



Comparative study

Team 122-506-510

The research of indigenous bacteria with food stamp

17 PARTNERSHIPS FOR THE GOALS



Members

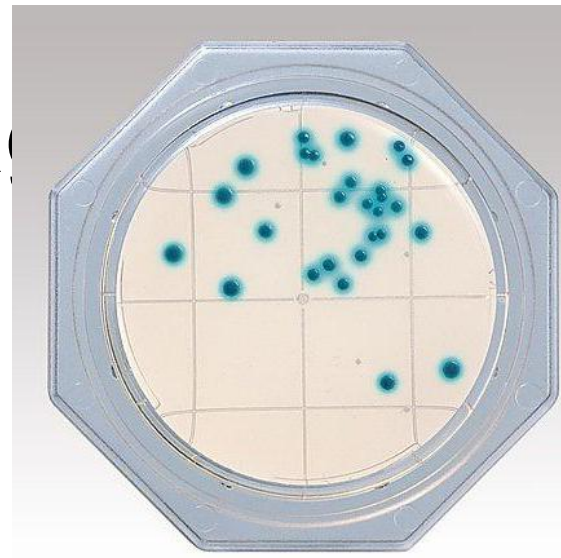
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- Instructor
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 - Mr. Kikutugi Jyun

3 GOOD HEALTH AND WELL-BEING



<What is food stamp ?>

Medium for culturing indigenous bacteria.
 In general, food stamps are used for hygiene management of food and cooking utensils.
 In this experiment, they were used by stamping on things and places around us.

