Slide 1

FL VC | IDN

Summer 2020 Webinar Series

Strategies for Online and Remote Lab Courses

A Panel Discussion

Bryan Biggers
Palm Beach Atlantic University

Christine Brown
University of South Florida

Debra Sheridan-Brinkman
Miami Dade College

Vicki Westergard
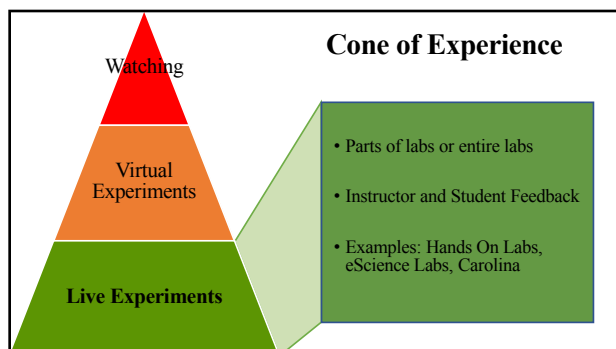St. Petersburg College

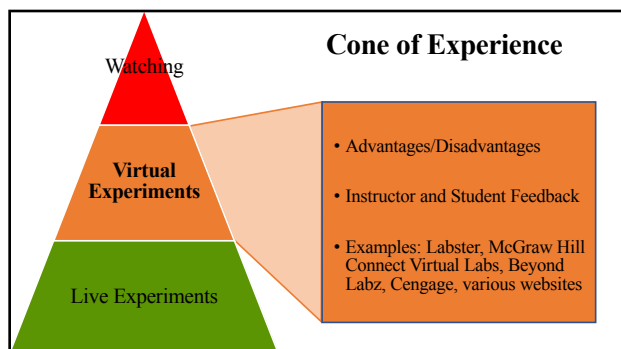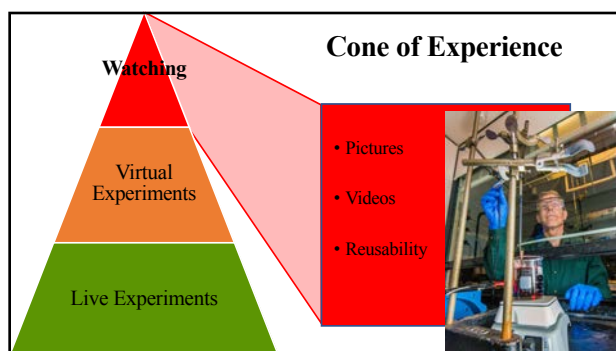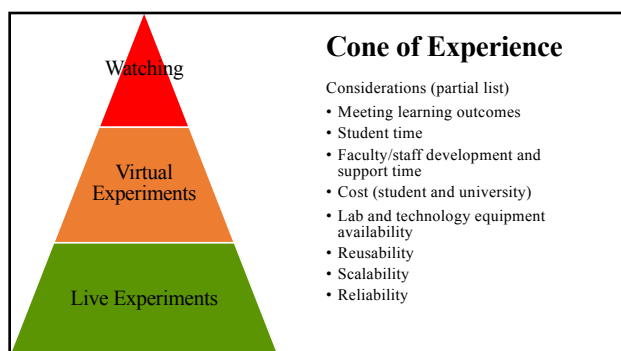©2020, Florida Virtual Campus

FL VC

Slide 2

FL VC | IDN

Summer 2020 Webinar Series

Strategies for Online and Remote Lab Courses

Bryan Biggers
Palm Beach Atlantic University

©2020, Florida Virtual Campus

FL VC

Slide 3

Cone of Experience

Watching

Virtual Experiments

Live Experiments

Considerations (partial list)
- Meeting learning outcomes
- Student time
- Faculty/staff development and support time
- Cost (student and university)
- Lab and technology equipment availability
- Reusability
- Scalability
- Reliability

Slide 4

Cone of Experience

Watching

Virtual Experiments

Live Experiments

- Pictures
- Videos
- Reusability

Slide 5

Cone of Experience

Watching

Virtual Experiments

Live Experiments

- Advantages/Disadvantages
- Instructor and Student Feedback
- Examples: Labster, McGraw Hill Connect Virtual Labs, Beyond Labz, Cengage, various websites

Slide 6

Cone of Experience

Watching

Virtual Experiments

Live Experiments

- Parts of labs or entire labs
- Instructor and Student Feedback
- Examples: Hands On Labs, eScience Labs, Carolina

Summer 2020 Webinar Series

Strategies for Online and Remote Lab Courses

Christine Brown
University of South Florida

Online Lab Development

Collaborative
Partnership between USF faculty and Innovative Education

Engaging
InEd Learning Design support for student-to-student interaction and custom content

Outcome Driven
Quality online learning focused on meeting student learning outcomes

USF Online STEM Labs - https://youtu.be/h8DSeVcu1dc

Faculty led multidisciplinary collaborative taskforce

- College of Arts and Sciences faculty & lab managers
- Innovative Education video production and learning designers
- Strategically prioritize shared resources (JoVE, Pivot, Labster, iNaturalist, custom video, kits)
- Establish a community of practice to access needs, solve instructional problems and make decisions

---

Summer 2020 Webinar Series

Strategies for Online and Remote Lab Courses

Debra Sheridan-Brinkman
Miami Dade College

Discovering Resources both Internal & External

- LMS Administrators
- Technology Training team
- Librarians/Learning Resource Specialists
- Lab Managers/Faculty
- Publishers/Third Party Vendors

