

# Teaching in Virtual Environments

APRU Global Health Program at the University of Southern California

*in collaboration with*

Global STEM Education Program at the University of Oregon

## August 27/28

*Creative Ideas for Online and Remote Assessment*

Eleanor Vandegrift, University of Oregon

Victor Hoe, University of Malaya

## September 3/4

*Authentic Experiential Education*

Eleanor Vandegrift, University of Oregon

Vivian WY Lee, Chinese University of Hong Kong

## September 10/11

*Building Community in Remote Classrooms*

Eleanor Vandegrift, University of Oregon

César Alberto Lucio Ramírez, Tecnológico de Monterrey



USC Institute on Inequalities in Global Health



**APRU**  
Global Health



UNIVERSITY OF  
**OREGON**

Register at [apru.org/our-work/pacific-rim-challenges/global-health](https://apru.org/our-work/pacific-rim-challenges/global-health).

# Welcome and Introduction

---

Mellissa Withers, University of Southern California



## Goals for today:

1. Provide pedagogical, technology, and peer support to faculty across the APRU network teaching remotely.
2. Create opportunities for APRU affiliated faculty to connect and share resources and experiences with assessments for remote settings.

# Format

---



20-30 MINUTES EXPERT  
PANEL



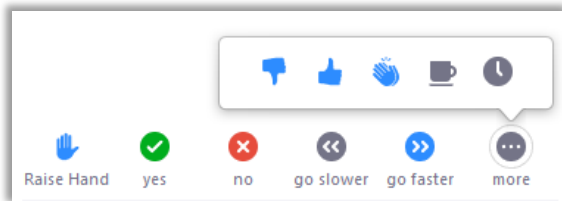
30 MINUTES SMALL  
GROUP DISCUSSION



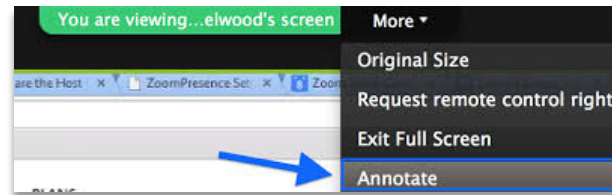
30 LARGE GROUP  
DISCUSSION

# Interactions

## Handraising and Feedback



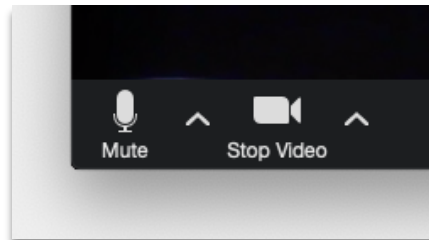
## Text on slide



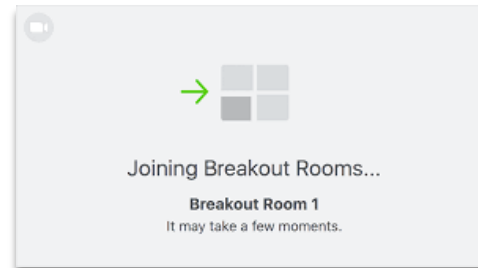
## Writing



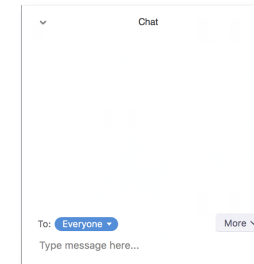
## Video and Audio



## Breakout Rooms

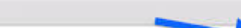


## Chat

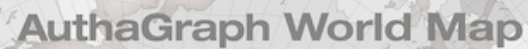


# Which of the following types of assessments have you used?

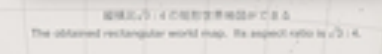
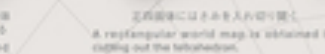
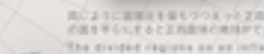
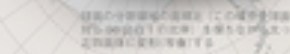
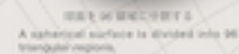
1. Midterm exams
2. Final exams
3. Multiple-choice questions
4. Short answer responses
5. True/False questions
6. Essay exams
7. Practical exams
8. Research papers
9. Poster presentations
10. Presentations