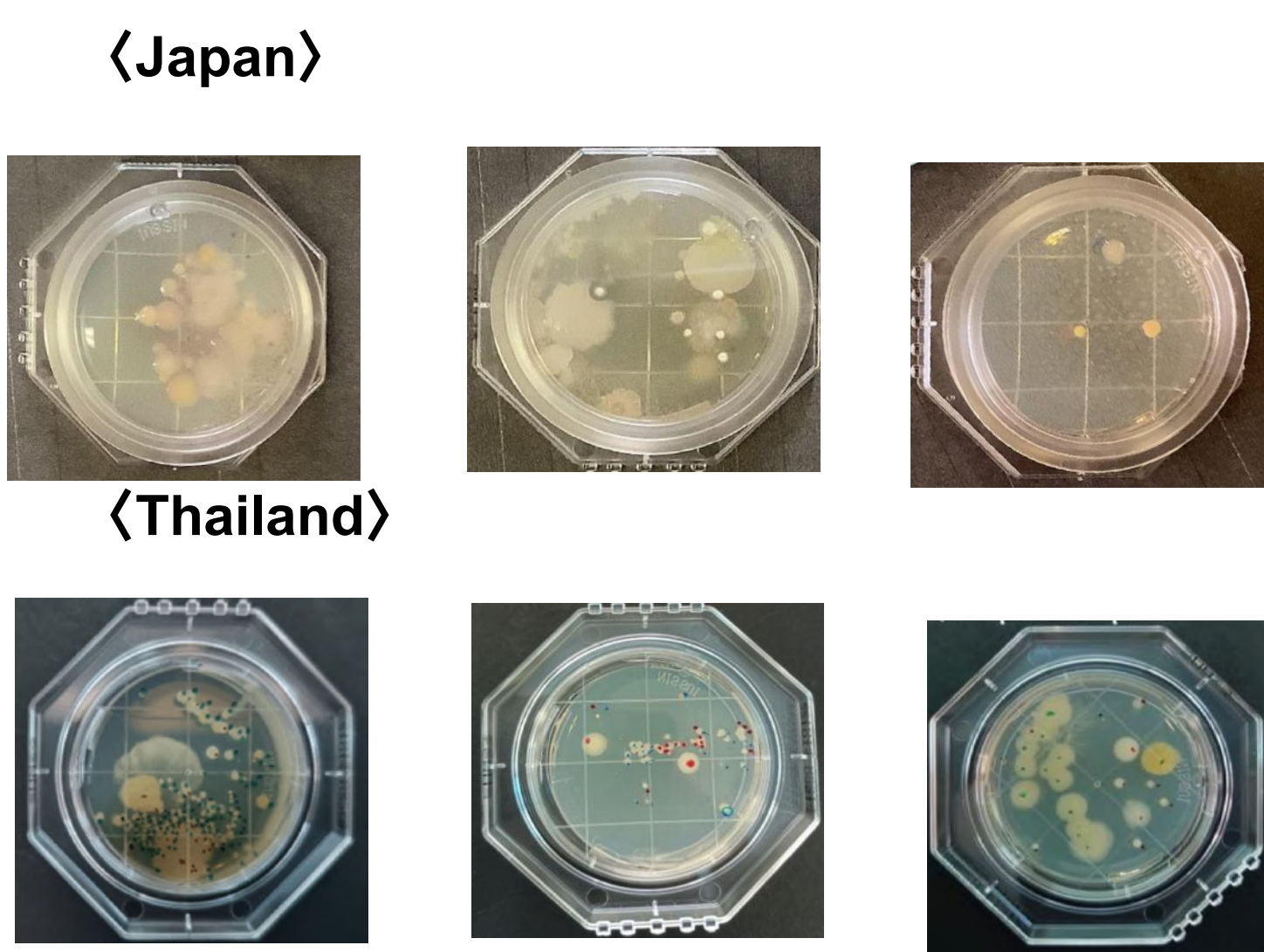


<Purpose>

- Find out where indigenous bacteria are
- Prevent opportunistic infections. * We know where we need to disinfect.
- Comparison with Thailand
- A more multifaceted look at the types and numbers of bacteria!
- The differences of types of colonies by temperature and humidity.

<Experiment 1> Comparative study

The interaction with SKR high school students in Thailand
 ⇒ Since July in 2022
 We stamped banknotes, doorknobs, floor, teaching table, stair's banister and switch with food stamps and observed them for three days (8/16~19).

