

TRANSLATING
PRACTICAL LEARNING
EXPERIENCE &
LABORATORY
DELIVERY
TO THE ONLINE DOMAIN

**BLENDED
LEARNING
COMMUNITY**

Sharing and fostering good practice in blended learning across all disciplines for both educational practitioners and developers. The BL Community is collegial based and coordinated by A/Prof Yasir Al-Abdeli and Michelle Pedlow at ECU. We welcome members from staff at any Perth based university.

BL Community 08.09.2021

Wrap-up

0915 - 0945 Settle-in, Light morning tea courtesy of the Faculty of Science and Engineering, Curtin University
0945 - 0950 A/Prof Chris Rawson, Dean Learning and Teaching - Faculty of Science and Engineering
Opening / Welcome, Acknowledgement of Country, and Housekeeping
0950 - 0955 A/Prof Yasir Al-Abdeli, Co-coordinator Blended Learning Community, School of Engineering, Edith Cowan Univ
Agenda / Theme: Translating Practical Learning Experience and Laboratory Delivery to the Online Domain

Themed Presentations

1000 - 1010 (1) Dr Paul Ellery, Curtin Medical School, Curtin University
Learning Karyotyping Asynchronously, Independently, and Remotely
1010 - 1020 (2) Dr Rina Wong, School of Medical and Health Sciences, Edith Cowan University
Reconfiguring Powerpoint to Build Semi-adaptive, Interactive Lessons for Lab Based Microbiology
1020 - 1030 (3) Dr Ahmed Ibrahim, School of Science, Edith Cowan University
Virtual Environments for Cyber Security Labs
1030 - 1040 Q&A time for presentations 1-3
1040 - 1050 (4) Siavash Khaksar, School of Electrical Engineering, Computing and Mathematical Sciences, Curtin University
Strategies For Teaching Practical Components of Electrical Engineering Units Using Blended Learning
1050 - 1100 (5) A/Prof Nick Timms, School of Earth and Planetary Sciences, Curtin University
A Virtual Geology Field Trip Learning Object Using a 360 Degree and AR Immersive Experience
1100 - 1110 (6) Dr Alexandra Yeung, School of Molecular and Life Sciences, Curtin University
Using Electronic Notebooks to Encourage Student Engagement during the COVID Pandemic
1110 - 1120 Q&A time for presentations 4-6
1120 - 1130 (7) Dr Georgina Sauzier, School of Molecular and Life Sciences, Curtin University
Lights, Camera, Reaction! A Blended Approach to Chemistry Laboratories with Filmed Experiments
1130 - 1140 (8) Dr Rina Wong, School of Medical and Health Sciences, Edith Cowan University
A Pilot Trial of McGraw Hill Virtual Labs for Remote Learning in Haematology
1140 - 1150 (9) Jenny Jongste, Sessional / School of Education, The University of Notre Dame Australia
Digital Workflows for Documentation and Sharing During School Placements for Pre-service Teachers
1150 - 1200 Q&A time for presentations 7-9
1200 - 1230 Michelle Pedlow, Co-coordinator Blended Learning Community, Senior Learning Designer, Centre for Learning and Teaching, Edith Cowan University
Open floor discussion, wrap-up, networking

<https://intranet.ecu.edu.au/learning/academic-development/learning-communities/blended-learning-community>

Want to be part of our Blended Learning Community?

Join us for our next event and **forward** this to other colleagues at ECU and any of Perth's based Uni's who may want to join the BL C

✉ y.al-abdeli@ecu.edu.au or m.pedlow@ecu.edu.au

Co-coordinators, BL C

Acknowledgements: Thank you to presenters for consenting to share their slides.

Access: Summary notes (slides) of earlier BL C activities:

<https://intranet.ecu.edu.au/learning/academic-development/learning-communities/blended-learning-community>

Learning Karyotyping Asynchronously, Independently, and Remotely

Paul Ellery, Ross Graham, and Milo Radunski

Curtin Medical School

Curtin University

Background

- Karyotyping = analysis of metaphase chromosomes for structural and/or numerical abnormalities
- A graduate scientist requires 6-12 months of full-time training to become competent
- Our students have somewhere between a 3-hour practical and a 25-credit unit!

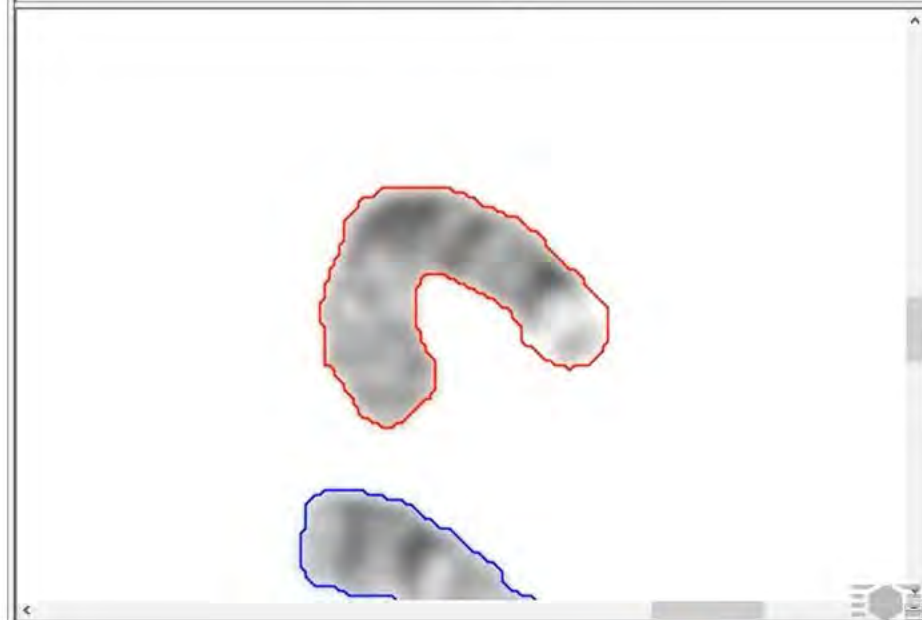
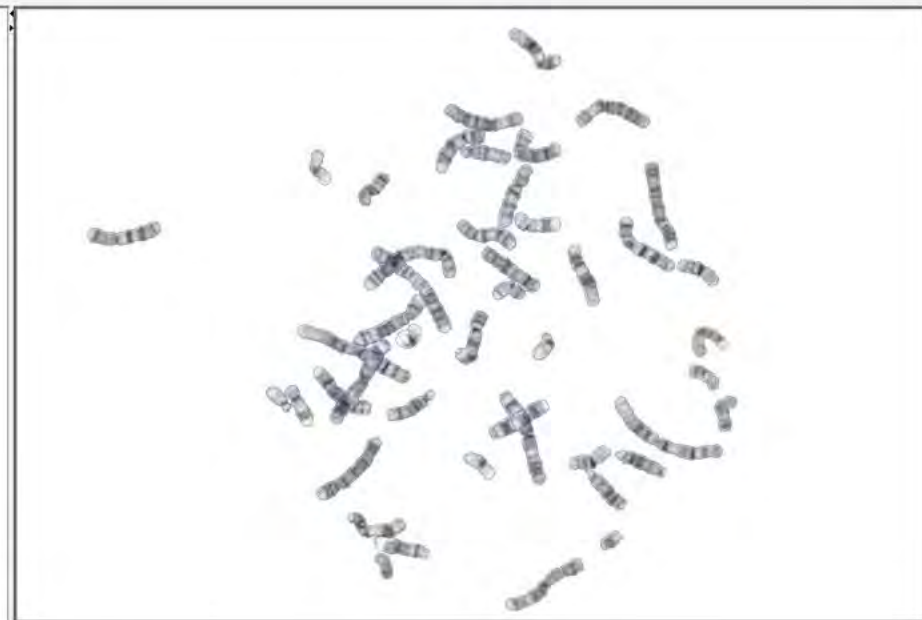
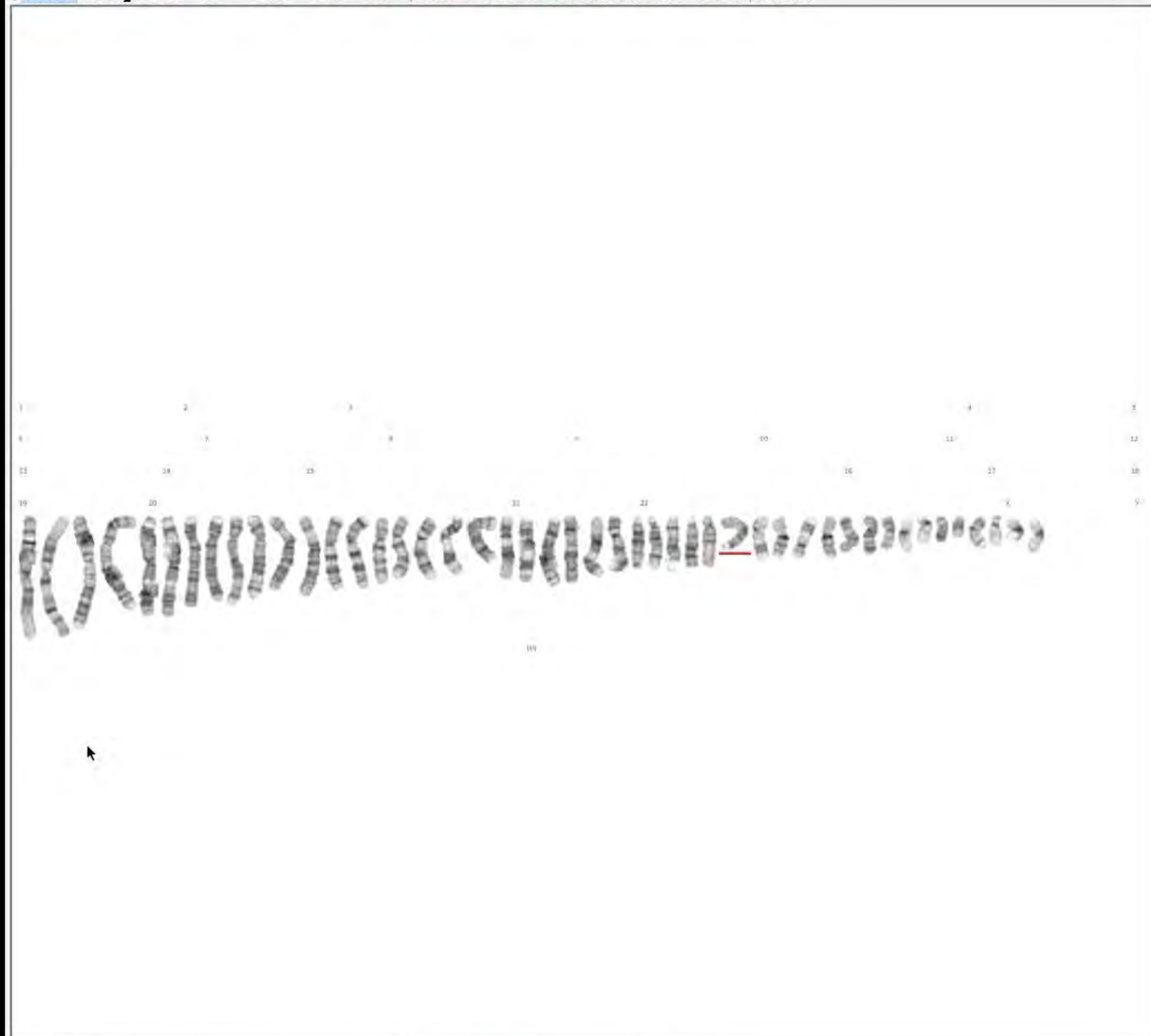
Background

- Karyotyping has traditionally been taught in our School's computer laboratory
 - 56 seats = 56 students
 - Requires SmartType software
 - Authentic ✓
 - Use is restricted to the computer lab ✗
 - Can't teach during lockdowns
 - Huge amount of demonstrator feedback ✗





chromosomes:46
crosses:0



Aims

Develop tools that help students identify chromosomes and learn the karyotyping process outside of the computer laboratory

Method

Go to Milo!!

He developed:

1. Karyotyper
2. Karyotype Error Identification Tool

Metaphase 1

< 1 (current) >

Save/Print

Submit

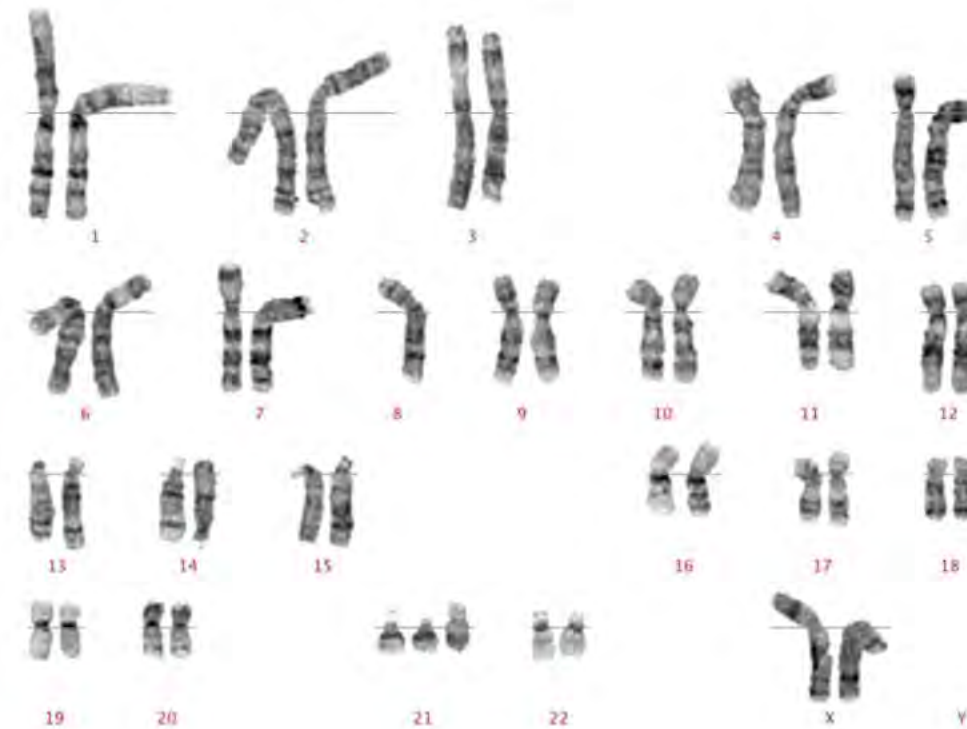
1	2	3	4	5		
6	7	8	9	10	11	12
13	14	15	16	17	18	
19	20	21	22	X	Y	

UN



Question 11

Inspect the Karyogram and identify the issues in the table below.



UN

#	Chromosome	Position	Issue/Abnormality	Additional
1	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	
2	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	
3	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	
4	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	
5	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	
6	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	<input type="text" value="Please Select"/>	

PDF

Reset

Submit

Exit

Conclusions and future directions

- Karyotyper and Karyotype Error Identification Tool promote independent learning of chromosome characteristics and the karyotyping process
- Combined with pre-lab videos and/or Collaborate sessions, they facilitate asynchronous learning, and remote classes at scale
- iSOLT project
 - Do formative karyotyping tools improve student's grades in summative karyotyping assessments?
 - Both tools output learning analytics data that we plan to correlate with results in summative assessments

Acknowledgements

- Ross Graham
- Milo Radunski
- Mahony Fenn
- Rebecca de Kraa

TRANSLATING
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Virtual Environments for Cyber Security Labs

Dr Ahmed Ibrahim

ahmed.ibrahim@ecu.edu.au

[@ai8rahim](#)

Unit & Student Details

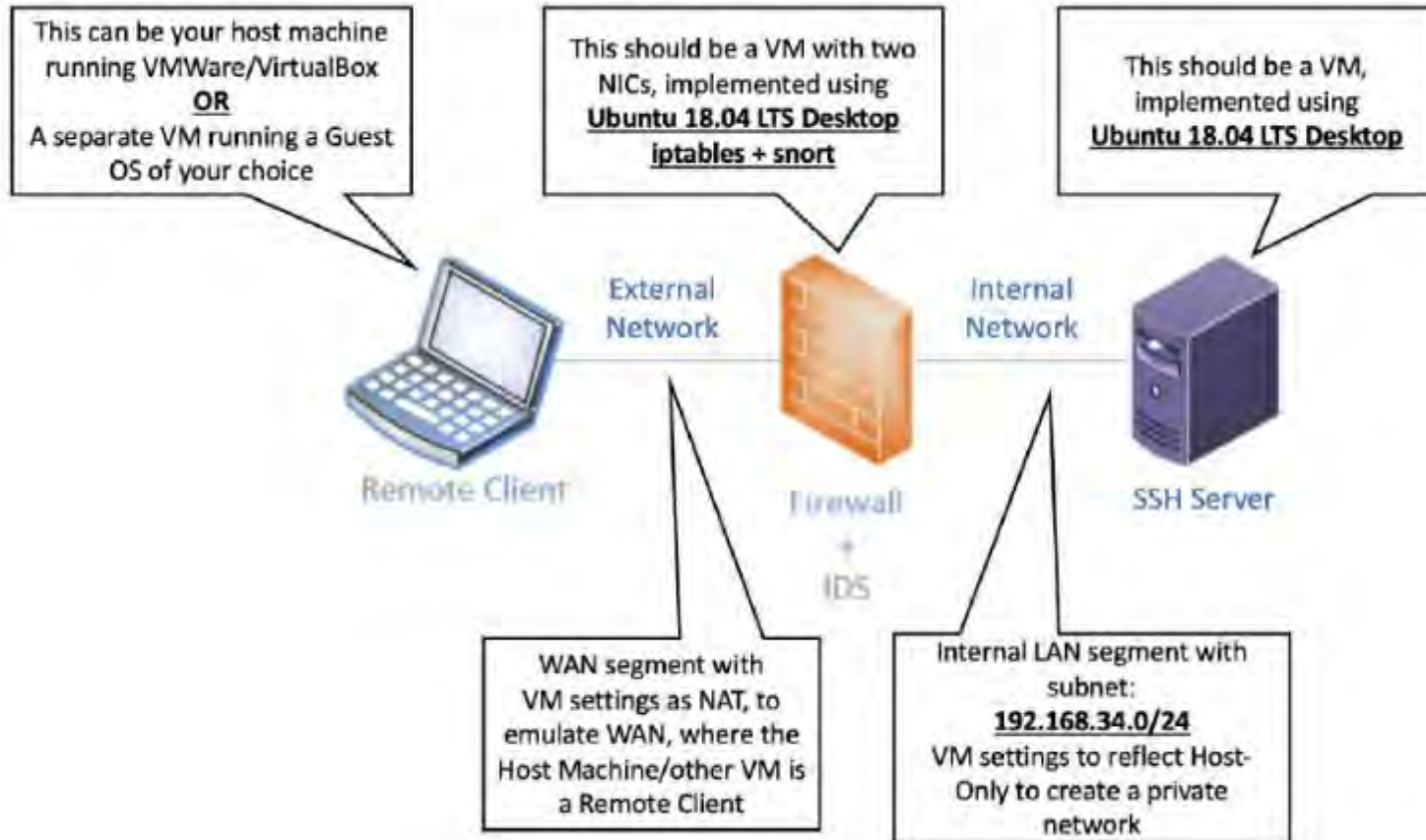
- PG Network Security
- 1st year, 1st semester
- On-Campus + Online
- Non-tech Background