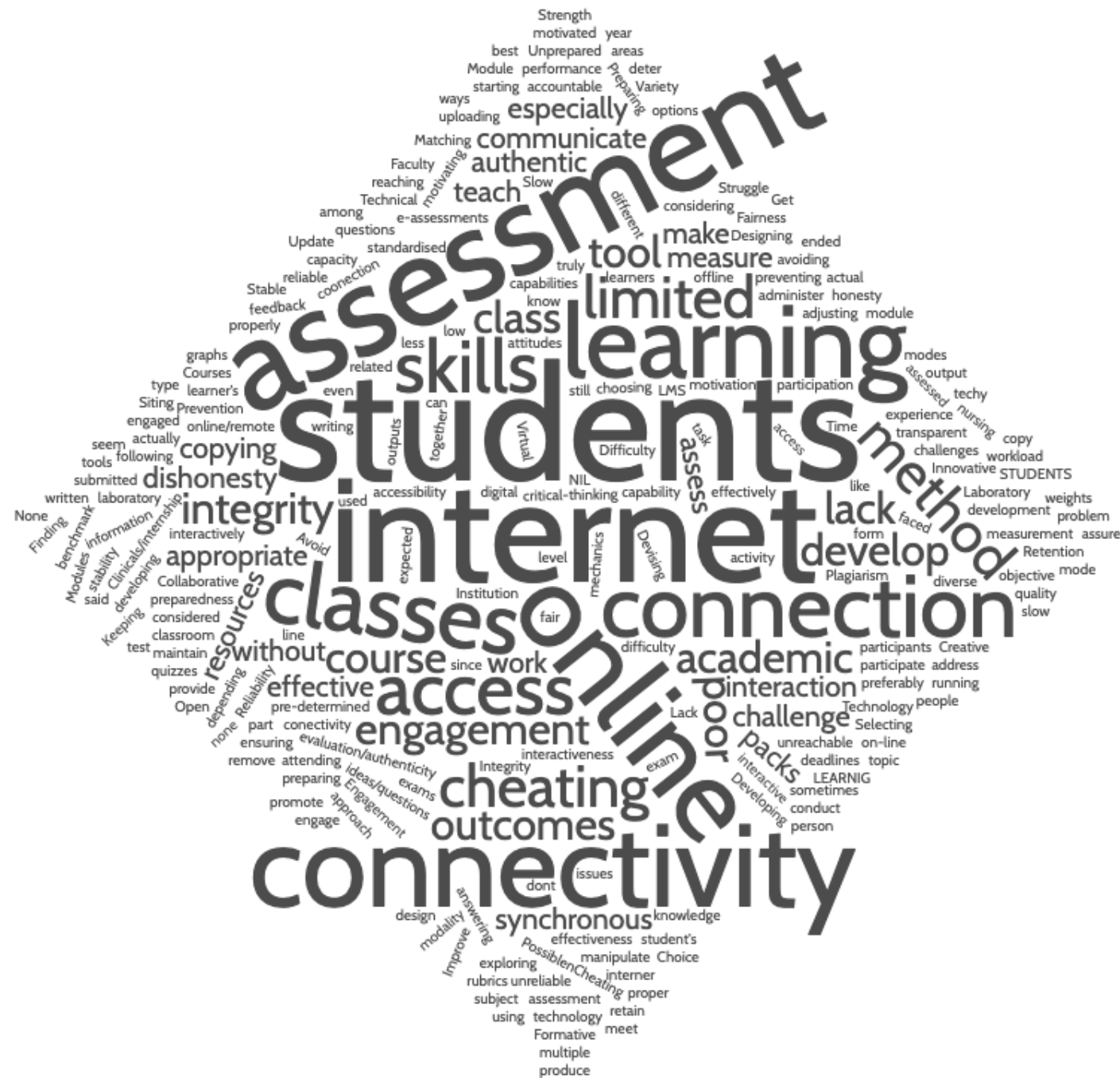
The screenshot shows the Zoom mobile app interface. At the top, a green banner reads "You are viewing...elwood's screen". Below this, a dark grey menu is open, displaying several options: "More" (with a downward arrow), "Original Size", "Request remote control right", "Exit Full Screen", and "Annotate". A blue arrow points to the "Annotate" option, which is highlighted with a blue underline.