Discovering Resources both Internal & External

Auralia and Musition

An Introduction Video: https://youtu.be/EXO3-0m-sHA

Slide 1

Discovering Resources both Internal & External

iHuman

An Introduction Video:
https://youtu.be/X_C-vWJDcOY

Slide 2

FL VC | IDN

Summer 2020 Webinar Series

Strategies for Online and Remote Lab Courses

Vicki Westergard
St. Petersburg College

©2020, Florida Virtual Campus

FL VC

Slide 3

St. Petersburg College Virtual Labs Strategies

Online transitions were decentralized, leading to various solutions:

- Video demonstration - Ceramics https://youtu.be/v9s51LlGy5Q
- FALSC resources - Jove for Biology https://www-jove-com.db24.linccweb.org/science-education/basicbio
- Microbiology – home lab kits
- Simulations - A&P Lab – in-house simulations
- Live online guided dissection

Slide 4

"Handwashing"

In the field of microbiology and in health care settings, handwashing is extremely important for health and safety of people in those areas. The importance of handwashing has been even more evident in the times that we are currently living in with COVID-19.

So, HANDWASHING is this week's Activity assignment! You will need to create a FLYER or VIDEO on proper handwashing technique. The idea is the flyer or video could be shared with the general public to better educate them on CDC recommended guidelines for handwashing (see your Week 1 Lab Guide for details on those recommendations).

If you choose to create a flyer you can either:

- Draw something, take a picture of it and upload it to the associated Dropbox.

- Create a flyer in Word or PowerPoint (you can use any program you'd like but I can only open .doc, .docx, .ppt, .pptx, or .pdf files—so make sure it's in one of those formats) and upload it to the associated Dropbox.

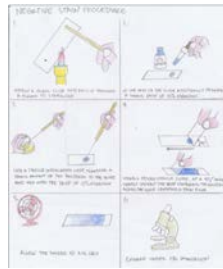If you choose to create a video:

- Please be sure to upload it to YouTube and provide me with a Public or Unlisted link (if you make it Private I won't be able to view it).

- Keep the video length to less than 2 minutes.

Keep all materials appropriate (no nudity, violence, cussing, etc.), but feel free to use props and/or ask family or friends to be a part of it.

NOTE: The information shared in the flyer or video should be based on CDC recommended guidelines and MUST BE YOUR ORIGINAL WORK. If you upload work that is not original you will not receive credit for the assignment and will be report to the Academic Integrity Council.

Slide 5

Examples of Students' Work:

https://www.youtube.com/watch?v=_rzlmLf0JXI&feature=share

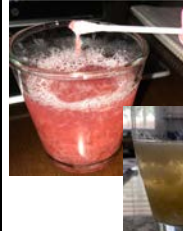## Slide 6

"Staining Guides"

- Students obviously couldn't do the staining procedures in lab, so they were directed to read the text book, watch a demo and then create a "Staining Guide"

This week we will be learning about a variety of staining techniques commonly used in microbiology laboratories.

So, STAINING is this week's Activity assignment! CHOOSE ONE OF THE STAINING PROCEDURES (e.g. Gram stain, Capsule stain, etc.). You will then need to create a FLYER or VIDEO on your chosen staining technique. Your target audience is a fellow classmate who is struggling to remember the details of the procedure.

If you choose to create a flyer you can either:

- Draw something, take a picture of it and upload it to the associated Dropbox.

- Create a flyer in Word or PowerPoint (you can use any program you'd like but I can only open .doc, .docx, .ppt, .pptx, or .pdf files—so make sure it's in one of those formats) and upload it to the associated Dropbox.

If you choose to create a video:

- Please be sure to upload it to YouTube and provide me with a Public or Unlisted link (if you make it Private I won't be able to view it).

- Keep the video length to less than 4 minutes.

Keep all materials appropriate (no nudity, violence, cussing, etc.), but feel free to use props and/or ask family or friends to be a part of it.

NOTE: The information shared in the flyer or video should be based on textbook guidelines and MUST BE YOUR ORIGINAL WORK. If you upload work that is not original you will not receive credit for the assignment and will be report to the Academic Integrity Council.

Examples of Students' Work:

GRAM STAINS

POSITIVE
•
NEGATIVE

1 2 3 4

Slides 1-4

"DNA Extraction"

Examples of student work

OBSERVING DNA IN FOOD

Materials Needed

Procedure

"Microbes Are Everywhere"
with student sample

MICROBES ARE EVERYWHERE

pH Determination
Click start to open the pH bottle.

Acid HCL   Base NaOh   Unknown

START

Biology II Lab
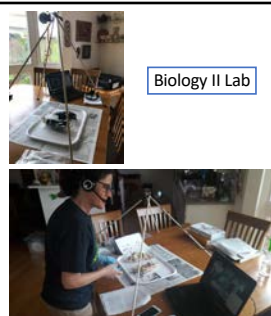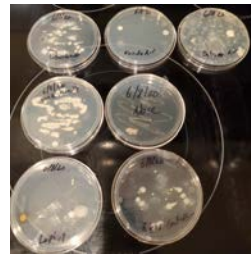
Live online guided dissection

Summary 2020 Webinar Series

Subscribe to the FLVC-IDN Listserv

• **Email Tom Tu (ttu@flvc.org)**

Follow FLVC-IDN On Social Media

• **Twitter Account:** @flvc-idn

• **Facebook Account:** flvc-idn

STATE UNIVERSITY SYSTEM of FLORIDA
Board of Governors

THE Florida
COLLEGE SYSTEM

©2020 Florida Virtual Campus