Tasks

- Practical Tech Activities
- Major Assignment (40%)



Virtual Environment



Problem – Initial Setup by Student

Virtualisation
Software

Operating System
Platform

Install & Configure
Software & Libraries



ubuntu.



```
ai@nVAC:~$ sudo apt update
[sudo] password for ai:
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Hit:2 https://archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [830 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1175 kB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [162 kB]
Get:8 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [8604 B]
Get:9 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [374 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/restricted Translation-en [53.7 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 c-n-f Metadata [500 B]
Get:12 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [638 kB]
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Get:24 http://archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [101 kB]
Get:25 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [18.8 kB]
Get:26 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [24.6 kB]
Get:27 http://archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [6776 B]
Get:28 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [620 B]
Get:29 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [5512 B]
Get:30 http://archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [2068 B]
Fetched 5541 kB in 5s (989 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
98 packages can be upgraded. Run 'apt list --upgradable' to see them.
ai@nVAC:~$
```

Solution – Initial Setup by Staff


Azure Lab Services

ECU-SYD-PRD-LAB-001

Edith Cowan University


+ New lab

My labs




CSI2450 IoT and OT
Security JO ES ECUSRI 211

Quota per user: 50 hours




CSI2450 IoT and OT
Security PSB 21TR2

Quota per user: 50 hours




CSI6202 Network
Security JO ES 221

Quota per user: 50 hours



CYB6003 Network
Security 21AC1

Quota per user: 50 hours

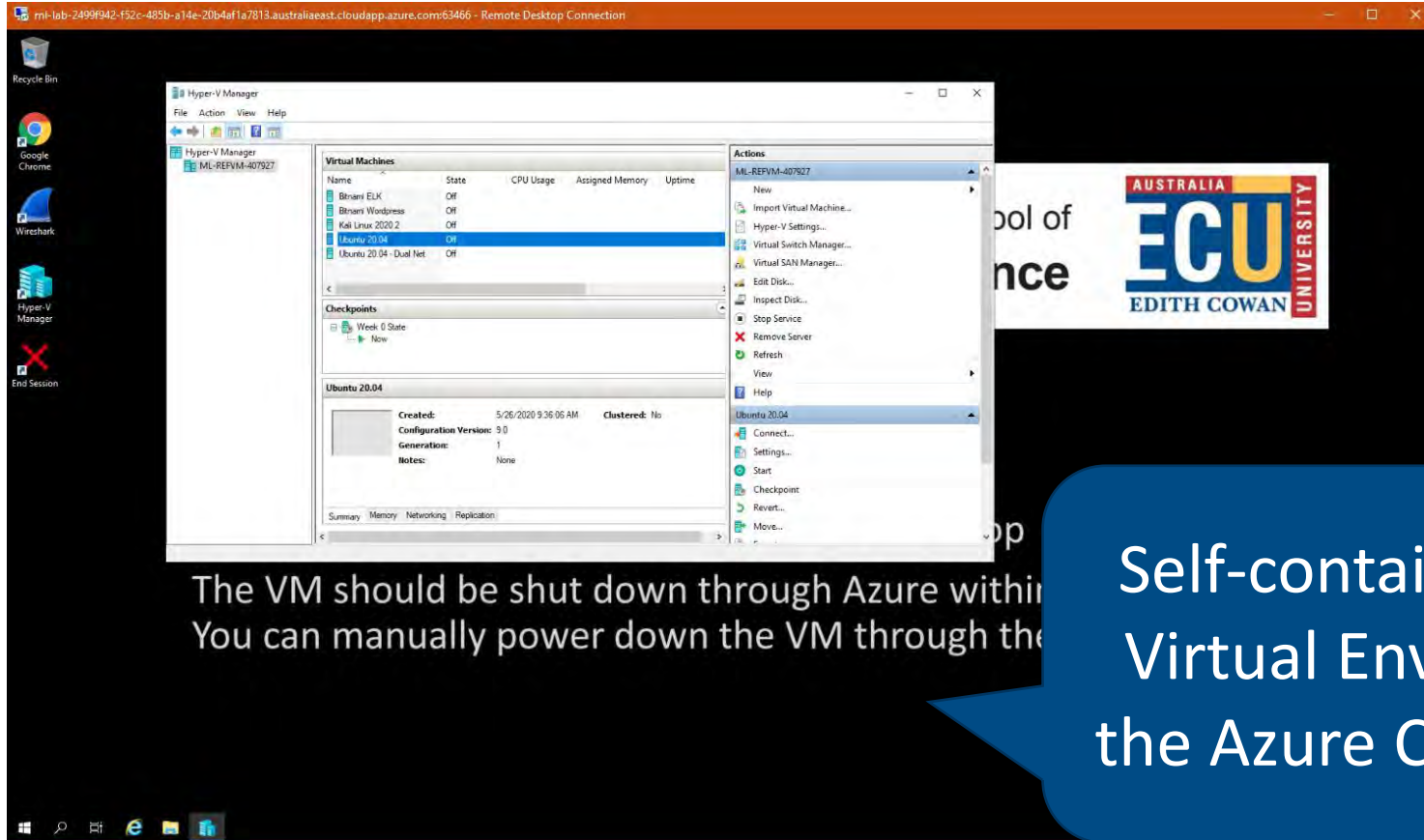


CYB6003 Network
Security 21AC4

Quota per user: 50 hours

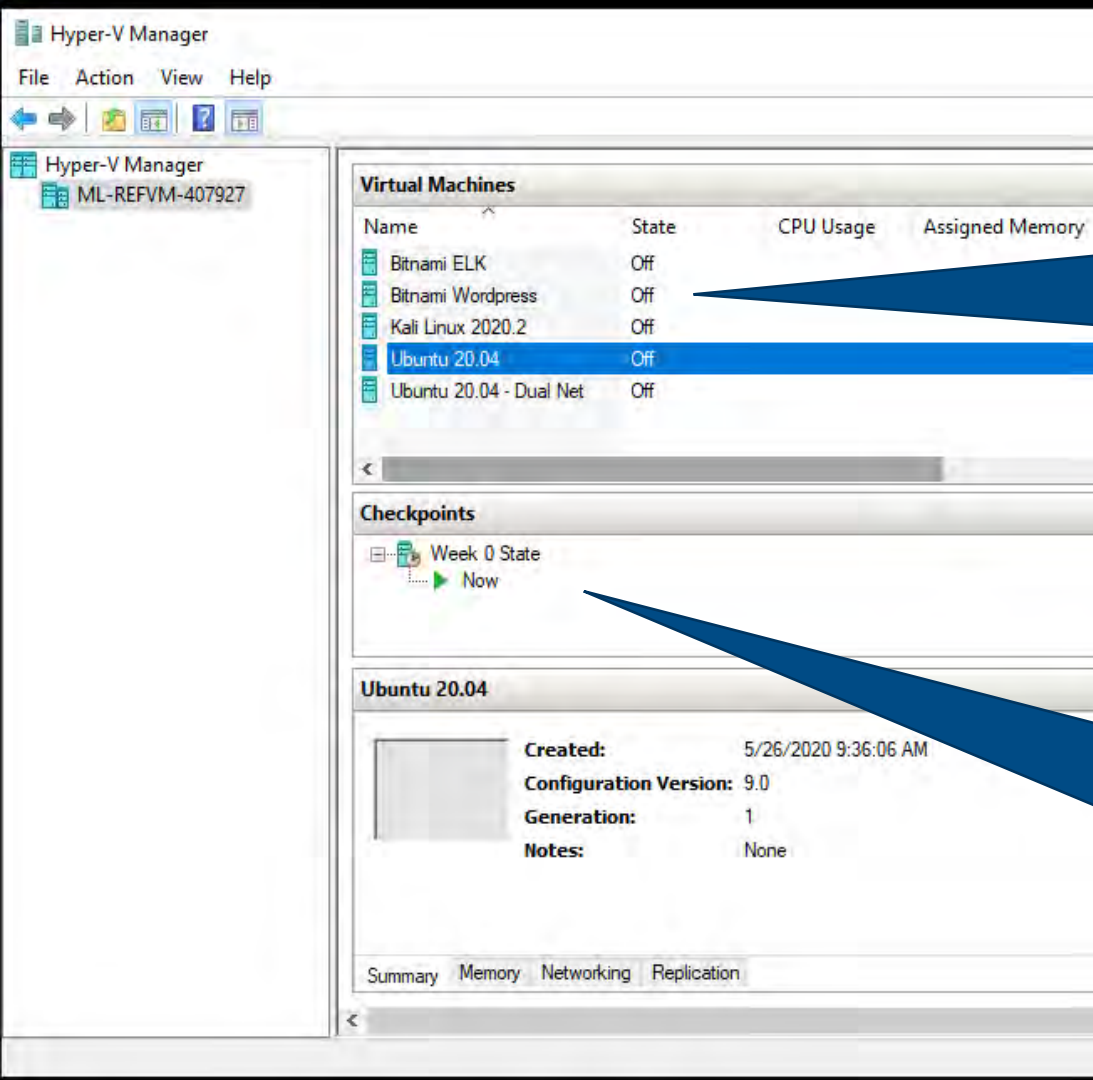
Multiple Labs can
be created from a
single template

Solution – Initial Setup by Staff



The VM should be shut down through Azure within 14 days of creation. You can manually power down the VM through the Hyper-V Manager.

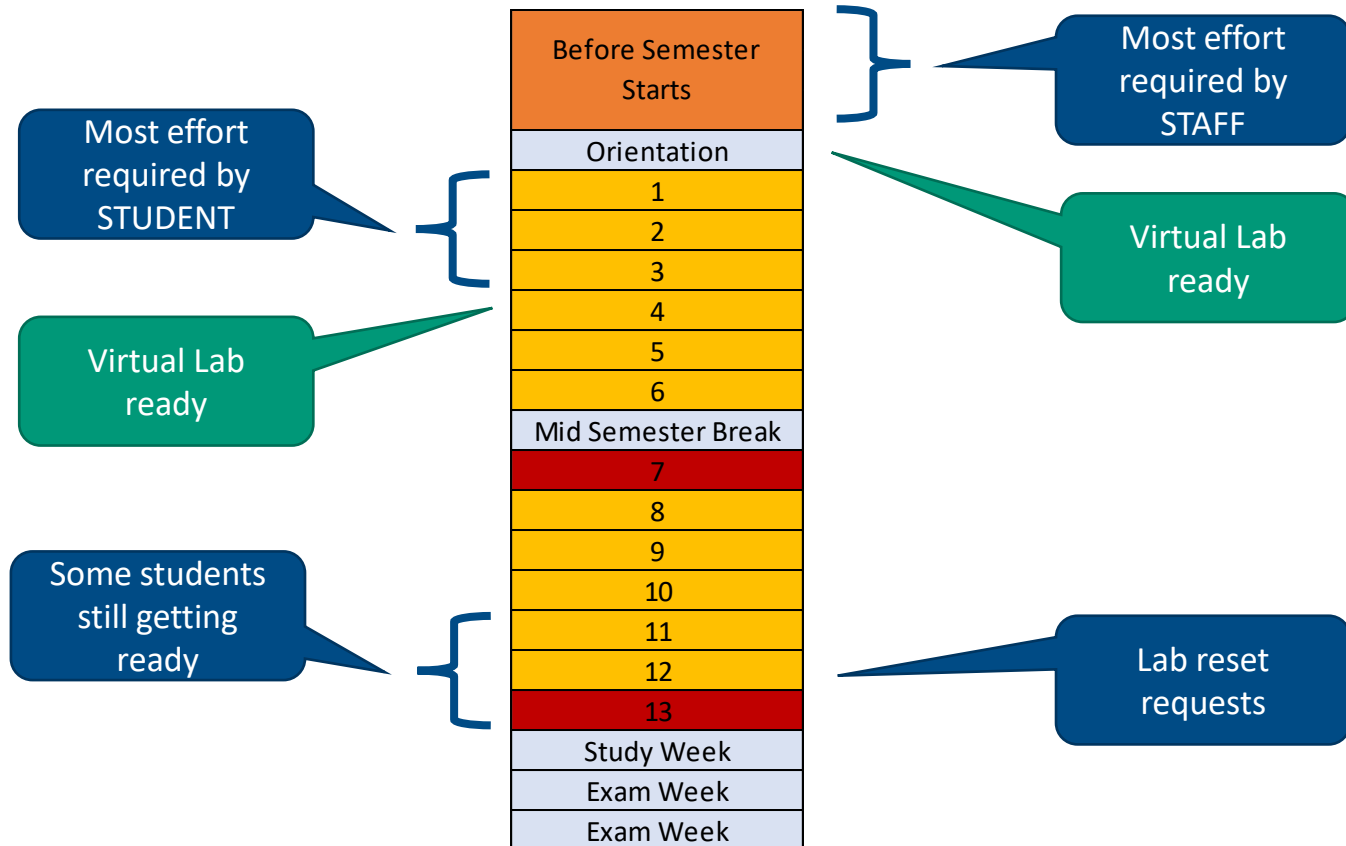
Self-contained Virtual Env on the Azure Cloud



Multiple VMs
can run
simultaneously
in Azure

Checkpoints allow
rolling back changes
when things break

Results



- Plan and prepare early
- Onboard during O-Week
- Week 0 Instructions
- Lab Resets, resolved through Checkpoints

Basic Instructions


Connecting to Azure

Refer to the following PDF document to view instructions on how to connect to the Azure Virtual Lab and v

[Azure Labs Instructions.pdf](#)

The following video demonstrates how you can connect to the Azure Lab environment using your own com

Azure Connection Instructions




Powered by Panopto

Thank you

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@ai8rahim



STRATEGIES FOR TEACHING PRACTICAL COMPONENTS OF ELECTRICAL ENGINEERING UNITS USING BLENDED LEARNING

PRESENTED BY:

SIAVASH KHAKSAR

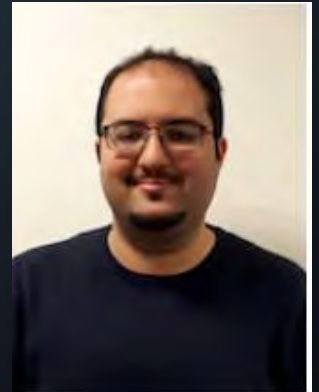
FACULTY OF SCIENCE AND ENGINEERING

SCHOOL OF ELECTRICAL ENGINEERING, COMPUTING AND MATHEMATICAL SCIENCES

CURTIN UNIVERSITY

INTRODUCTION

- Mr Siavash Khaksar
Associate Lecturer
Faculty of Science and Engineering
School of Electrical Engineering, Computing and Mathematical Sciences
Curtin University
UG and PG coursework project coordinator
Teaching units in Digital Design, Embedded Systems, Sensor Networks,
Microcomputers



THE COHORT

- Group A: First Year Students studying “Hardware Fundamentals”
- Group B: 3rd and 4th year students studying “Advanced Digital Design”
(Project for this unit was previously designed by Prof Cesar Ortega-Sanchez and Mr Clive Maynard in 2012)

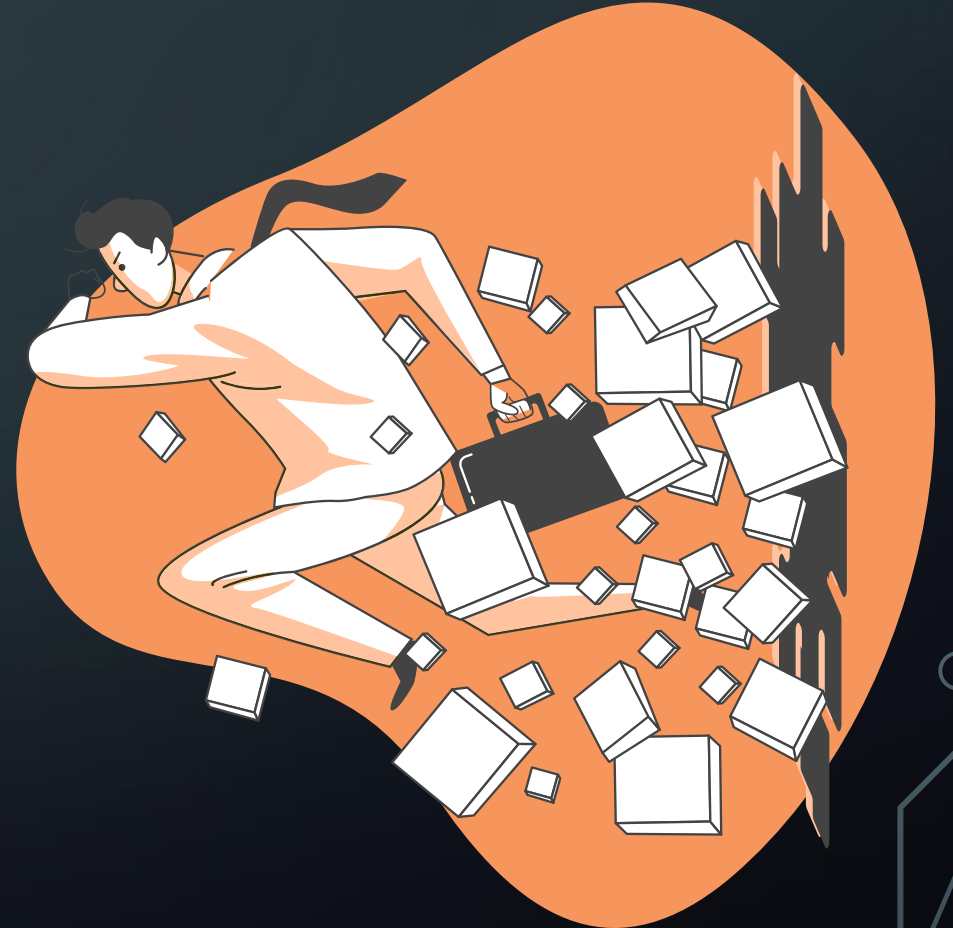
THE SOLUTION FOR LECTURES AND TUTORIAL

- Fairly straight forward with pre-recorded online lectures
- Live Tutorial and Q/A sessions
- What about the practical components?