This original mapping method is able to transfer a spherical surface to a rectangular surface such as a map of the world while preserving a point on a sphere as a point on a rectangle, and maintaining visually proportions in areas. Author's map faithfully illustrates all of the continents including the neglected Antarctica. This is a unique rectangular frame with no interruptions or distortions. Our map is able to be tessellated and repeated to create a new world map provides an expanded precise perspective of our planet.









How can we reduce student pressure and increase the learning during exams?

---

Elly Vandegrift, University of Oregon



# Three ideas for exams

---

1. Two Part Exams
2. Public Exams
3. Exam Wrappers

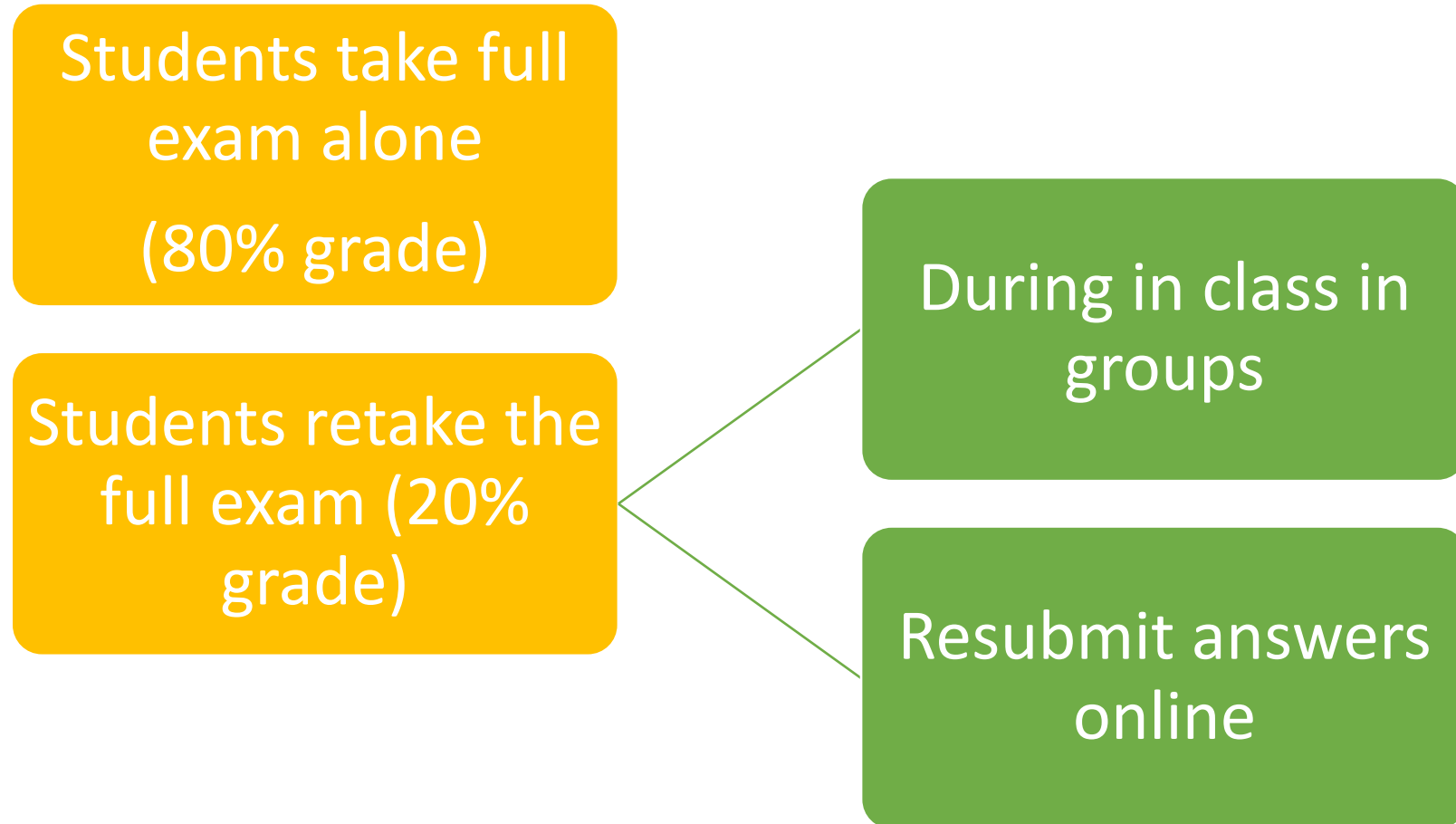
Wieman, C. E., Rieger, G. W., & Heiner, C. E. (2014). Physics exams that promote collaborative learning. *The Physics Teacher*, 52(1), 51-53.

