be prepared to interact with the students, we continuously had our scientific information and logistics reviewed. The many iterations of our promotional material, survey questions and event logistics allowed us to ensure the accuracy and reliability of the information presented and formulated.

Survey Questions

Qualitative Questions

- How did you hear about this event? (*if applicable*)
- Are you interested in the Faculty of Science?
- Why are you interested/not interested in the Faculty of Science
- What other faculties are you interested in?
- If you utilize social media, which platform do you use the most?
- How often do you spend time on social media daily?
- Do you follow any educational accounts? Which ones?
- What type of learner are you? Visual, auditory, read/write, etc.
- What do you think could increase your interest in Science?

Quantitative Questions

Rate 1 (Strongly Disagree) to 10 (Strongly Agree)

- Science Class
 - I find science class interesting
 - I look forward to my science class
 - Science is difficult to me
 - Practical/lab work in science is interesting
 - I would rather do practical/lab work than attend lectures
- Science Attitude
 - I would like to study science at university
 - I would like to get a job or career in science
 - I believe science and technology is important for society
 - I believe science and technology makes our lives easier

Event Flyer

The following event flyer was posted via Instagram.

ION-SPIRE: ENERGIZING IDEAS




A chemistry workshop for
10th grade-12th grade students

FEBRUARY 17 2024 / 1:00 PM-5:00 PM
**MAHAMAKUT BUILDING,
CHULALONGKORN UNIVERSITY**

- Join us for a fun afternoon of chemistry activities! Free of charge
- Choose between electrochemistry or surface tension experiment
- Create your own idea for a chance to win prizes!

*Certificate of participation provided

REGISTRATION: [BIT.LY/IONSPIRE](https://bit.ly/ionspire)

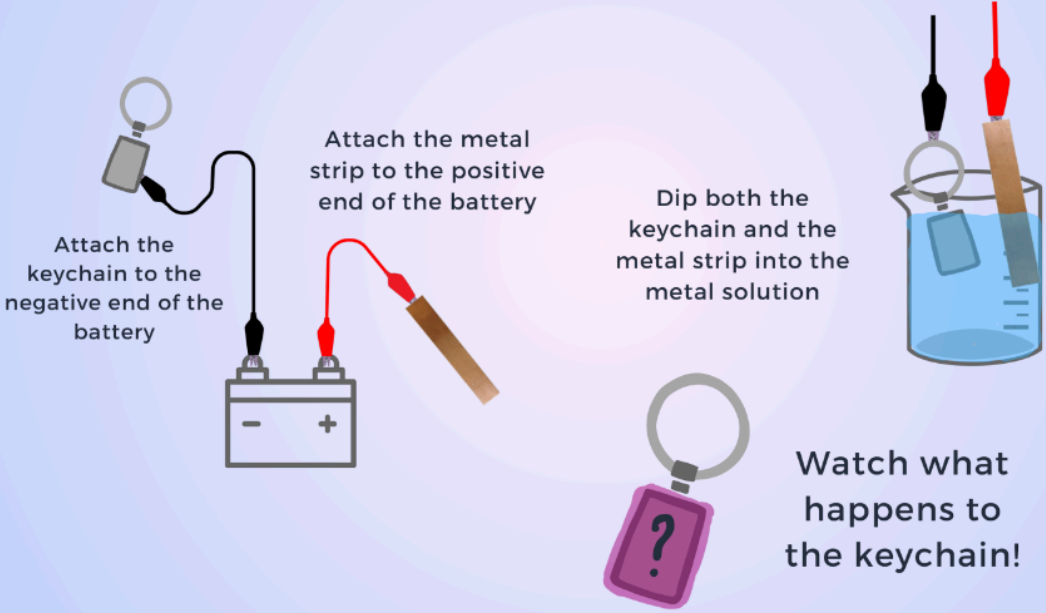
  

Electroplating Lab Manual

Lab manuals were made available in both Thai and English.

ELECTROPLATING EXPERIMENT

Coat a keychain with another metal using electricity!



Attach the keychain to the negative end of the battery

Attach the metal strip to the positive end of the battery

Dip both the keychain and the metal strip into the metal solution

Watch what happens to the keychain!

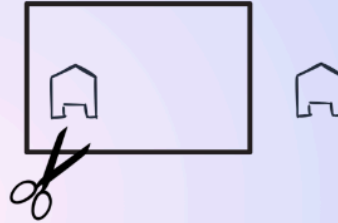
Soap Boat Lab Manual

“SOAP BOAT” EXPERIMENT

Use different types of soap to alter the surface tension of the water and move the boat around!



Add some water to the tray



Cut a boat out of the board provided



Add a drop of soap behind the boat



Watch what happens to the boat!

Judging Rubric

Ion Spire: Energizing Ideas Presentation Rubric

	4	3	2	1
Content	Students demonstrate a comprehensive knowledge of the topic and applies knowledge accurately to the pitch.	Students understand the topic but can't quite accurately apply the knowledge to the pitch.	Students show limited knowledge on the topic or can't accurately apply the knowledge to the pitch.	Students do not display an understanding of the topic and thus can't accurately apply the knowledge to the pitch.
Clarity	Students have a clear and understandable pitch for their product.	Students have a mostly understandable pitch. A few clarifying questions need to be asked to fully understand.	Students have a somewhat understandable pitch, but many questions needed to be asked to fully understand product.	Students do not have an understandable pitch.
Presentation	Students present in a professional manner, they are well heard, have eye contact with the audience and have appropriate body language.	Students present in a mostly professional manner, they sometimes are well heard, have eye contact or appropriate body language.	Students present in a somewhat professional manner, they rarely are well heard, have eye contact or appropriate body language.	Students present in a non-professional or unacceptable manner.
Organization	Students' presentation is very easy to follow and is presented in a creative manner.	Students' presentation is somewhat easy to follow, and presented in a creative matter.	Students' presentation is somewhat hard to follow.	Students' presentation is hard to follow.

Sample Event Certificate

The following certificate was awarded to students who participated in our event. Students can use this in their university applications.



Event Website

The following screenshot shows our website used for event registration.

**ION-SPIRE:
ENERGIZING IDEAS**

***Ion-Spire
Energizing Ideas***

February 17, 2024, 1:00 PM - 5:00 PM
Mahamakut Building, Chulalongkorn University
254 Phaya Thai Rd, Wang Mai, Pathum Wan, Bangkok 10330



Registration closed.




Join us for a fun and interactive afternoon of science! You will be able to work with others on hands-on science experiments and come up with your own solution to an everyday problem. The day will conclude with a presentation to judges for a chance to win prizes!

This event is a part of the Interactive Science and Social Project (ISSP) - "Building Scientific Literacy Among Thai Youths" project in collaboration with Chulalongkorn University, Worcester Polytechnic Institute, and The Principia. This project focuses on the barriers that deter good scientific literacy in Thai youth and aims to assist The Principia in improving scientific literacy among Thai youth.

Please contact bsac.iqp5@gmail.com with any questions.

Follow The Principia on socials!

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