CHALLENGES IN HARDWARE FUNDAMENTALS

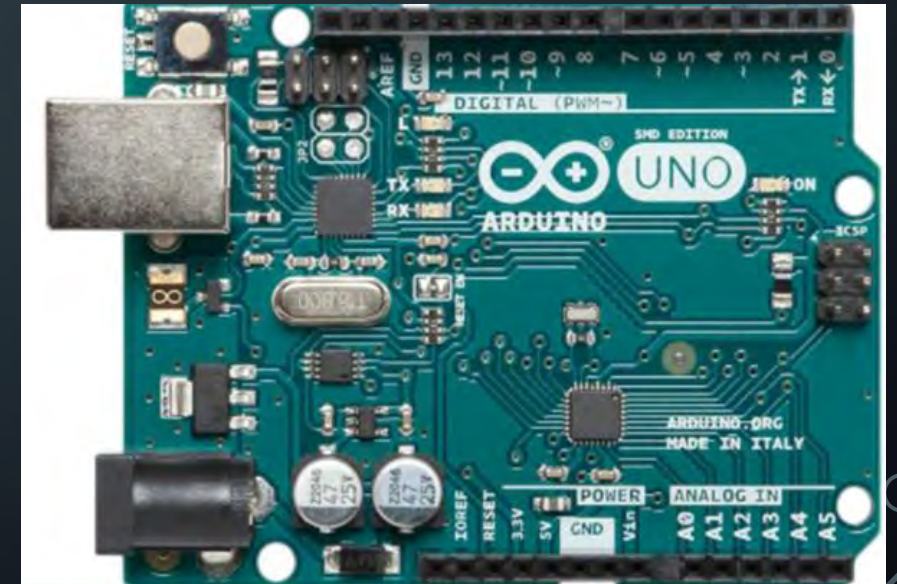
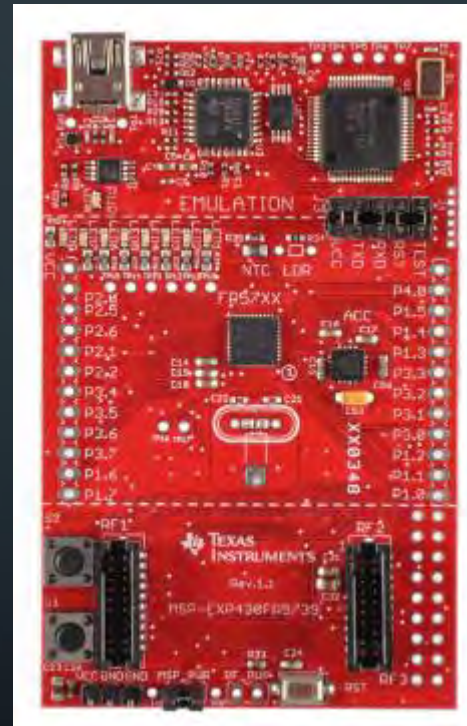
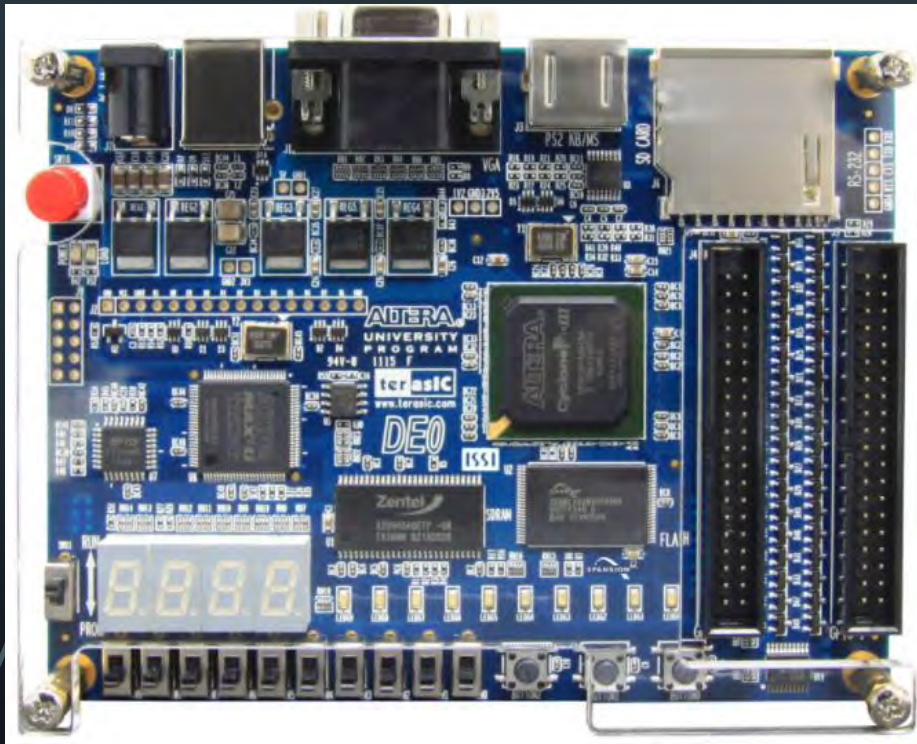
- First year students with no experience in higher education
- More than half the unit involved using field programmable gate arrays (FPGAs)
- Assessment became an issue
- Large number of students (about 245 combined)



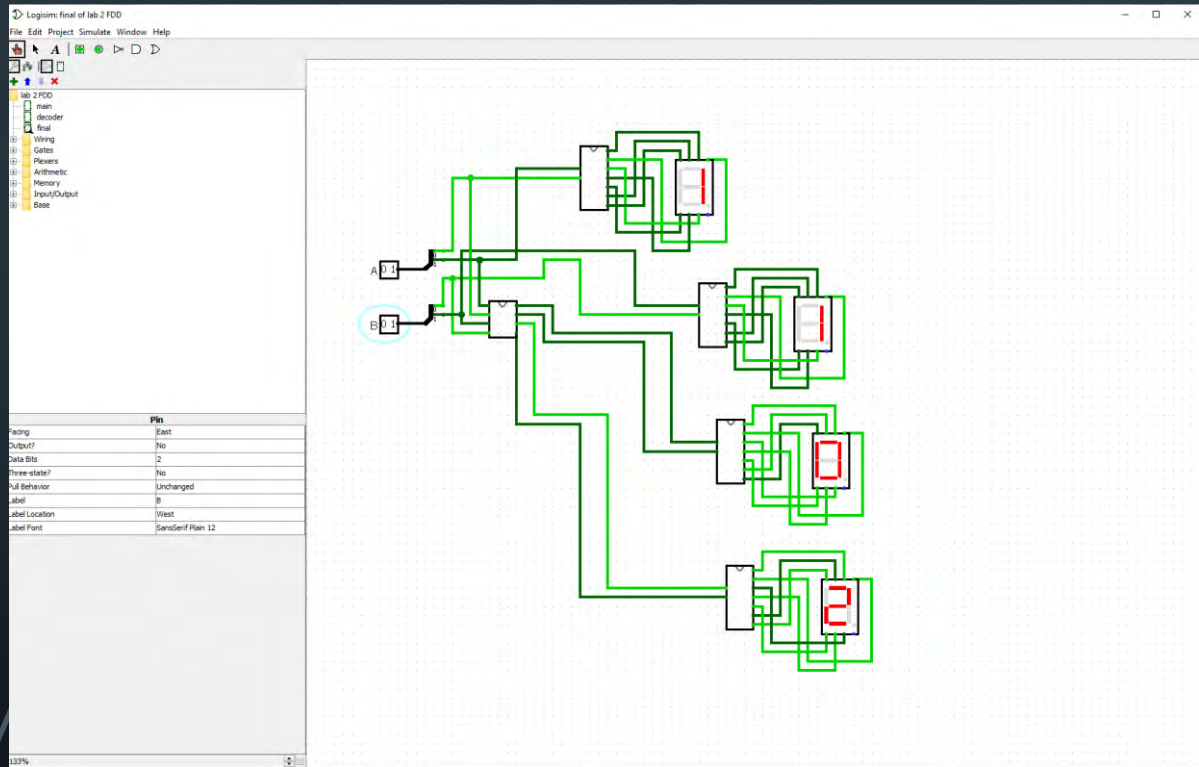
THE SOLUTION FOR HARDWARE FUNDAMENTALS

- The following simulators were used to design digital circuits
 - Logisim (Free digital design software)
 - Altera Quartus II (Free student version available)
- The students were given step by step guides for using the simulators
- Multiple Q/A sessions were held throughout the week so students could reach us

SOME OF THE HARDWARE USED IN THE LABS



LOGISIM



A1	A0	B1	B0	Q3	Q2	Q1	Q0
0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	1
0	0	1	0	0	0	1	0
0	0	1	1	0	0	1	1
0	1	0	0	0	0	0	1
0	1	0	1	0	0	1	0
0	1	1	0	0	0	1	1
0	1	1	1	0	1	0	0
1	0	0	0	0	0	1	0
1	0	0	1	0	0	1	1
1	0	1	0	0	1	0	0
1	0	1	1	0	1	0	1
1	1	0	0	0	0	1	1
1	1	0	1	0	1	0	0
1	1	1	0	0	1	0	1
1	1	1	1	0	1	1	0

Output:

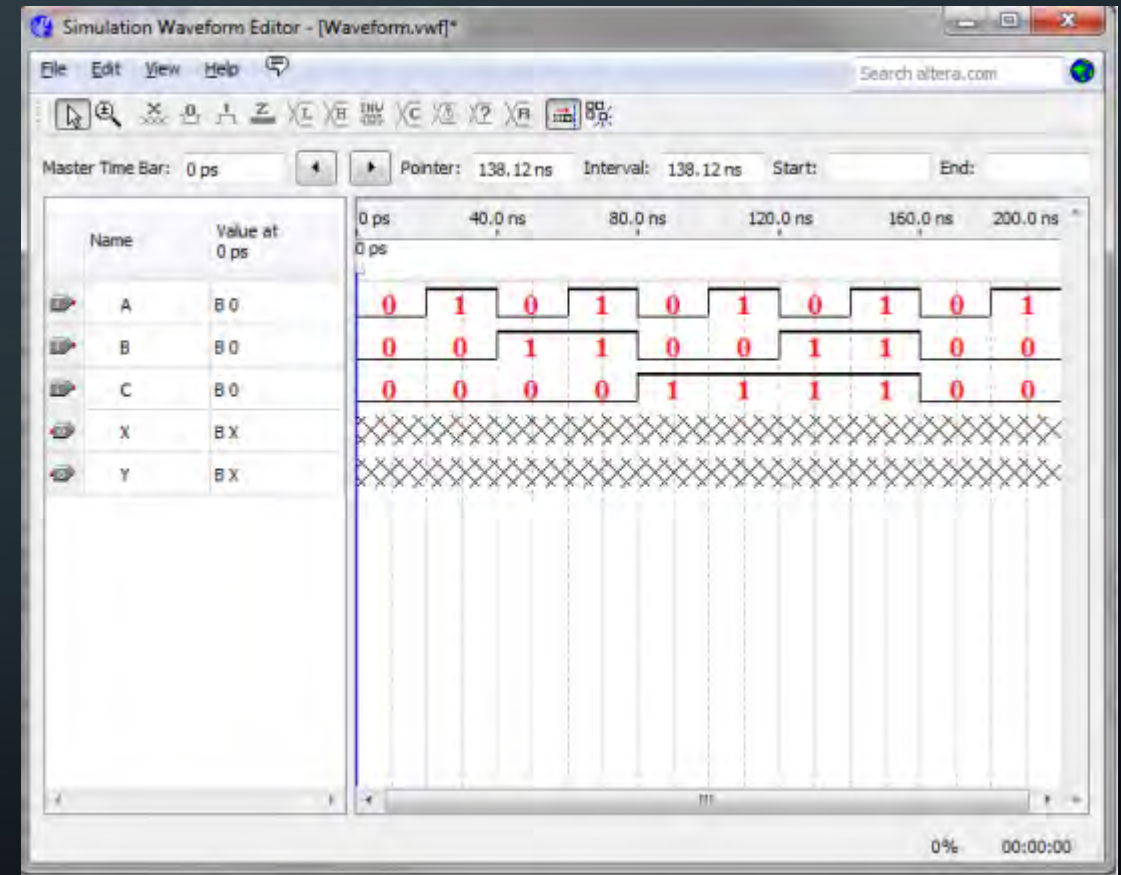
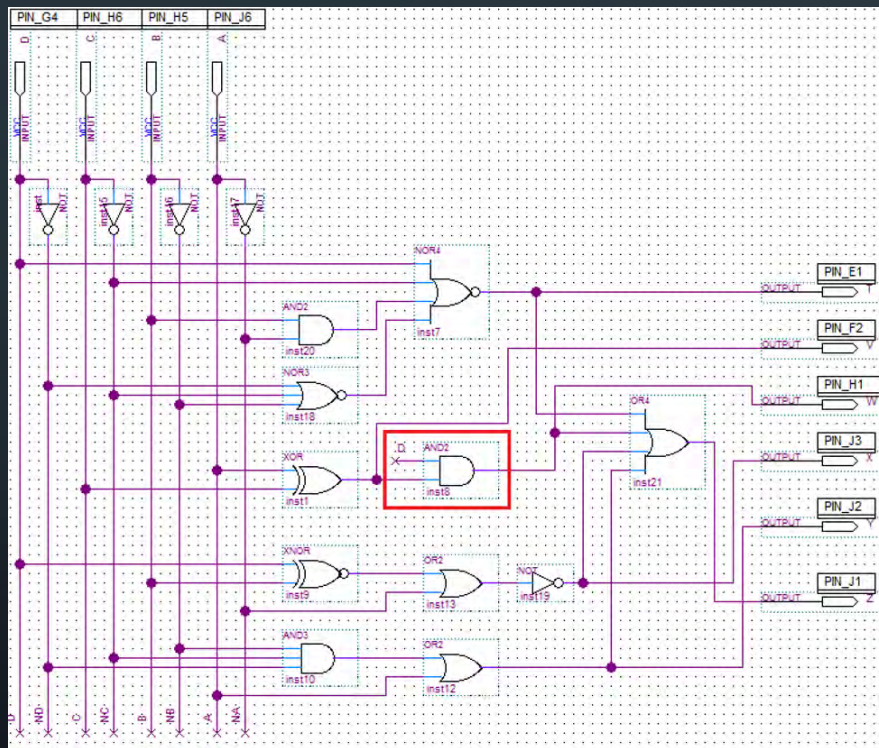
Format:

B1, B0

	00	01	11	10	
A1, A0	00	0	0	0	0
01	0	0	1	0	
11	0	1	1	1	
10	0	0	1	1	

$A0 B1 B0 + A1 B1 + A1 A0 B0$

QUARTUS II

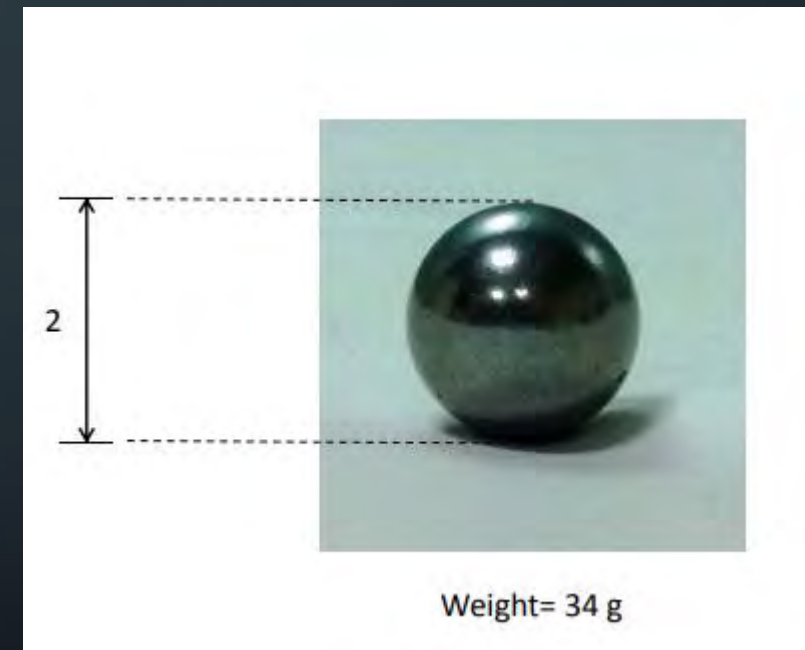
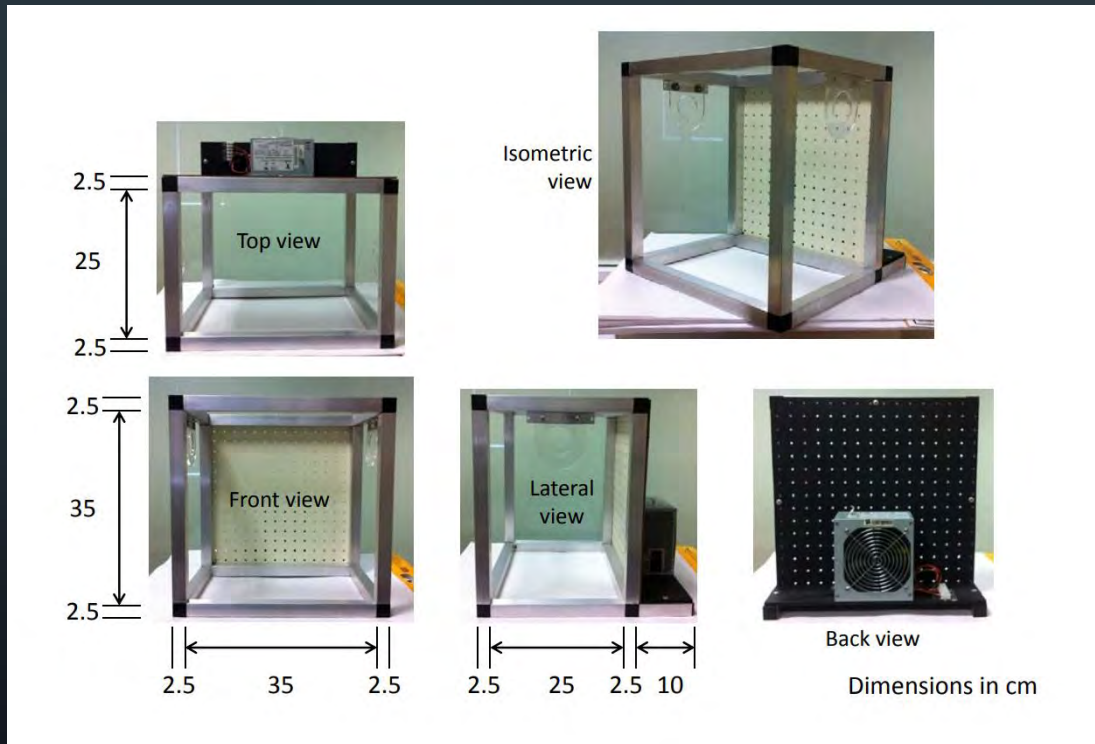


CHALLENGES IN ADVANCED DIGITAL DESIGN

- 3rd and 4th year students
- Project based unit
- The project was group based
- No final exam, so the unit just had the project
- Largest run of the unit (jumping from 50 Students to 90)



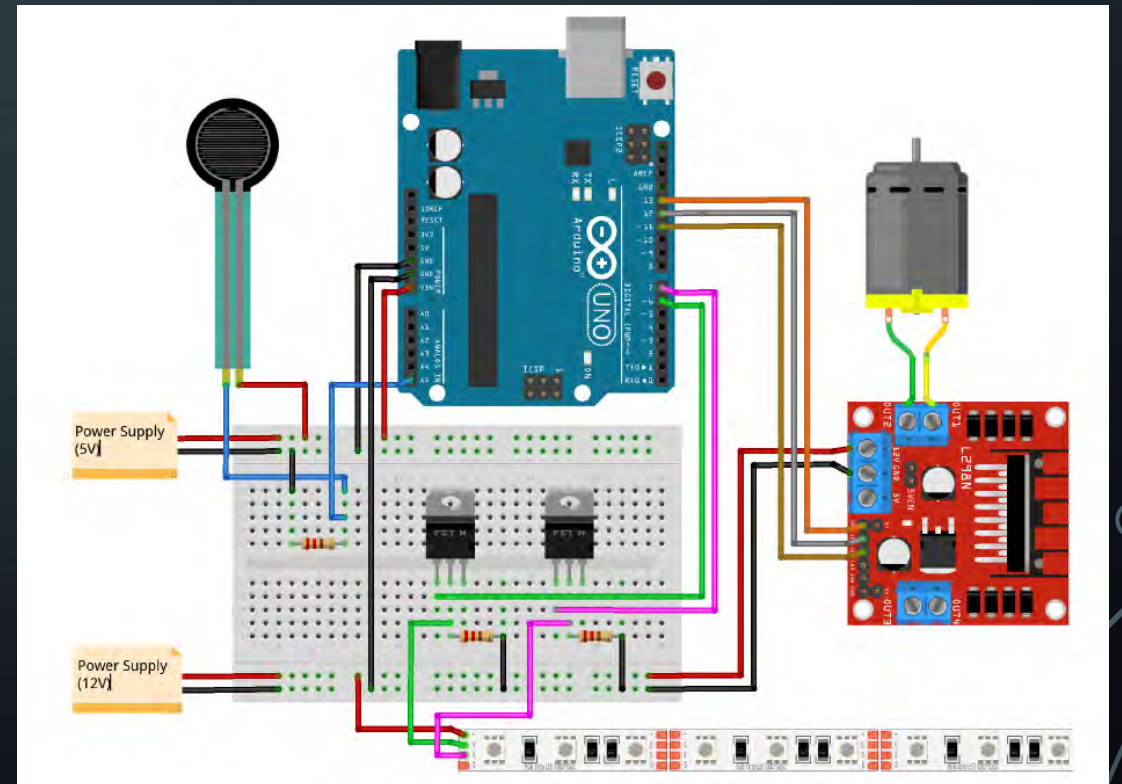
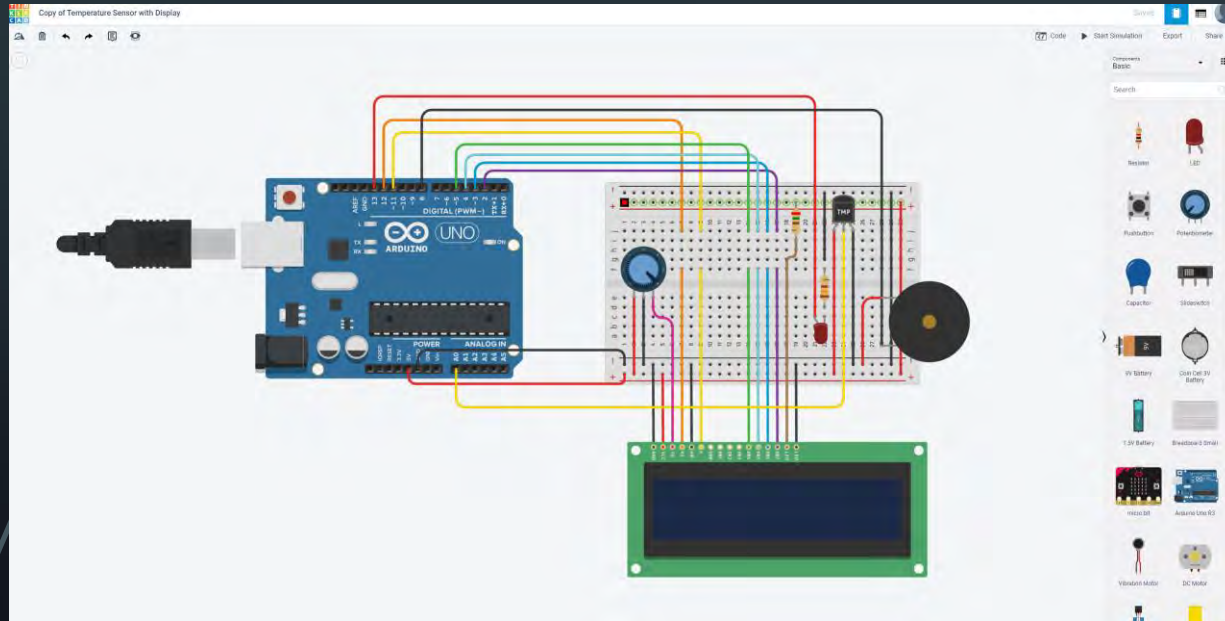
THE PROJECT IN ADVANCED DIGITAL DESIGN (THE CRAZY MACHINE PROJECT)



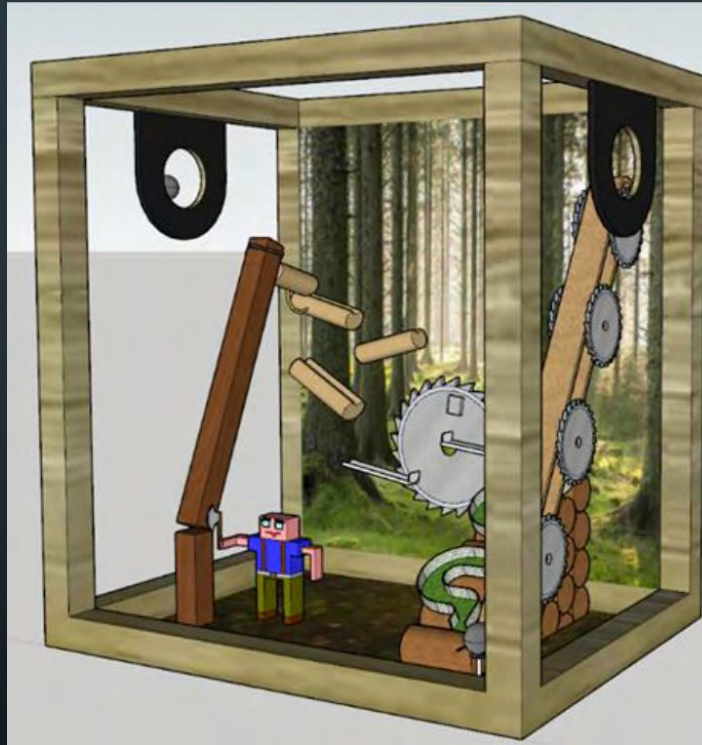
THE SOLUTION FOR ADVANCED DIGITAL DESIGN

- Blackboard collaborate environments were created so students can hold their group meetings
- Sensors and actuators were purchased so students could take the crazy machine boxes home
- Different parts of the construction were broken down and assigned it to different team members
- All project presentations were held online
- For overseas campuses Tinkercad was used

EXAMPLES STUDENT CIRCUITS IN TINKERCAD



EXAMPLE OF THE SIMULATED CRAZY MACHINE



EXAMPLE CRAZY MACHINE PROJECT



EXAMPLE CRAZY MACHINE PROJECT



UNIT EVALUATE RESULTS DURING LOCKDOWN

Unit Name: Advanced Digital Design	Responses(n): 20		
Unit Code: CMPE3006	Enrolment(N): 92		
	Response Rate: 22 %		
eVALUate quantitative items	Percentage Agreement	Percentage Disagreement	Percentage Unable to Judge
1. The learning outcomes in this unit are clearly identified.	90	10	0
2. The learning experiences in this unit help me to achieve the learning outcomes.	80	15	5
3. The learning resources in this unit help me to achieve the learning outcomes.	80	15	5
4. The assessment tasks in this unit evaluate my achievement of the learning outcomes.	90	10	0
5. Feedback on my work in this unit helps me to achieve the learning outcomes.	80	10	10
6. The workload in this unit is appropriate to the achievement of the learning outcomes.	95	5	0
7. The quality of teaching in this unit helps me to achieve the learning outcomes.	80	10	10
8. I am motivated to achieve the learning outcomes in this unit.	90	10	0
9. I make best use of the learning experiences in this unit.	85	10	5
10. I think about how I can learn more effectively in this unit.	85	5	10
11. Overall, I am satisfied with this unit.	85	15	0

Unit Name: Foundations of Digital Design	Responses(n): 65		
Unit Code: CMPE2001	Enrolment(N): 245		
	Response Rate: 27 %		
eVALUate quantitative items	Percentage Agreement	Percentage Disagreement	Percentage Unable to Judge
1. The learning outcomes in this unit are clearly identified.	94	5	1
2. The learning experiences in this unit help me to achieve the learning outcomes.	91	8	1
3. The learning resources in this unit help me to achieve the learning outcomes.	91	8	1
4. The assessment tasks in this unit evaluate my achievement of the learning outcomes.	88	11	1
5. Feedback on my work in this unit helps me to achieve the learning outcomes.	80	11	9
6. The workload in this unit is appropriate to the achievement of the learning outcomes.	91	6	3
7. The quality of teaching in this unit helps me to achieve the learning outcomes.	91	8	1
8. I am motivated to achieve the learning outcomes in this unit.	91	9	0
9. I make best use of the learning experiences in this unit.	91	8	1
10. I think about how I can learn more effectively in this unit.	88	9	3
11. Overall, I am satisfied with this unit.	90	8	2

STUDENT COMMENTS

- *"I thought that the unit did a fantastic job of transferring to online classes, in particular the tutorials being available for download was very helpful, and the lab help sessions were also useful."*
- *"Currently It is the fastest adapting to the issues that have plagued uni studies"*
- *"Despite the sudden shift to online learning, this unit has still done well. Siavash should be commended for his willingness to help during EXTRA consultation sessions every week. The unit content has been great and very interesting, and it has been useful material. THANKS SIAVASH!"*
- *"All of the content on Blackboard was organised very well and I knew what I needed to be working on each week. The lectures and tutorials were easy to follow and new information was explained in a very helpful way. The lecturer made himself available via Blackboard Collaborate to answer questions and actually keep up interactions with the students after isolation started"*

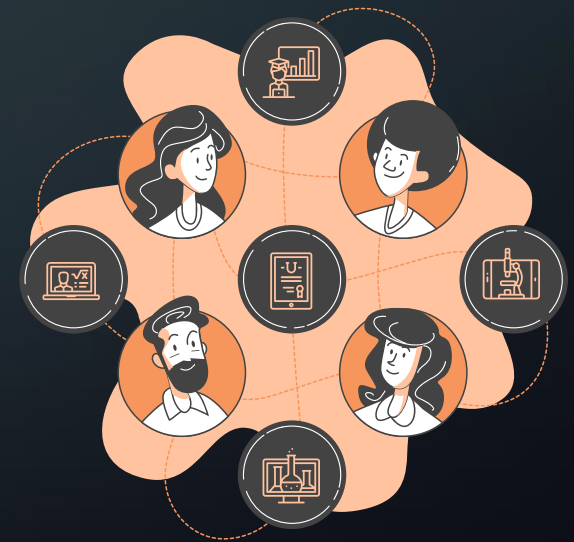
WHAT DID WE LEARN?

- Student engagement is an issue so students need an extra push
- It takes a lot of patience to answer the same question over and over
- Talking to a screen for long time without being interrupted takes a toll on your vocal cords!
- All the simulators in the world don't replace hands on experience



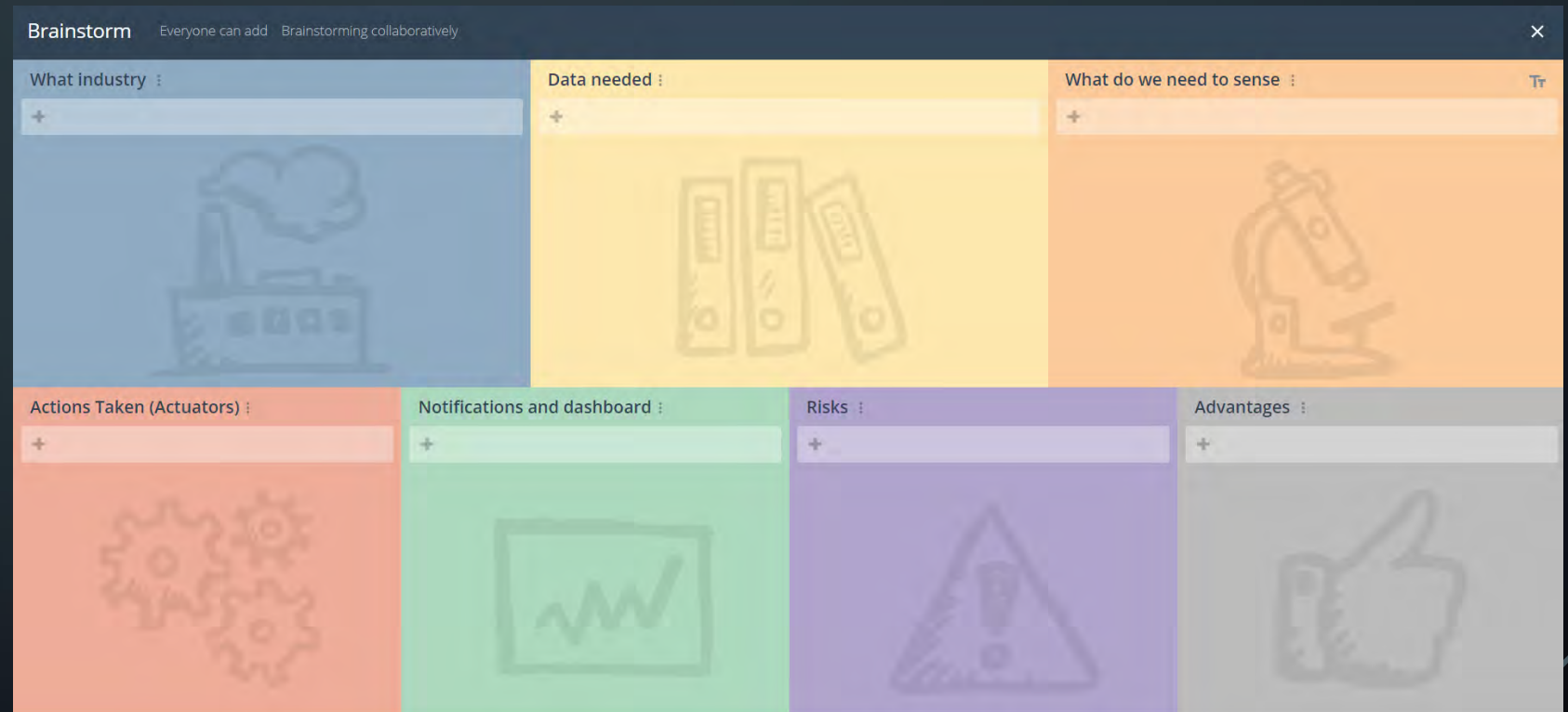
WHAT ABOUT THE GLASS HALF FULL?