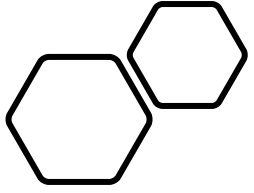
Wiggins, B. (2019). The Public Exam System: Simple Steps to More Effective Tests. <https://www.coursehero.com/faculty-club/classroom-tips/benjamin-wiggins/>

Lovett, M. C. (2013). Make exams worth more than the grade: Using exam wrappers to promote metacognition. In M. Kaplan, N. Silver, D. LaVague-Manty, & D. Meizlish (Eds.), *Using reflection and metacognition to improve student learning: Across the disciplines, across the academy* (pp. 18-52). Sterling, VA: Stylus.



# Two Part Exams





# Public Exams



60-70% of material



Missing key  
elements



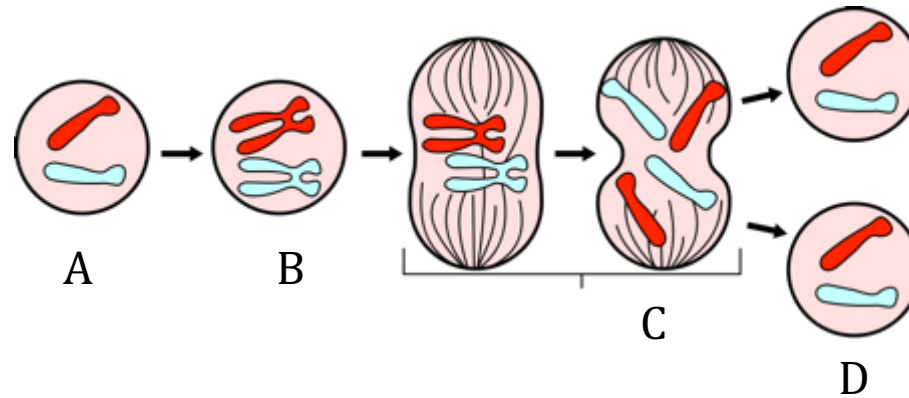
Posted for students  
for one week



Students provide  
feedback

# Full Exam Question (Multiple True/False)

For each answer, select True or False.



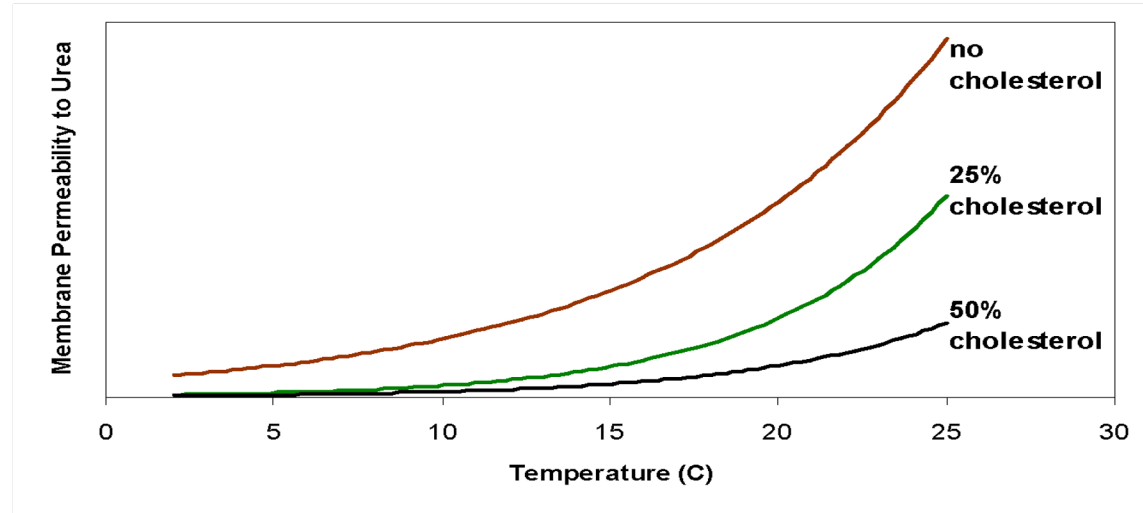
- \_\_\_\_\_ This diagram represent mitosis.
- \_\_\_\_\_ This process creates eggs and sperm that are ready for fertilization.
- \_\_\_\_\_ In this image, at stage D the cells are identical to the cells at stage A.
- \_\_\_\_\_ In this image, the cells at stage D are diploid.
- \_\_\_\_\_ In this image at stage C the chromosomes undergo crossing over.
- \_\_\_\_\_ In this image at stage B the cell is diploid.