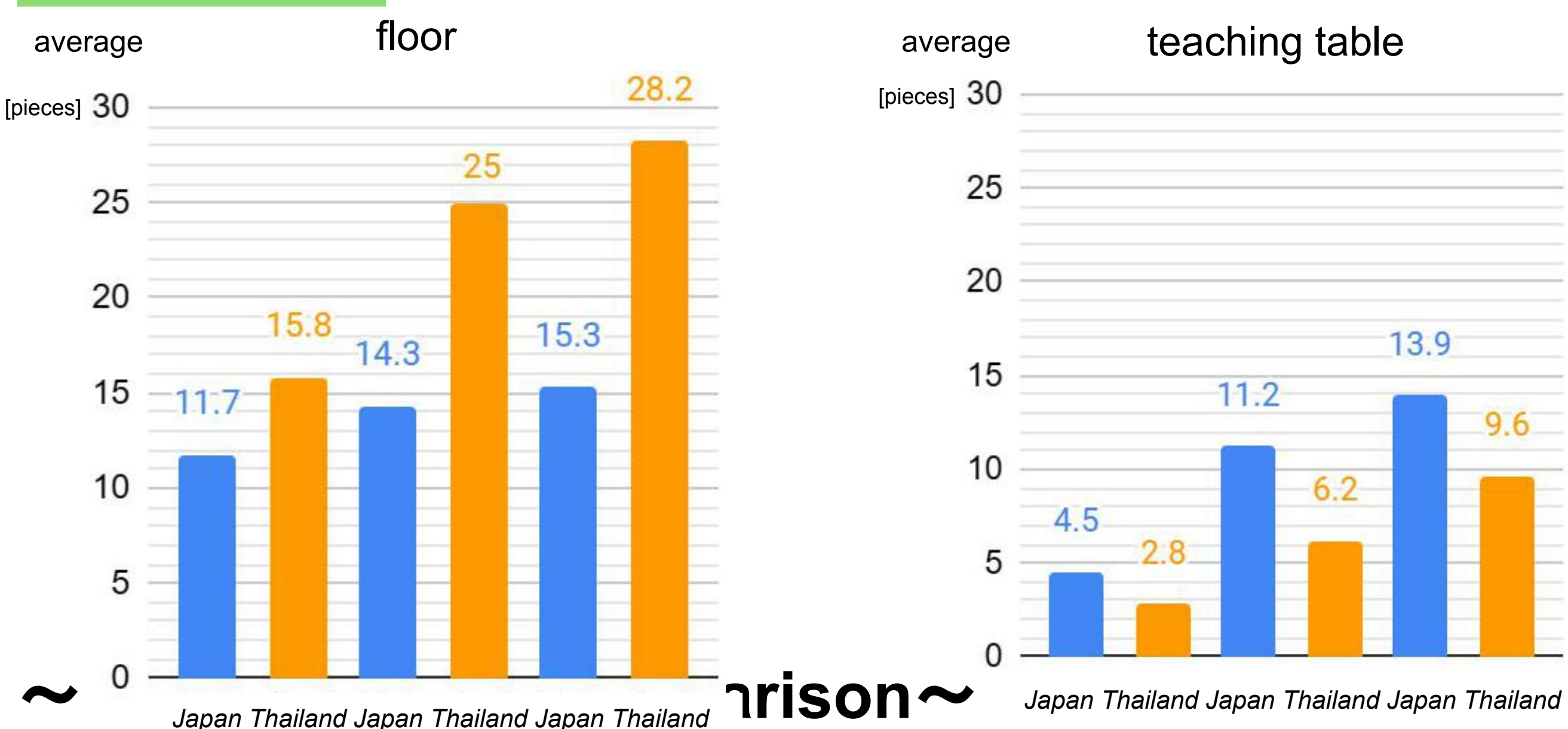


From right is doorknob, stair's banister, banknote
 * The black and red dots were put when we counted the number of colonies.



Both students in Japan and Thailand collected the colonies on the same days.

<Result>



place where there are a lot of colonies.
 JAPAN : teaching table, banister of stairs
 THAILAND : floor, banknote, switches, doorknob