- Simulators can be power tools to build assignments and exams
- The pandemic challenged us to get out of our routine
- Things being online made us experiment with assignment and project-based assessments rather than the traditional final exam



WHAT DID WE KEEP AFTER LOCKDOWN?

- Blended doesn't mean move everything online
- Short video recording of theory
- More interactive tutorials
- Collaborative mind maps



UNIT EVALUATE RESULTS WITH BLENDED LEARNING

Unit Name: Foundations of Digital Design	Responses(n): 68		
Unit Code: CMPE2001	Enrolment(N): 252		
	Response Rate: 27 %		
eVALUate quantitative items	Percentage Agreement	Percentage Disagreement	Percentage Unable to Judge
1. The learning outcomes in this unit are clearly identified.	99	1	0
2. The learning experiences in this unit help me to achieve the learning outcomes.	99	1	0
3. The learning resources in this unit help me to achieve the learning outcomes.	96	4	0
4. The assessment tasks in this unit evaluate my achievement of the learning outcomes.	93	7	0
5. Feedback on my work in this unit helps me to achieve the learning outcomes.	93	6	1
6. The workload in this unit is appropriate to the achievement of the learning outcomes.	96	3	1
7. The quality of teaching in this unit helps me to achieve the learning outcomes.	96	4	0
8. I am motivated to achieve the learning outcomes in this unit.	97	1	2
9. I make best use of the learning experiences in this unit.	100	0	0
10. I think about how I can learn more effectively in this unit.	99	1	0
11. Overall, I am satisfied with this unit.	97	3	0

FIXING BLENDED LEARNING'S IMAGE



QUESTIONS?



Geology Virtual Field Experience



Curtin University

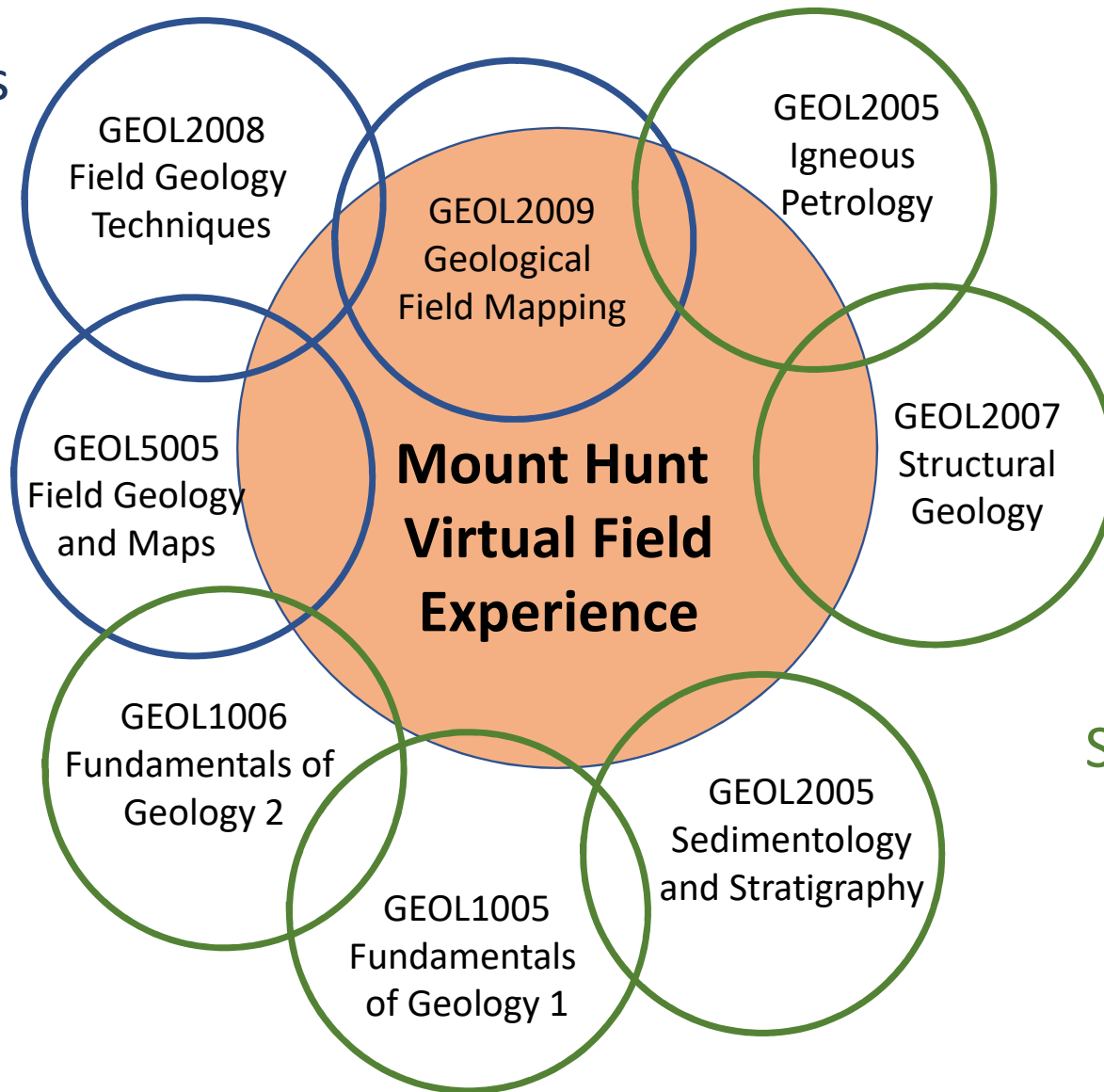
A/Prof Nick Timms

**Madelon Heperi, Martin Towner, Aaron
Cavosie, Katy Evans, Diana Taylor, David
Mole, Chris Kirkland, Sean Makin, Andrea
Rajsic, Dave Belton, Tony Snow, Denis
Fougerouse, Timmons Erickson, Steve Reddy**



I am here

Field-based units



Sub-discipline units

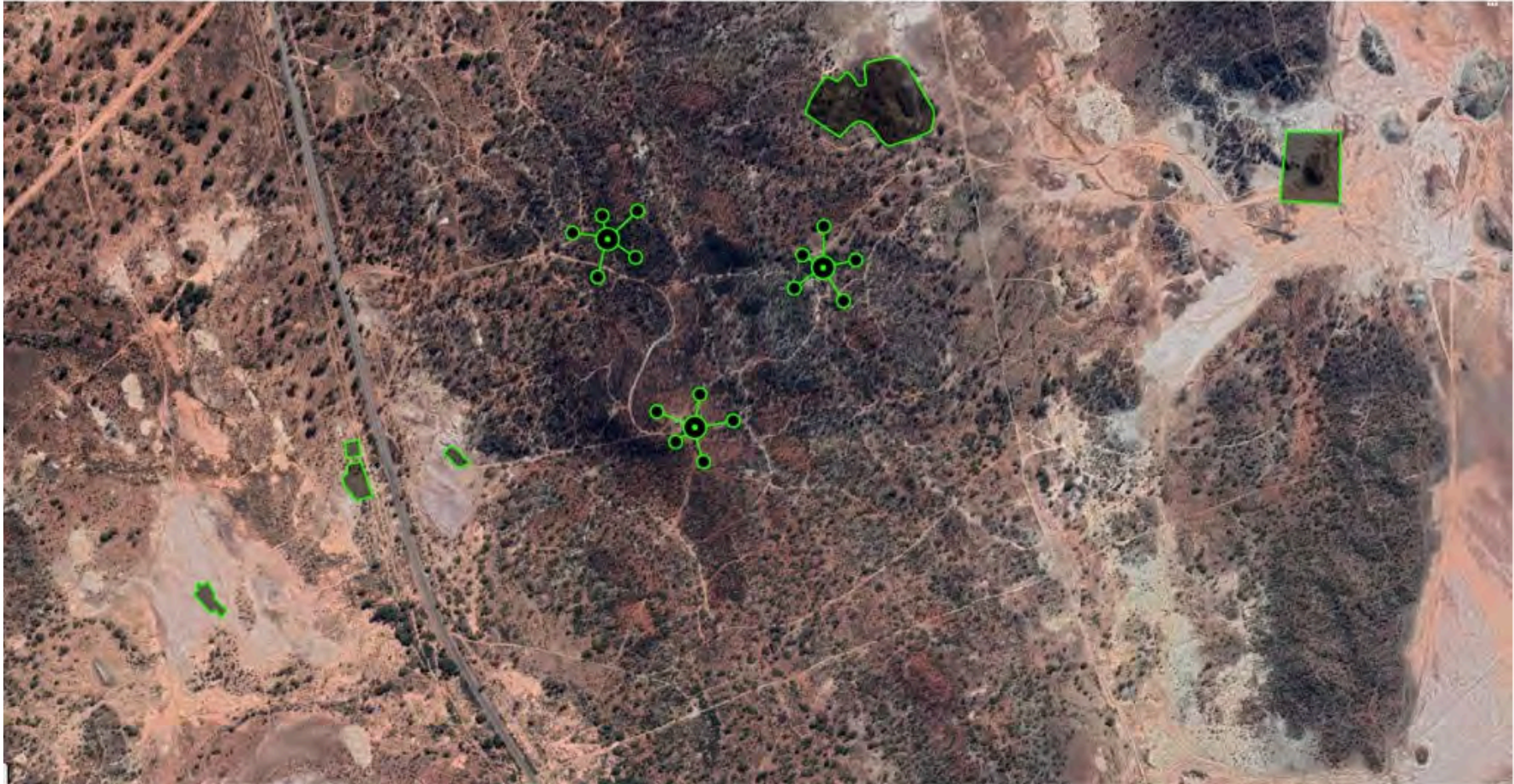
Field learning activities/skills

Learning activity / field skill	Level	GEOL1005 ULO	GEOL2008 ULO	GEOL2009 ULO
Rock description, identification, and interpretation				
Describing rocks using various criteria (e.g., colour, grain size, texture, mineralogy)	novice		1	1
Identifying and classifying rocks based on descriptions	novice / intermediate		1	1
Interpreting how rock units formed (e.g., geological process, environment/conditions, timing, etc)	novice / intermediate		1	1
Use contact relationships to infer the relative ages of rocks in the field	novice		1	
Recording geological observations in the field (e.g., systematically in a field notebook)	novice		3	1
Interpreting field relationships among rock types/units	novice		1	1
Measuring structures in the field (e.g., bedding, foliations, lineations, planes, small-scale folds)	intermediate		2	1
Collection of quantitative data from rock units (e.g., making a sedimentary log, etc)	intermediate		3	1
Making geological sketches of rocks and their relationships (range of scales?)	novice		3	1
Plotting structural data on a stereonet (e.g., to compile data, calculate geometry of folds, etc)	intermediate		n.a.	1

Making a field map				
Locating yourself on a map (e.g., using aerial photos/images, GPS, compass)	intermediate		4	2
Subdividing rock in the area into mappable units	intermediate		1	2
Mapping observable geological boundaries (sharp, gradational at scale of mapping)	intermediate		3	2
Inferring geological boundaries through cover	intermediate		3	2
Plotting measured structural data on to a map using appropriate map symbols (e.g., bedding, foliations, lineations, planes, small-scale folds)	intermediate		3	2
Showing geological relationships using appropriate map symbols (U/C, large-scale folds, faults, etc)	intermediate		3	2
Other skills/activities (advanced? Linking field and lab observations)				
Synthesise a geological history from field-based observations and mapping	intermediate		n.a.	2,3
Use microscope-scale observations to aid interpretations of field relationships	expert		n.a.	n/a
Interpret geochemistry data in context of field relationships	expert		n.a.	n/a
Interpret geochronological data in context of field relationships	expert		n.a.	n/a
Developing mineral exploration strategies	expert		n.a.	n/a



Virtual Field Experience - The Geology of Mount Hunt





<https://360example.netlify.com/>

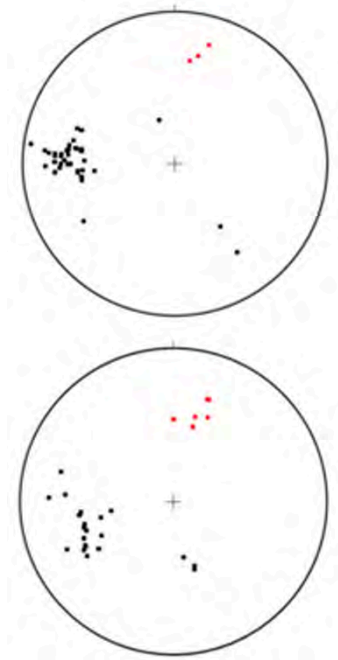
Video explanations



Field Photos



Indexing (m2)	Overlapping (m2)	Plant rank	Type of structure	Measurement	Step	Step description
DS0000.0	DS0000.0	structure build	Building	0		
DS0000.1	DS0000.1	structure build	Building	0		
DS0000.2	DS0000.2	structure build	Building	0		
DS0000.3	DS0000.3	structure build	Building	0		
DS0000.4	DS0000.4	structure build	Building	0		
DS0000.5	DS0000.5	structure build	Building	0		
DS0000.6	DS0000.6	structure build	Building	0		
DS0000.7	DS0000.7	structure build	Building	0		
DS0000.8	DS0000.8	structure build	Building	0		
DS0000.9	DS0000.9	structure build	Building	0		
DS0001.0	DS0001.0	structure build	Building	0		
DS0001.1	DS0001.1	structure build	Building	0		
DS0001.2	DS0001.2	structure build	Building	0		
DS0001.3	DS0001.3	structure build	Building	0		
DS0001.4	DS0001.4	structure build	Building	0		
DS0001.5	DS0001.5	structure build	Building	0		
DS0001.6	DS0001.6	structure build	Building	0		
DS0001.7	DS0001.7	structure build	Building	0		
DS0001.8	DS0001.8	structure build	Building	0		
DS0001.9	DS0001.9	structure build	Building	0		
DS0002.0	DS0002.0	structure build	Building	0		
DS0002.1	DS0002.1	structure build	Building	0		
DS0002.2	DS0002.2	structure build	Building	0		
DS0002.3	DS0002.3	structure build	Building	0		
DS0002.4	DS0002.4	structure build	Building	0		
DS0002.5	DS0002.5	structure build	Building	0		
DS0002.6	DS0002.6	structure build	Building	0		
DS0002.7	DS0002.7	structure build	Building	0		
DS0002.8	DS0002.8	structure build	Building	0		
DS0002.9	DS0002.9	structure build	Building	0		
DS0003.0	DS0003.0	structure build	Building	0		
DS0003.1	DS0003.1	structure build	Building	0		
DS0003.2	DS0003.2	structure build	Building	0		
DS0003.3	DS0003.3	structure build	Building	0		
DS0003.4	DS0003.4	structure build	Building	0		
DS0003.5	DS0003.5	structure build	Building	0		
DS0003.6	DS0003.6	structure build	Building	0		
DS0003.7	DS0003.7	structure build	Building	0		
DS0003.8	DS0003.8	structure build	Building	0		
DS0003.9	DS0003.9	structure build	Building	0		
DS0004.0	DS0004.0	structure build	Building	0		
DS0004.1	DS0004.1	structure build	Building	0		
DS0004.2	DS0004.2	structure build	Building	0		
DS0004.3	DS0004.3	structure build	Building	0		
DS0004.4	DS0004.4	structure build	Building	0		
DS0004.5	DS0004.5	structure build	Building	0		
DS0004.6	DS0004.6	structure build	Building	0		
DS0004.7	DS0004.7	structure build	Building	0		
DS0004.8	DS0004.8	structure build	Building	0		
DS0004.9	DS0004.9	structure build	Building	0		
DS0005.0	DS0005.0	structure build	Building	0		
DS0005.1	DS0005.1	structure build	Building	0		
DS0005.2	DS0005.2	structure build	Building	0		
DS0005.3	DS0005.3	structure build	Building	0		
DS0005.4	DS0005.4	structure build	Building	0		
DS0005.5	DS0005.5	structure build	Building	0		
DS0005.6	DS0005.6	structure build	Building	0		
DS0005.7	DS0005.7	structure build	Building	0		
DS0005.8	DS0005.8	structure build	Building	0		
DS0005.9	DS0005.9	structure build	Building	0		
DS0006.0	DS0006.0	structure build	Building	0		
DS0006.1	DS0006.1	structure build	Building	0</		