# Example (questions no image)

- \_\_\_\_\_ This diagram represent mitosis.
- \_\_\_\_\_ This process creates eggs and sperm that are ready for fertilization.
- \_\_\_\_\_ In this image, at stage D the cells are identical to the cells at stage A.
- \_\_\_\_\_ In this image, the cells at stage D are diploid.
- \_\_\_\_\_ In this image at stage C the chromosomes undergo crossing over.
- \_\_\_\_\_ In this image at stage B the cell is diploid.

# Full Question: Two-tiered Multiple Choice Questions

Review the graph at right.



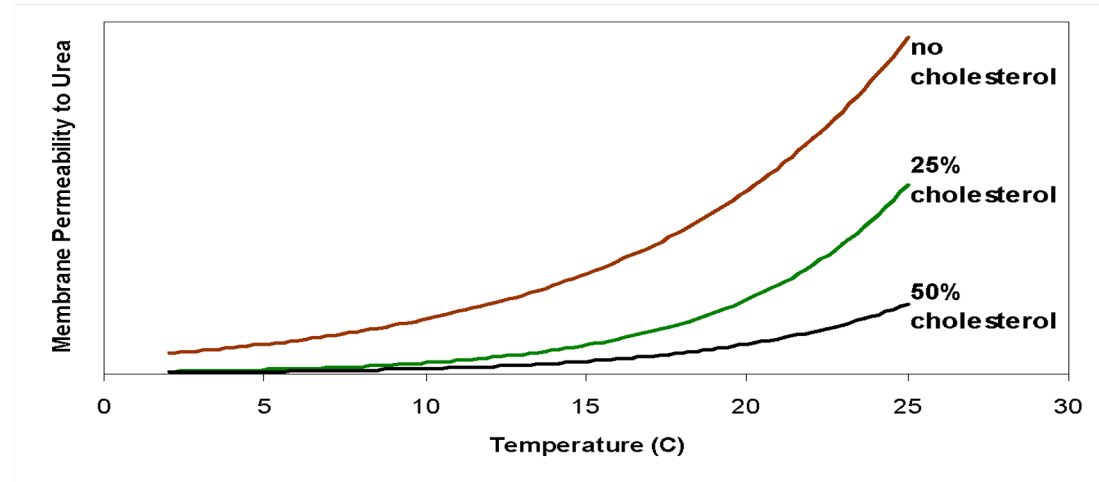
Which of the following passages describes the graph?

- A) membrane permeability to urea is only dependent on the amount of membrane cholesterol
- B) amount of membrane cholesterol is only dependent on membrane permeability to urea
- C) membrane permeability to urea is dependent on temperature and the amount of membrane cholesterol
- D) amount of membrane cholesterol and membrane permeability to urea are dependent on one another

Dirks, C., Wenderoth, M. P., & Withers, M. (2014). *Assessment in the college science classroom*. WH Freeman.