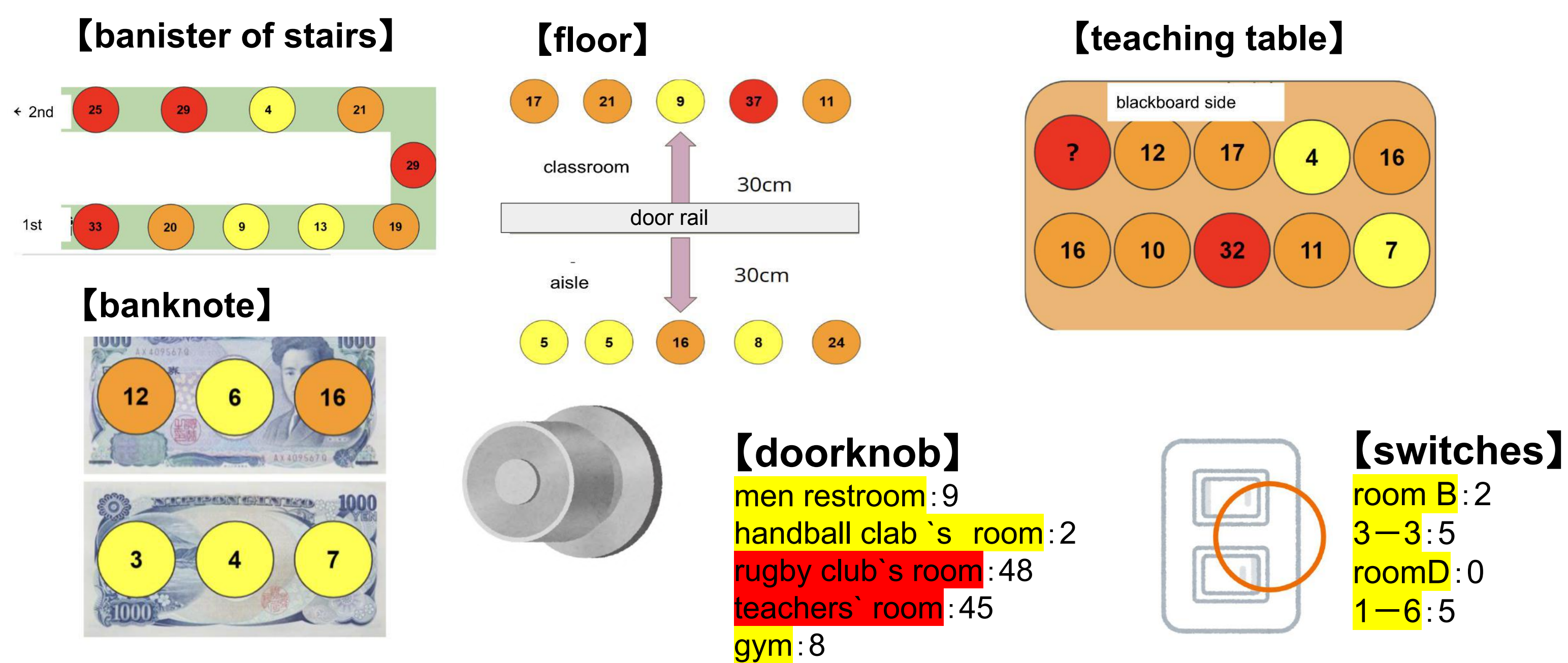
~Colony color comparison~

JAPAN : white, black, orange, yellow, brown, green, pink, cream
 THAILAND : white, yellow, orange

We carried out experience at 6 places and there are some differences of bacteria.
 The number of colonies → JAPAN < THAILAND
 The types of colors of colonies → JAPAN > THAILAND
 Depends on colors of colonies, there were differences of increase.

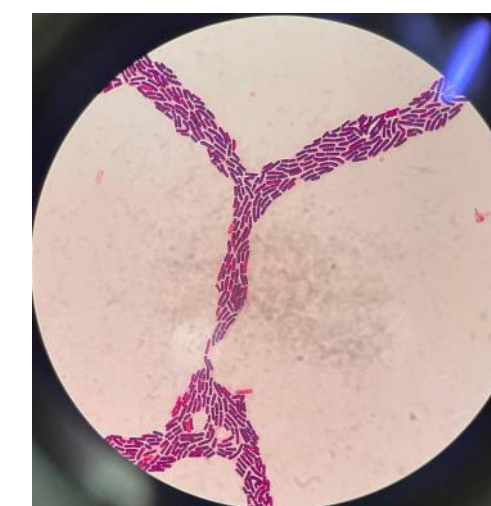
<Experiment 2> Check distribution

We researched distribution of bacteria each place by using food stamps. We put them on the banknotes, doorknob, teaching table, and banister.
 ~difference the number of bacteria~