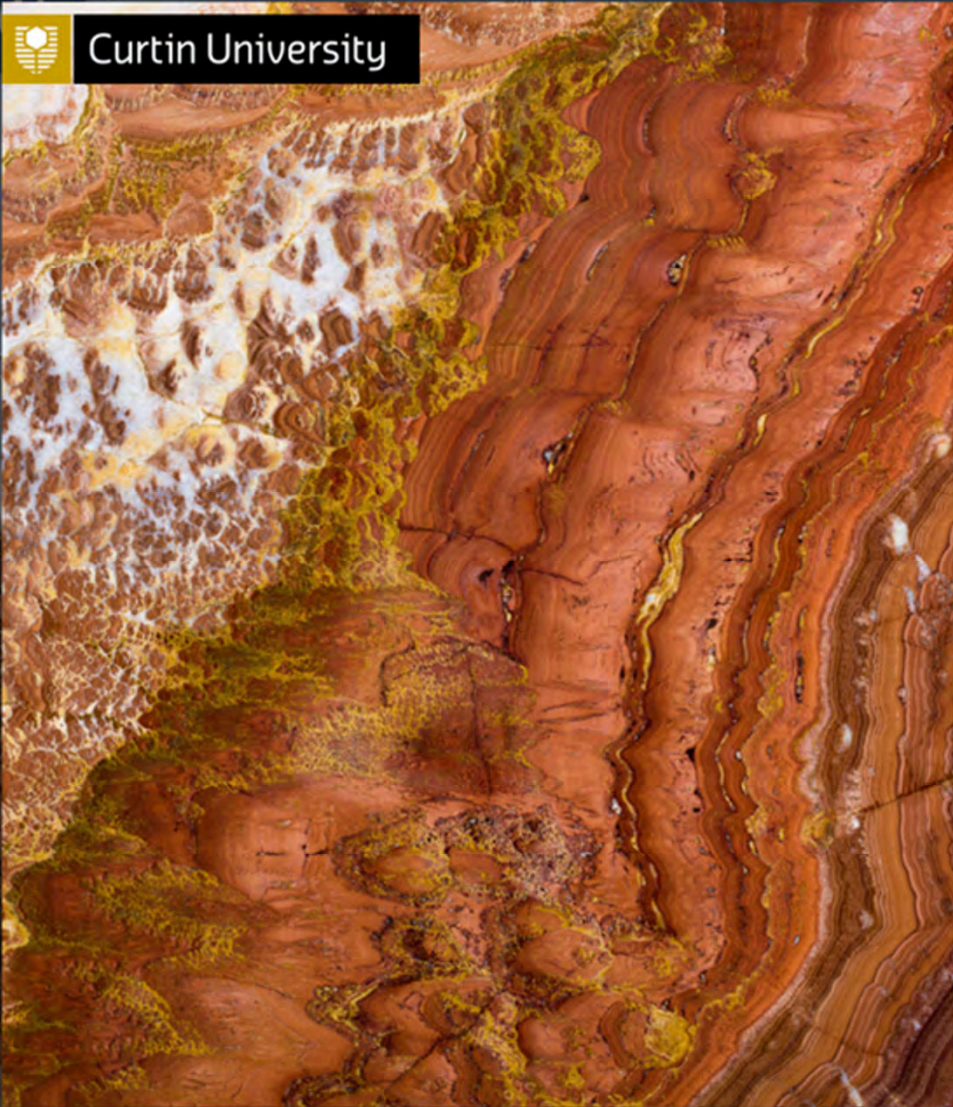



Link to VFE

<https://storage.net-fs.com/hosting/6412700/5/>



Screen capture from the virtual field experience







Geology Virtual Field Experience


We acknowledge the traditional owners of Mount Hunt in Kalgoorlie Boulder, the Wongutha people of the North-Eastern Goldfields, on which this geological virtual field experience takes you.


You will see spectacular aerial views spanning 2km² of terrain from where you will deep dive into specific geological landmarks through an interactive 360 degree experience.

Use the skill set index at each location to explore the Novice, Intermediate and Advanced activities to complete.


 Zoom out for preferred viewing


 Instructions


 Navigate between the three aerial views


 Google map location


 Navigate to location and select skill set


 Zoom in for preferred viewing


 Novice quiz questions

 Intermediate quiz questions

 Advanced quiz questions

 Select settings for different viewing options

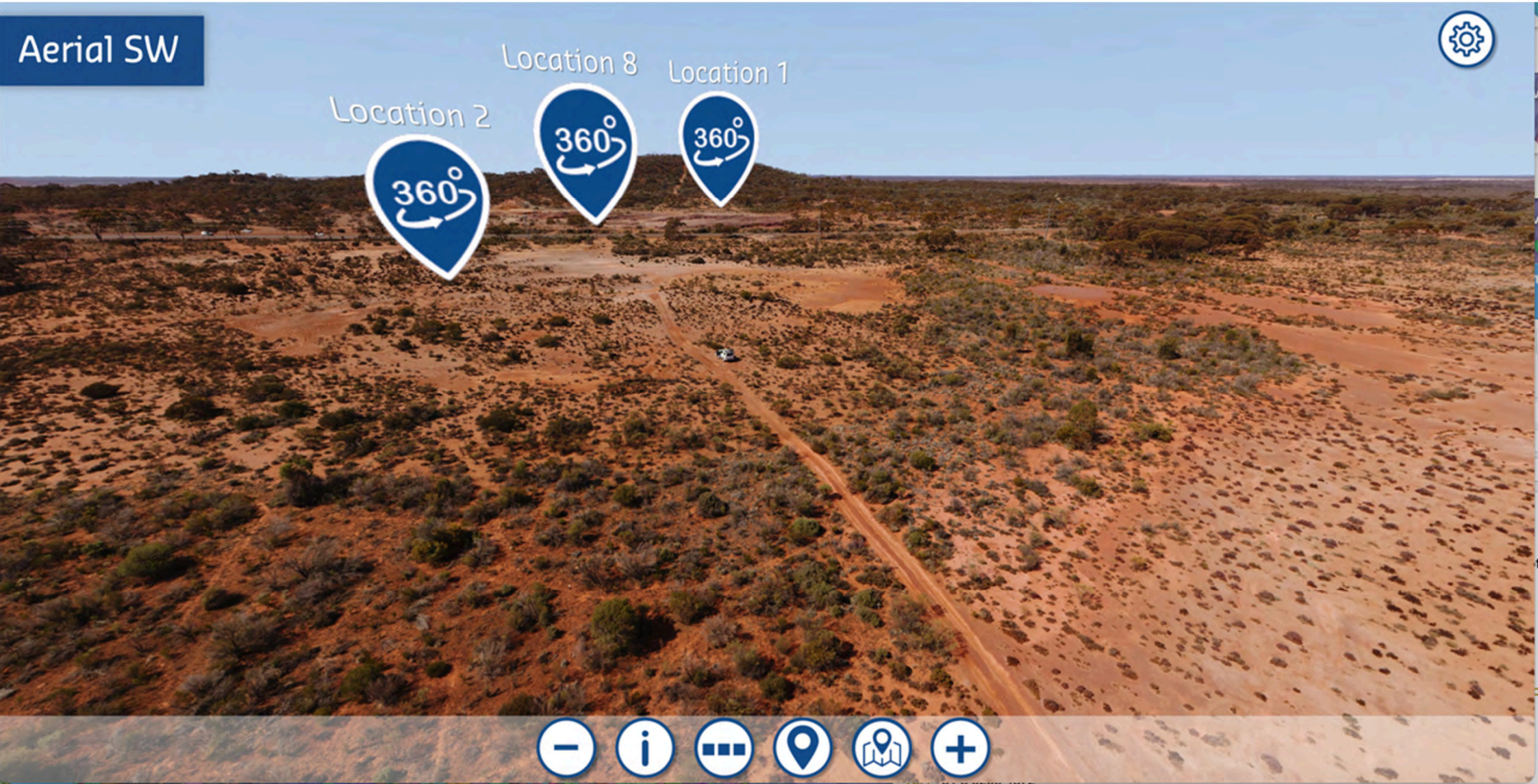
 Watch video

 Go to next panorama at this location

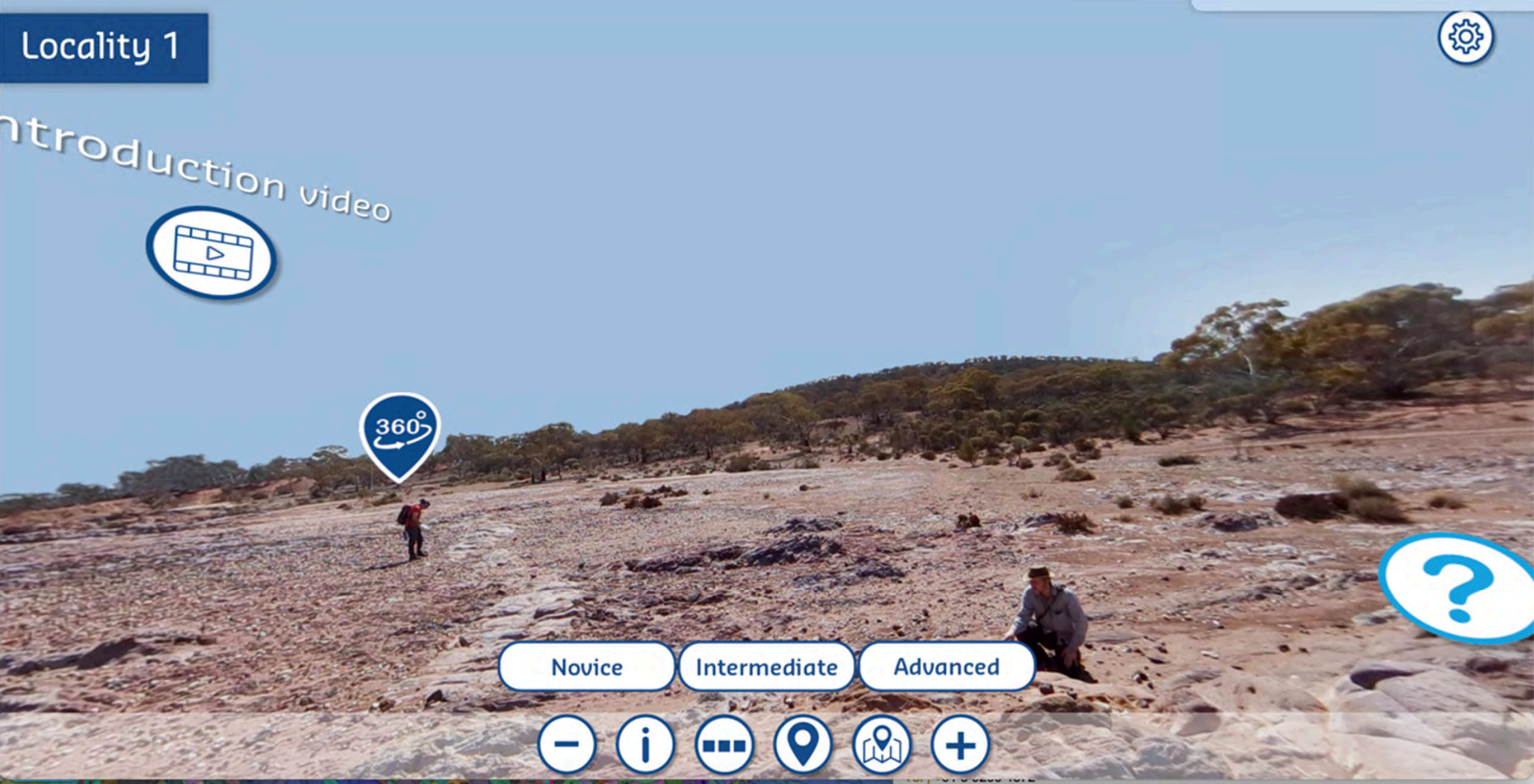
Credits

Start

Screen capture from the virtual field experience



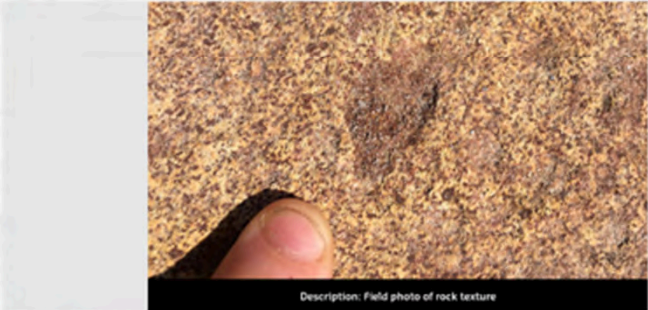
Screen capture from the virtual field experience



Locality 1



Q 1/1 - The image shows a dark red-weathering rock fragment inclusion - a xenolith.
Based on its weathering colour, what was likely to be its original composition?



Description: Field photo of rock texture

- A mafic
- B felsic

Novice Intermediate Advanced



Screen capture from the virtual field experience

Locality 1

Instructions Novice Intermediate Advanced

Locality 1

X

1.0 - Introduction video: locality 1

1.2.1 - Interpreting how rock units formed 1/2

1.2.2 - Making a field map

1.2.3 - Plotting structural data onto a map

1.2.4 - Interpreting how rock units formed 2/2

1.2.5 - Plotting and interpreting structural data on stereonet

?

Novice Intermediate Advanced

- i ... location map +

Credits

Nick Timms (Curtin EPS) – mastermind, overlord and acknowledges support from a Curtin Media Grant

Madelon Heperi (Curtin FLET) – programming, graphic desing and teaching and learning design

Martin Towner (Curtin EPS) – drone pilot, cameraman, sound guy, field model, drone mosaic data processing

Aaron Cavosie (Curtin EPS) – geochemistry data and petrology wizard

Katy Evans (Curtin EPS) – teaching and learning design and acknowledges support from a Curtin Media Grant

Diana Taylor (Curtin FLET) – teaching and learning design

David Mole (CSRIO at the time) – whole geochemistry sample collector and acknowledges support from the Science Plus Leader program of CSIRO

Chris Kirkland (Curtin EPS) – geochronology data collection and processing

Sean Makin (Curtin EPS) – drone pilot and data processing

Andrea Rajšic (Curtin EPS) – 360 camera operator, structural data collection and field model

Dave Belton (Curtin EPS) – areal 360 drone pilot and data processing


Tony Snow (Curtin EPS) – areal 360 drone co-pilot and assistant

Denis Fougerouse (Curtin EPS) – field model

Timmons Erickson (Curtin EPS, now at NASA) – sample collector

Steve Reddy (Curtin EPS) – sample collector

Blended learning community – 8 September 2021



Using Electronic Notebooks to Encourage Student Engagement during the COVID Pandemic

Dr Alexandra Yeung
School of Molecular and Life Sciences



Background and context – ELNs

- ✓ Electronic laboratory notebooks (ELNs) are increasingly used in the workforce
 - accepted practice in industry
- ✓ Ideal time to introduce ELNs in undergraduate classes
 - up-skilling students with electronic recording and data management skills
- ✓ Need to prepare students for a technological rich workplace
 - help them develop skills that are easily transferable to any workplace environment
- ✓ Institutional push towards electronic data management and record keeping
- ✓ Interest from department in using ELNs in teaching

What is an ELN?

Electronic Laboratory Notebooks (ELN) is a digital platform that is designed to replace traditional paper research notebooks with a digital and secure version.

Key features:

Research data management and organisation	Searchable	Portability	Sharing	Inventory	IP protected	Data security	Seamless
You are able to manage and organise all of your research data and information in one place (central HUB).	Can be searched by keywords or tags	The cloud-based platform can be accessed anywhere, anytime.	Data can be accessed by your research group and collaborators.	samples, reagents and consumables can be kept up-to-date	IP is protected with third party data and timestamps.	Data is centrally stored including historical versions	Files, photos and documents can be stored



Daniel Southam

Context of our units



Students

Mainly a service taught unit
with students from Health
Sciences

CHEM1001/1005
Biological chemistry

Tuition pattern pre-COVID

- 1 x 1 hour lecture
- 1 x 2 hour workshop
- 1 x 3 hour lab



Students

Bentley: Mixed cohort –
Chemistry majors, Engineering,
Health Sciences, Education
Miri: Engineering

CHEM1002
Reactivity and
Function in Chemistry

Tuition pattern pre-COVID

- 1 x 1 hour lecture
- 1 x 2 hour workshop
- 1 x 3 hour lab

A Microsoft Surface Pro tablet is mounted on a laboratory bench. The screen displays a vibrant image of a beach with two prominent rock formations in the ocean under a blue sky with white clouds. In the bottom left corner of the screen, the time '11:15' is shown in large white digits, and below it, 'Friday, 4 September' is written in smaller white text. The background of the image is a blurred laboratory setting with shelves holding various glassware and equipment.

Technology uplift

Program of works to fit out teaching laboratories with tablets for electronic laboratory note keeping

Specifications:

Four teaching laboratories
20 to 32 student capacity
Up to four three hour labs per day
Labs run Monday to Saturday

Technology:

Microsoft Surface Pro

Challenges



- Provide an equivalent experience to students
 - despite not being able to run laboratories – All labs moved online
- Maintain interaction of students between peers and teaching staff
- Provide feedback to students in an online way
- Assessment was moved online – needed an efficient way to do so

Moving things online

Online laboratory content

Videos developed and sample data were provided to students in LabArchives

Online workshop assessments

Workshop assessments were completed in class pre-COVID. Workshops were run synchronously but the assessments were moved online and released in LabArchives.



Electronic laboratory notebook (ELN)

LabArchives was already used and was a seamless transition

Online Help Desk

Established to allow students to ask questions and interact with teaching staff

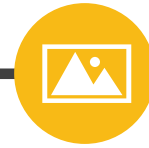


LabArchives

Two forms – classroom edition (CE) and professional edition (PE)

CE has the same features as the PE but with specialised instructional features

Features of CE: teacher control, gradebook, every edit is logged against users name and time stamped, pages can be converted to pdf and submitted through Turnitin.



Flexible design and permanent record

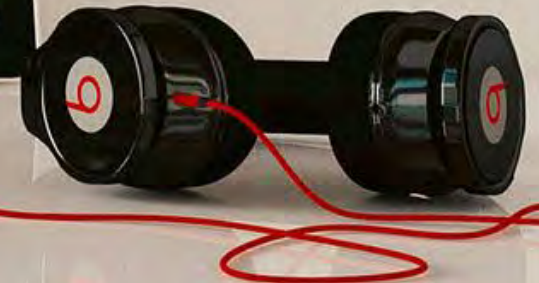
Add photos, videos, graphs, math calculations etc.