# Two-tiered MCQ



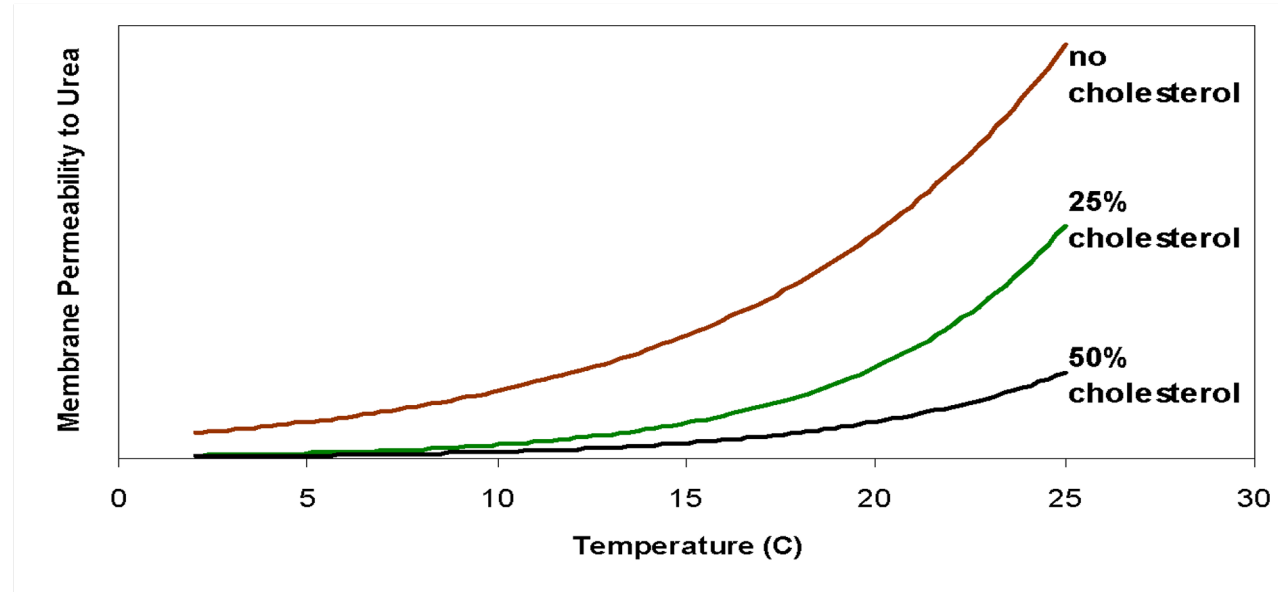
Which of the following best describes why you selected the answer that you did?

The graph shows . . .

- A) two dependent variables and one independent variable
- B) one dependent variable and two independent variables
- C) one dependent variable and one independent variable
- D) two dependent variables and two independent variables

Dirks, C., Wenderoth, M. P., & Withers, M. (2014). *Assessment in the college science classroom*. WH Freeman.

# Example (figure no questions)



Dirks, C., Wenderoth, M. P., & Withers, M. (2014). *Assessment in the college science classroom*. WH Freeman.

# Exam Wrappers -- Reflection

## **Before Exam**

- I am MOST comfortable this content:
- I am still confused about this content:
- I plan to do the following before the exam:

# Exam Wrappers -- Reflection

## **Before Exam**

- I am MOST comfortable this content:
- I am still confused about this content:
- I plan to do the following before the exam:

## **After Exam**

### **For missed questions**

- I was confused about the facts
- I didn't study/review/practice this content enough
- I still do not understand this topic
- I did not follow the directions

## **Reflection**

- How did you prepare for this exam/lesson/activity/class session?

# Our experience in Malaysia

---

Victor Hoe, University of Malaya

# Final Examination

- Take Home Examination
  - Problem Solving Questions
- Two-parts Take Home Examination
  - Part 1
    - Problem Solving Questions
  - Part 2
    - Present the answer for the Part 1 which leads to the second Problem Solving Questions

# Final Examination

- Remote Examination
  - Questions can be Essay, Problem Solving, MCQ
  - Preparation before the examination
  - Direct observation using video conferencing software
- Issues encountered
  - Server downtime
  - Slow Internet Connections