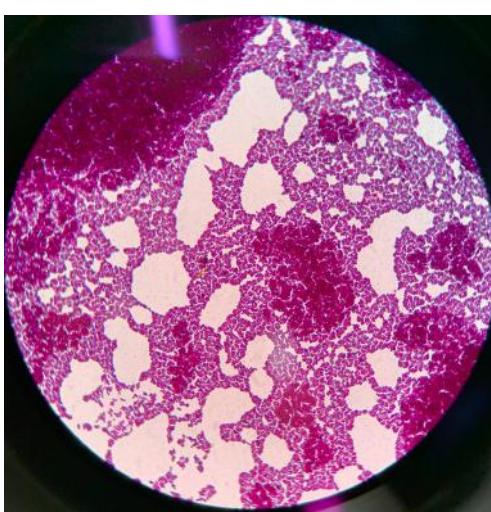


<Experiment 3> Gram staining

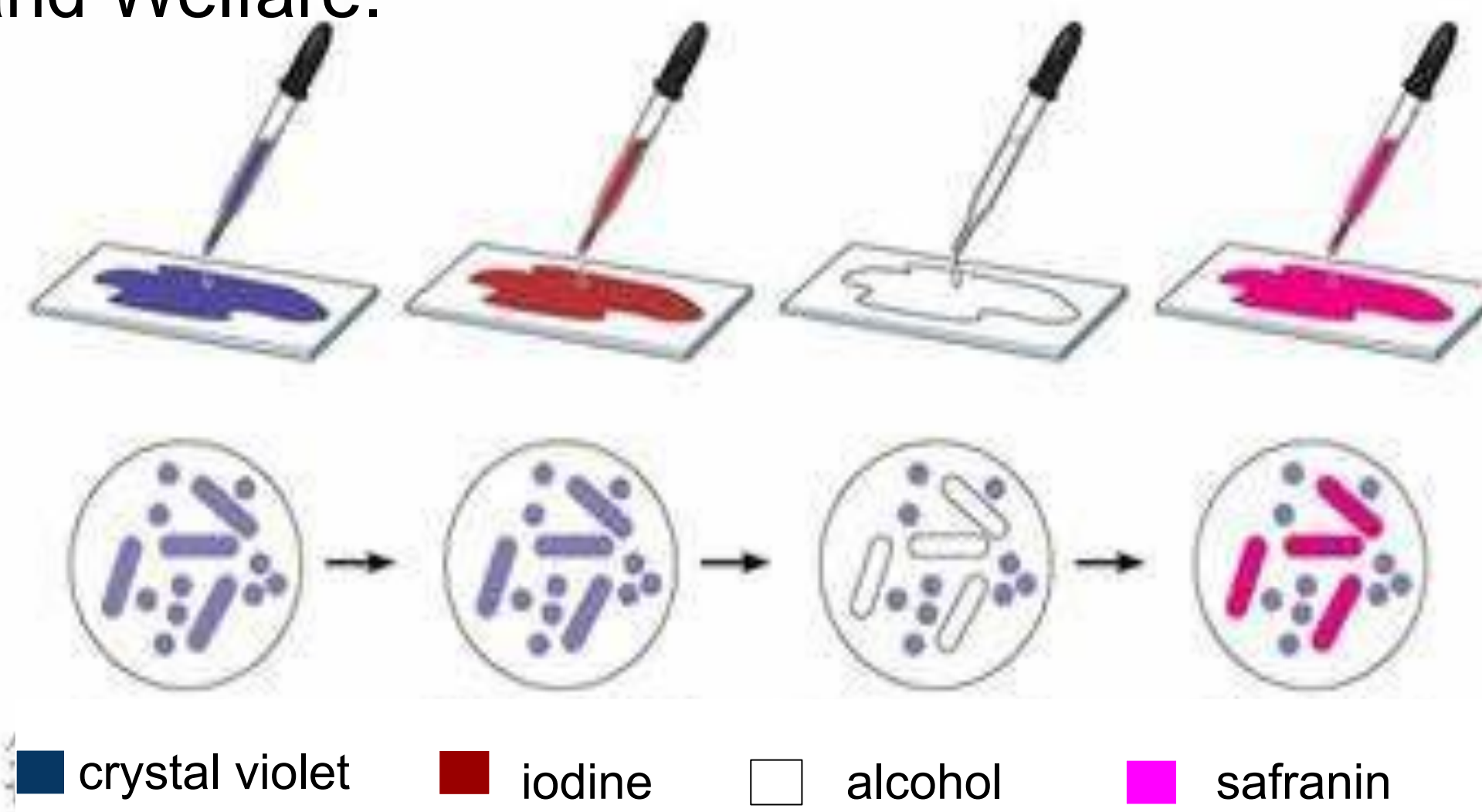
→ This is an experiment we researched the types and features of bacteria. Mr. Yakushiji taught us how to research at Kyusyu University of Health and Welfare.



← Bacillus



← Coccus



<Result> Experiment 3 Gram staining

The kinds of bacteria differed by places but we guessed that the bacteria which appeared in most places was Staphylococcus expect for mold.

- Staphylococcus aureus
 - ⇒ bacteria contained in human and animal skin
 - ⇒ They cause suppuration from cuts, etc.
 - ⇒ They cause various infections such as pneumonia and peritonitis



<Consideration>

- ~What is the factor that influenced on this experiment's result?~
- Thailand is hotter and more humid than Japan.
 - Bacteria can spread easily.
- In Japan, students usually clean their classroom.
 - ⇔ In Thailand, cleaners clean regularly.
- frequency of use, difference in number of contacts (stairs, bill)
- difference in shape and material (bill, handrail)
- power, way to count

<Thank>

Dear SKR High school, professor Takesawa, Kyushu University of Health and Welfare, and teachers, thank you for your support of this study. Thank you from the bottom of our hearts.