Data hosted in Australia



Showcase of ELN

Examples of what we have done!



Videos and photos provided

Curtin University
SCHOOL OF MOLECULAR AND LIFE SCIENCES

Search notebook

Alexandra Yeung

05499

powered by labarchives®

Notesbooks 31 >

Videos, photos and data


+ New Rich Text Heading Widget Assignment Attachment Office Document

Alexandra Yeung - Sep 01, 2020, 2:48 PM AWST

Video: Experimental procedure

CHEM1002 (Online labs) - Sem 2, 2020

- Welcome!
- Lab Manual
- Experiment 0: LabArchives training
- Experiment 1: Purification of benzoic acid
- Notebook self-assessment 1
- Notebook demonstrator assessment 1
- Experiment 2: Preparation of benzoic acid
- Experiment 3: Preparation and reaction of benzoic acid
- Experiment 4: Kinetics of the iodine clock reaction
- Introduction
- Pre-lab questions: Experiment 4
- Videos, photos and data
- Experiment 4 notes
- Post-lab questions: Experiment 4
- + New...
- Notebook self-assessment 2
- Notebook demonstrator assessment 2
- Experiment 5: Determination of acetic acid
- Experiment 6: Designing and making a buffer
- Experiment 7: Extraction of organic compounds
- Experiment 8: Carboxylic acids and their derivatives
- Notebook self-assessment 3
- Notebook demonstrator assessment 3



Catalyst

30 Degrees

40 Degrees

Ice Cold

Students watched the videos and looked at the photos to collect data and write observations/inferences

Curtin University
SCHOOL OF MOLECULAR AND LIFE SCIENCES

Search notebook

Notesbooks 31 >

Updated lab manual and photos and data

CHEM1002 (Online labs) - Sem 2, 2020

- Welcome!
- Lab Manual
- Experiment 0: LabArchives training
- Experiment 1: Purification of benzoic acid
- Notebook self-assessment 1
- Notebook demonstrator assessment 1
- Experiment 2: Preparation of benzoic acid
- Experiment 3: Preparation and reaction of benzoic acid
- Experiment 4: Kinetics of the iodine clock reaction
- Introduction
- Pre-lab questions: Experiment 4
- Videos, photos and data
- Experiment 4 notes
- Post-lab questions: Experiment 4
- + New...
- Notebook self-assessment 2
- Notebook demonstrator assessment 2
- Experiment 5: Determination of acetic acid
- Experiment 6: Designing and making a buffer
- Experiment 7: Extraction of organic compounds
- Experiment 8: Carboxylic acids and their derivatives
- Notebook self-assessment 3
- Notebook demonstrator assessment 3


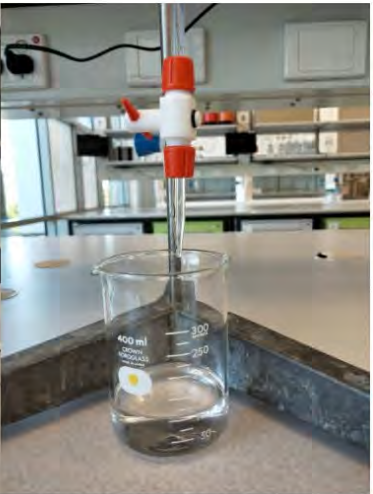



Image 1: Sodium hydrogen carbonate dissolved in 100 mL of deionised water.



Data and feedback

The screenshot shows a virtual lab notebook interface. On the left is a sidebar with a list of experiments and sections like 'Introduction', 'Pre-lab questions', 'Photos and data', and 'Post-lab questions'. The main area is titled 'Photos and data' and contains two parts:

- PART A: Simulation of a weak acid-strong base titration**
Complete simulation to obtain results.
• <http://www.rsc.org/learn-chemistry/resources/screen-experiment/titration/experiment2>
See lab manual for details.
- Part B(i): Determining the concentration of acetic acid in vinegar using titration**
Concentration of NaOH from carboy: 0.1093 M

Burette Readings (mL)	Rough Titration	Accurate Titrations (Place an asterisk next to your concordant results)				
Final	14.50	26.80	38.85	26.10	38.10	
Initial	2.45	14.50	26.80	13.75	26.10	
Titre						
Mean titre volume of your concordant results					mL	

Below the table is **Part B(ii): Determining the concentration of acetic acid in vinegar using a pH meter**. It includes a link to a virtual titration simulation: <https://scientistsarepeopletoo.itch.io/virtual-titration>.

Some experiments required students to computer online simulations

Students were also provided with data that allows them to complete the data analysis and obtain results for the experiment

Observations and inferences

Observations can be obtained by watching the video and viewing the photos. You need to include your own inferences based on your observations.

- Students could tag teaching staff to get feedback and help for their lab work
- Teaching team could tag students with feedback

A comment box interface showing a text input field containing the tag `@alexandra.yeung@curtin.edu.au` followed by the text `HELP!`. Below the input field is a button with an '@' symbol. To the right of the input field is an 'Add Comment' button.

Workshop assessments

Curtin University
SCHOOL OF MOLECULAR AND LIFE SCIENCES

Search notebook

Workshop 3 (Alkenes and curly arrows) Assessment

Question 3

Alexandra Yeung - Aug 19, 2020, 12:00 AM AWST

Consider the reaction shown below.

Diagram showing the reaction of 1-methylcyclohexene with H-Br. The reaction proceeds via two possible carbocation intermediates (labeled 'carbocation' in boxes). The first intermediate leads to product A (1-bromo-1-methylcyclohexane), and the second intermediate leads to product B (1-bromo-2-methylcyclohexane).

(a) Draw the carbocation intermediates formed for each reaction pathway shown above. Label each carbocation as 1°, 2° or 3°

Use the chemical sketcher to draw each carbocation. If you get stuck you may hand-draw and attach an image below.

(b) Only one of these products (A or B) forms. Which product in equation 1 that does not form.

Add a rich text entry below and type in your answer

Workshop 3 (Alkenes and curly arrows) Assessment

Rich Text Heading Chemical Skel...

Hand-drawn chair conformation of 1-methylcyclohexane. The methyl group (CH₃) is in an axial position, and the hydroxyl group (OH) is in an equatorial position. The text "most stable" is written below the structure.

The CH₃ and OH group are pointing in opposite directions in the original structure so make sure this is reflected in your chair conformations (one up and one down)

write a comment...

@

add Comment

Students completed their workshop assessments online. Facilitators were able to mark and provide students with feedback online in a timely fashion

Student and staff perceptions - Feedback

Students (n=32)



93%

Strongly Agree / Agree
Using an ELN allowed me
to receive feedback easily

Demonstrators (n=8)



88%

Strongly Agree / Agree
Using an ELN allowed
students to ask me for
feedback easily

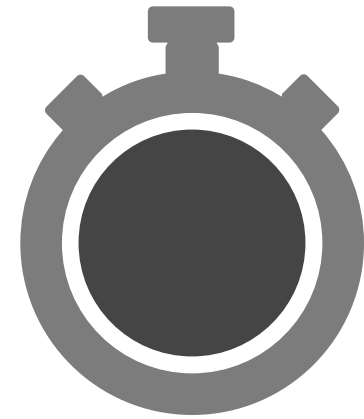
Students



86%

Strongly Agree / Agree
Using an ELN allowed me
to ask for feedback easily

Demonstrators



100%

Strongly Agree / Agree
Using an ELN allowed me to
provide feedback easily

Student and staff perceptions - Interaction

Students



75%

Strongly Agree / Agree
Using an ELN allowed me
to interact with teaching
staff

Demonstrators



88%

Strongly Agree / Agree
Using an ELN allowed me
to interact with my
students

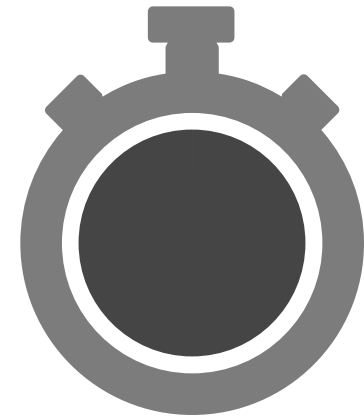
Students



71%

Strongly Agree / Agree
I utilised the tagging
feature on LabArchives

Demonstrators



100%

Strongly Agree / Agree
I utilised the tagging
feature on LabArchives to tag my
students

Student and staff perceptions



61%
18%

Students

Strongly Agree / Agree

Strongly Disagree / Disagree

Using an ELN enhanced my participation in this subject

88%
18%

Demonstrators

Strongly Agree / Agree

Neutral

I was satisfied with the overall experience with using an ELN for teaching

Student comments

What do you think are the benefits of using an electronic laboratory notebook?



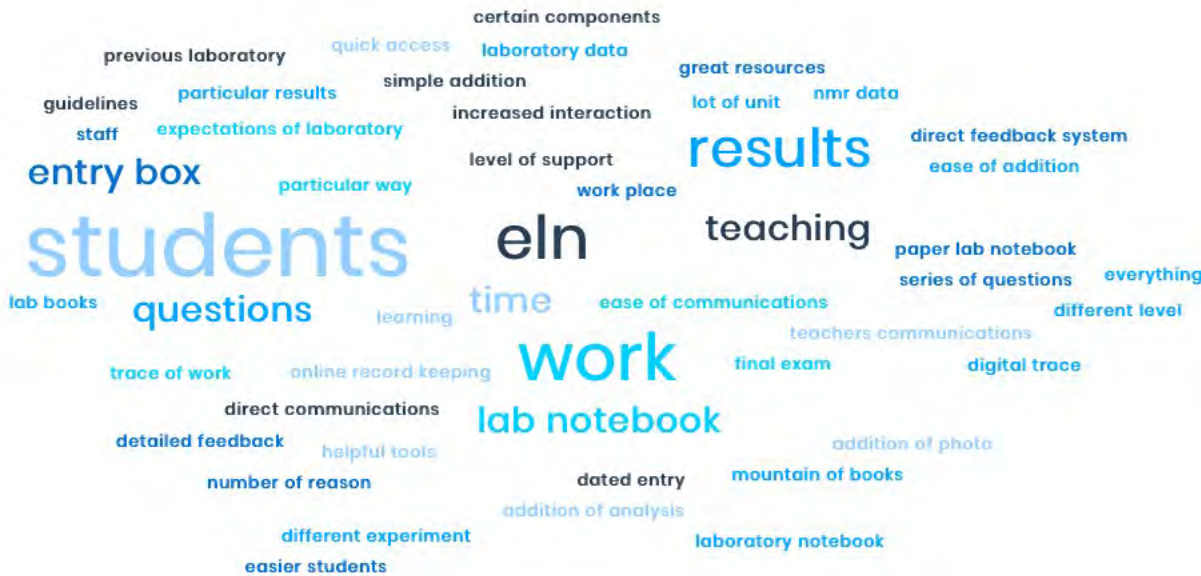
ELN makes it so **much easier to keep up with the content of the class**, making sure you are prepared before each experiment as you had to complete the designated work. **I have done this unit with both an ELN and PLN and ELN was far better.** I was able to **get feedback on all of my work** and ask my teachers for help.

We were able to access and edit the workbook from any location at any time and the electronic tools made it far easier for "non-creatives" like myself to **create diagrams and graphs** that were more aesthetically pleasing.

Considering the current the climate **with regards to the Corona Virus, the ELN was an efficient method to complete chemistry work online.**

Staff comments

What do you think are the benefits of using an electronic laboratory notebook?



The **ease of communication** between students/staff. The @comment feature is an incredibly helpful tool for both parties, and I think it's worthwhile implementing ELN's across a lot of units purely because of this tool.

I think it **sets students up well for the work place**, where there has been a shift to online record keeping. It is also advantageous to a paper lab notebook for a number of reasons, primarily being able to keep all laboratory data in one place (e.g. where excel files, spectra or pictures have been utilised). This makes **everything more organised** and easy to find.

Using the ELN allows students to **access their lab notebook and prepare at any time**. It provides a great resource for the students to easily refer to when studying for final exams. The ELN keeps work neat, easy to read and safer (in the sense that there is a digital trace of work so can not be lost or damaged).

I love teaching with the ELN and wish I was fortunate enough to use this software throughout my undergrad.

Staff and student comments

Do you prefer using an electronic laboratory notebook (ELN) or a paper laboratory notebook (PLN)?
Give reasons for your answer.

Preference	Students	Staff
ELN	Though I may be biased because of my tech-mindedness, I prefer ELNs. Other than possible data loss, electronic mediums for data storage will always be superior to physical ones . It's remotely accessible, editable, TurnItIn-friendly, customisable, impossible to misplace, far more useful (embedded video) and better for the environment. It's odd to me that this technology wasn't implemented a decade ago.	I prefer an ELN because there is easier accountability for students and demonstrators , and it allows for easier interactions outside of the lab/classroom.
Either	I like the electronic lab notebook and paper lab notebook equally . The electronic notebook does allow for all notes to be in one place rather than writing notes on multiple pages of the paper notebook and trying to find them. The paper notebook is more portable. Allowing for any observations and measurements to be written down where they are occurring. It also means can bring the instructions to the experiment rather than moving back and forth if not right near the tablet...	I prefer using an electronic lab book. For the coherence of storing all useful data in one place , i.e. flow of looking back over work without having to find supporting analysis. Paper lab books are better for keeping an accurate up to date description , as sometime using electronic, you may not have the means to enter something at a given time and have to go back to enter it later.
PLN	Although I do see the benefits of a ELN I found it very time consuming and not very accommodating to my learning style . I have ADHD so struggle with reading off screens and I also struggled with the coding required when writing chemical formula. Personally I find using PLN a lot easier to grasp concepts.	I like PLNs because that was what I started my career with , but I can see the benefit of ELNs and am considering switching to using a ELN for my PhD once I have a better device to use it on in the lab.



THANK YOU

Questions ???

Curtin Teaching Academic
Scholarship Seed Grant
Department of Chemistry

Diana Taylor
Demonstrators
Technical staff
Students



alexandra.yeung@curtin.edu.au



@alexandra_yeung



Curtin University

Lights, Camera, Reaction!

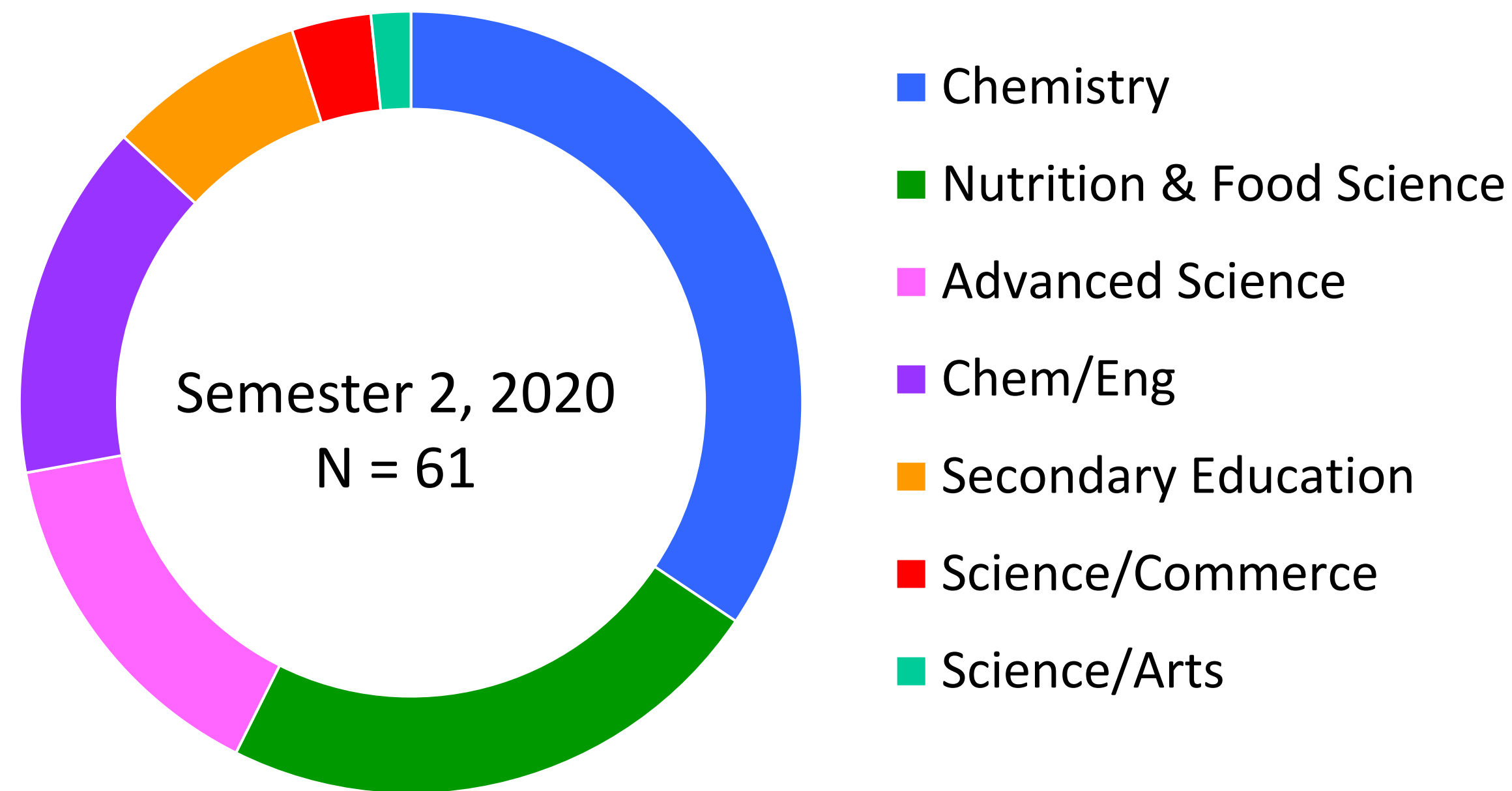
A blended approach to chemistry laboratories with filmed experiments

Dr Georgina Sauzier

School of Molecular and Life Sciences, Curtin University, Perth, Western Australia.