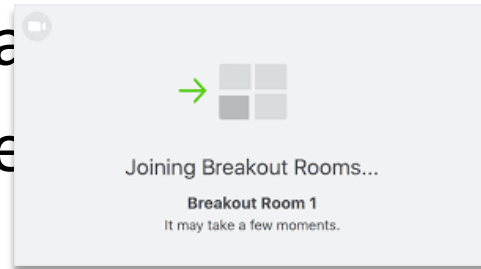


# Breakout Room Questions (30 minutes)

Introduce yourselves (Name + Institution)

Questions

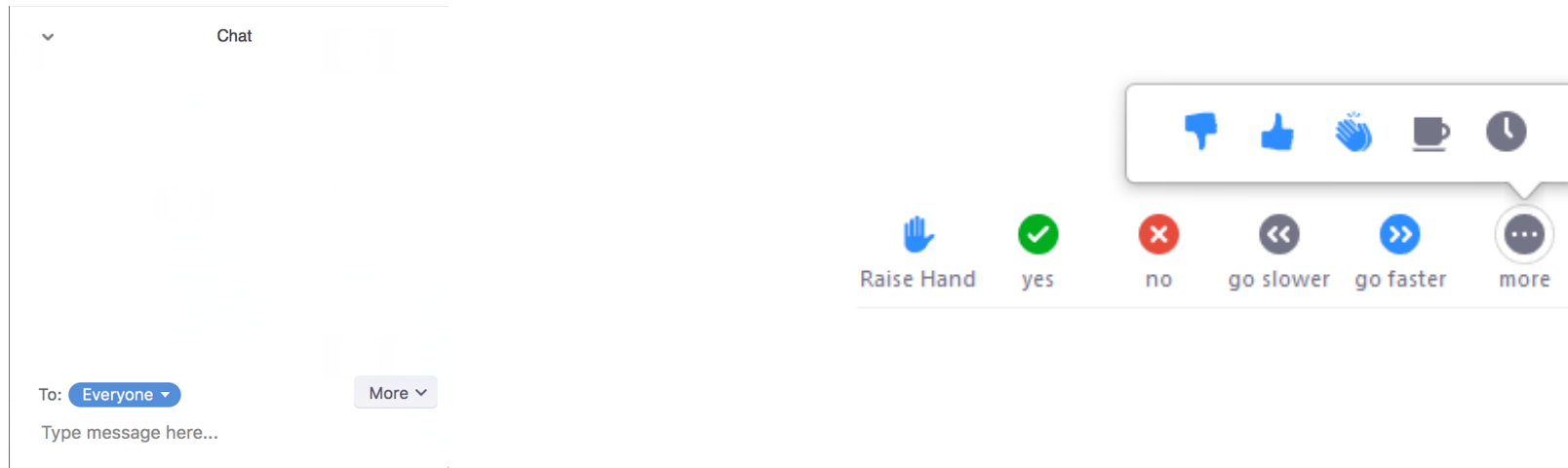
1. Which of the ideas presented could you implement in your courses?
2. What other ideas do you have for assessing your students' knowledge?
3. What concerns do you have regarding?
4. What other types of lower level assignments might you like to try?



# Group Discussion

Report out

Chat #Ideas



# Final Poll: Which of the following ideas from today would you like to try out?

1. Two-part exams
2. Public exams
3. Exam wrappers
4. Multiple True/False questions
5. Two tiered multiple choice questions
6. Take home examinations
7. Two-parts take home examinations
8. Remote examination

# Teaching in Virtual Environments

APRU Global Health Program at the University of Southern California

*in collaboration with*

Global STEM Education Program at the University of Oregon

## August 27/28

*Creative Ideas for Online and Remote Assessment*

Eleanor Vandegrift, University of Oregon

Victor Hoe, University of Malaya

## September 3/4

*Authentic Experiential Education*

Eleanor Vandegrift, University of Oregon

Vivian WY Lee, Chinese University of Hong Kong

## September 10/11

*Building Community in Remote Classrooms*

Eleanor Vandegrift, University of Oregon

César Alberto Lucio Ramírez, Tecnológico de Monterrey



USC Institute on Inequalities in Global Health



**APRU**  
Global Health



UNIVERSITY OF  
**OREGON**

Register at [apru.org/our-work/pacific-rim-challenges/global-health](https://apru.org/our-work/pacific-rim-challenges/global-health).