CHEM2005 Analytical Chemistry

- Second-year core unit developing “*mastery*” of analytical chemistry skills
- Laboratories: Seven experiments (four ‘wet lab’, three instrumental)

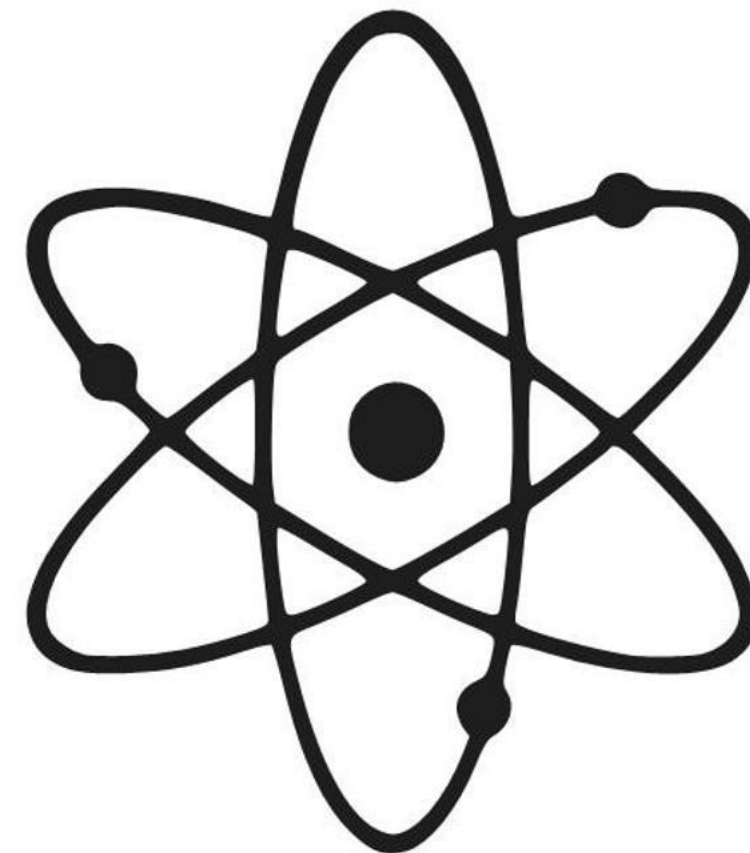


Laboratory Assessment

- Pre-laboratory: Concept questions and risk assessment
- Post-laboratory: Written report (Experiments 1-3 only)



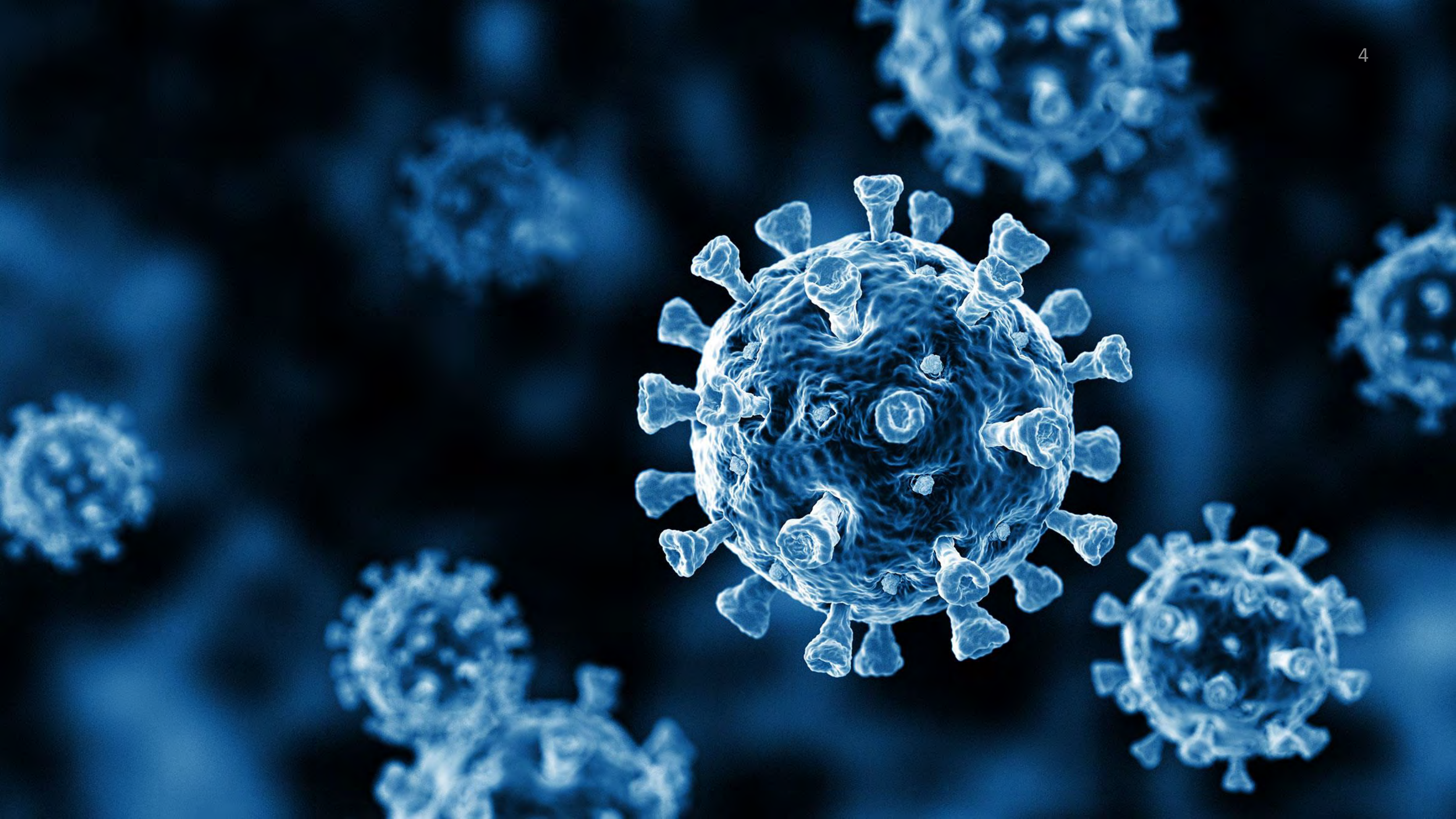
Safety



Chemical knowledge



Communication

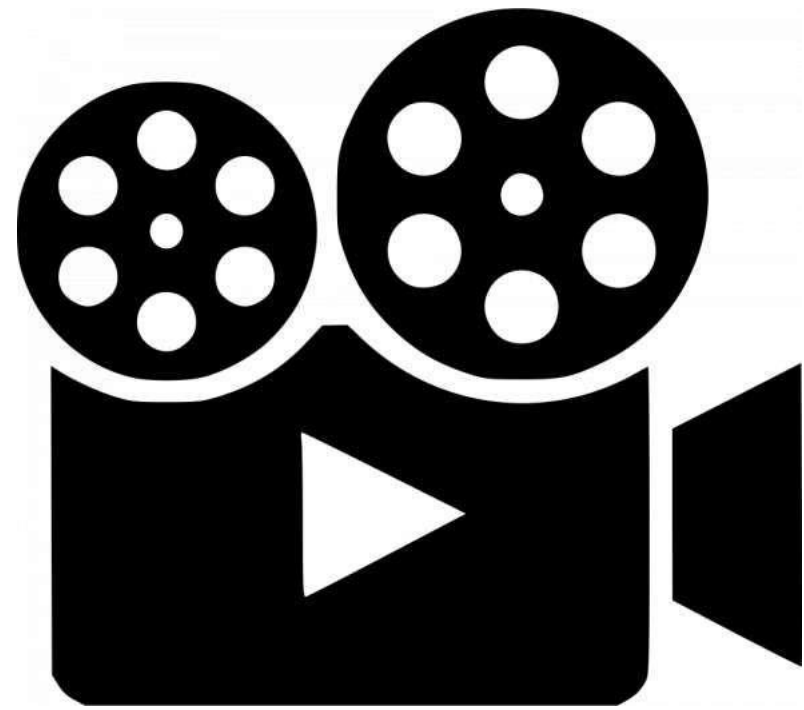


Considerations

- Prioritisation of laboratories for face-to-face instruction
- Online laboratories – not just a matter of providing data
 - *Context*
 - *Support*
 - *Assessment*

How do we provide an equivalent learning experience?

‘Online Laboratory Package’



Sessional staff re-deployed
to assist with development



Exercise 1: Selective Redox Extraction of Iron A↓



The use of aqueous solutions to recover metals from ores, concentrates or residual materials is known as hydrometallurgy. In this exercise, you will determine the percentage of iron in an ilmenite ore based on hydrometallurgy using selective reduction and oxidation.

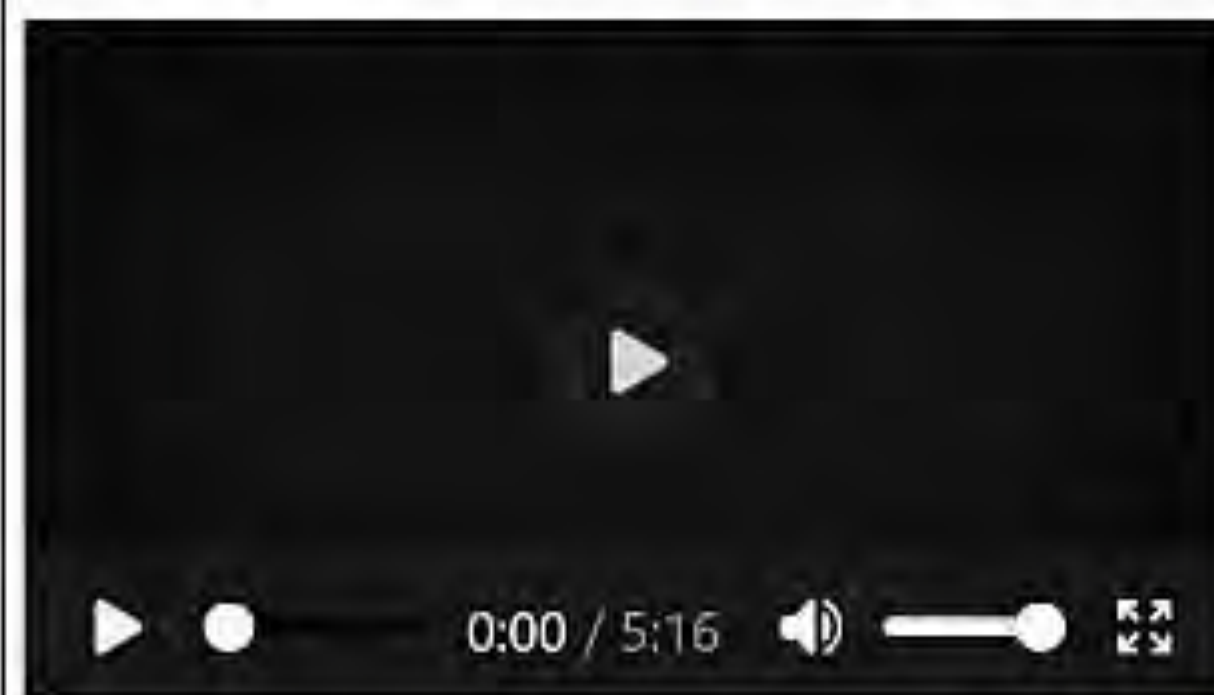


This exercise builds on the following concepts that you may have encountered in first-year chemistry units. If you wish to review these concepts before attempting this exercise, please view the resources below.

- [Uncertainty analysis](#)
- [Weighing by difference](#)



Before attempting this exercise, watch the following video. This outlines the experimental procedure and contains important information that will assist you in completing your report.



Download the information sheet for this exercise: [Selective Redox Extraction of Iron](#) A↓
Complete your written report and submit using the Turnitin link below. All reports must be completed individually and in your own words. Advice on structuring your report can be found [here](#) A↓



~ 0.5 g ilmenite ore

Student Feedback

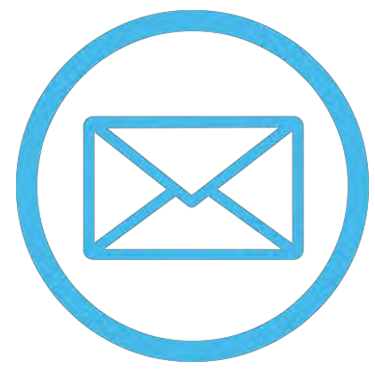


*“The online content was delivered very well...
Online [laboratories] were very useful for learning.”*

	% Agreement	
	2019	2020
<i>“Learning experiences help me achieve the unit outcomes”</i>	79	100
<i>“Learning resources help me achieve the unit outcomes”</i>	84	100
<i>“I am motivated to achieve learning outcomes”</i>	74	82
<i>“Overall, I am satisfied with this unit”</i>	74	100

Acknowledgements

- Dr Ching Yong Goh, Rhiannon Boseley, Ashley Hollings and David Hartnell (Curtin University)



Georgina.Sauzier@curtin.edu.au



@GeorginaSauzier

- - Our issue emerged during the 2020 practicum placements



- + • We needed a solution for potential remote supervision
 - + • We needed to be able to 'see' the PST's paperwork and remotely observe lessons
-

NDA prac placements in the School of Education

1st year – 2 weeks

2nd year – 10 weeks

3rd year - 10 weeks

4th year – 10 weeks

What was the problem?

Supervisors were not allowed on site in many schools for our placements in Term 2 and 3, 2020

We needed a 'lockdown proof' solution for visibility into our prac placements paperwork requirements

Pre-service teachers needed quick and easy to implement solutions

No budget for new software



OneNote

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zoom

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We created a simple solution
OneNote + Zoom

Paperwork =
Onenote



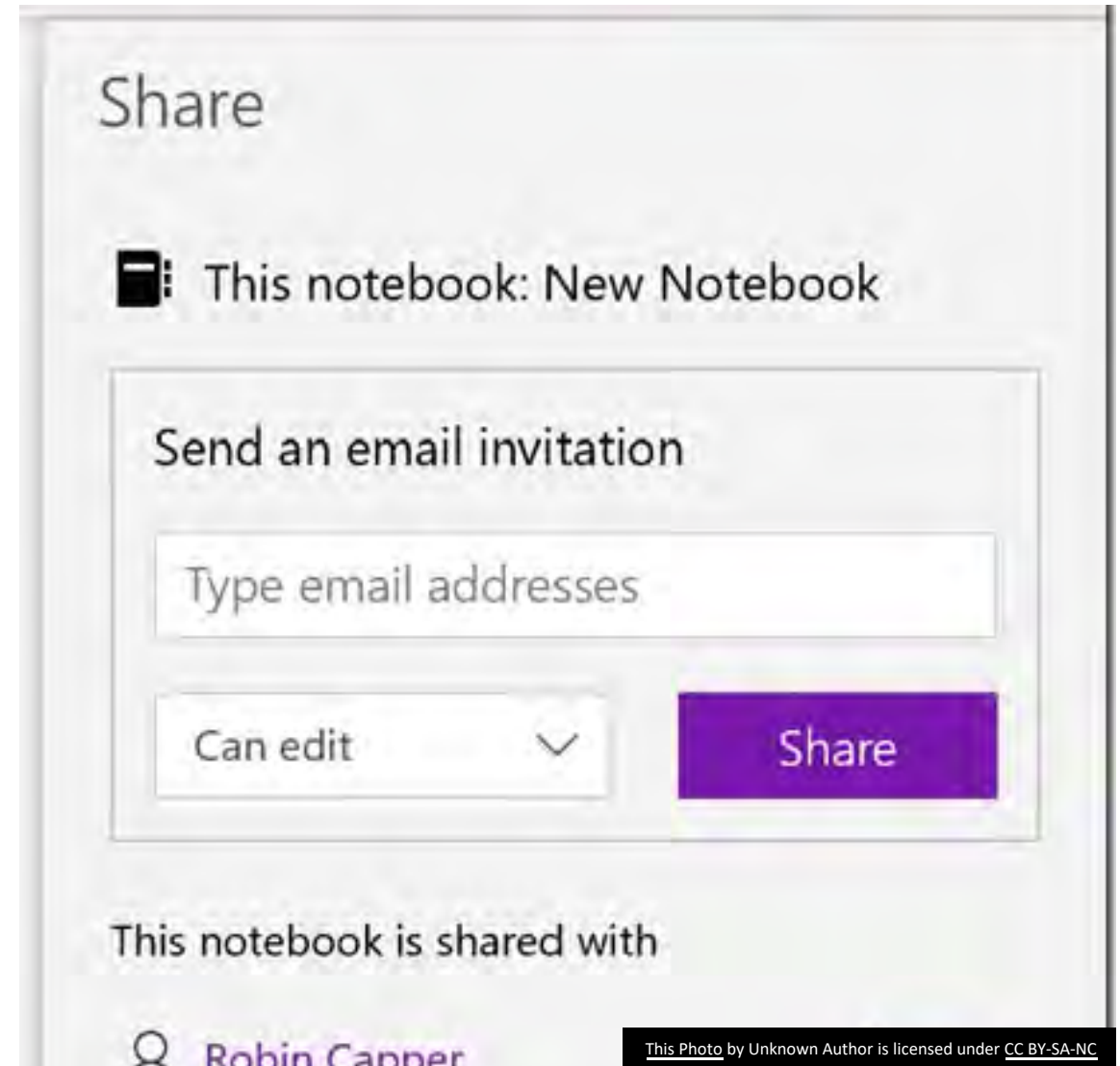
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Observations =
Zoom



Shared OneNotes

- Every PST is required to create a OneNote for each practicum
- They share the link with their Mentor, the Professional Experience office and their Supervisor



Advantages

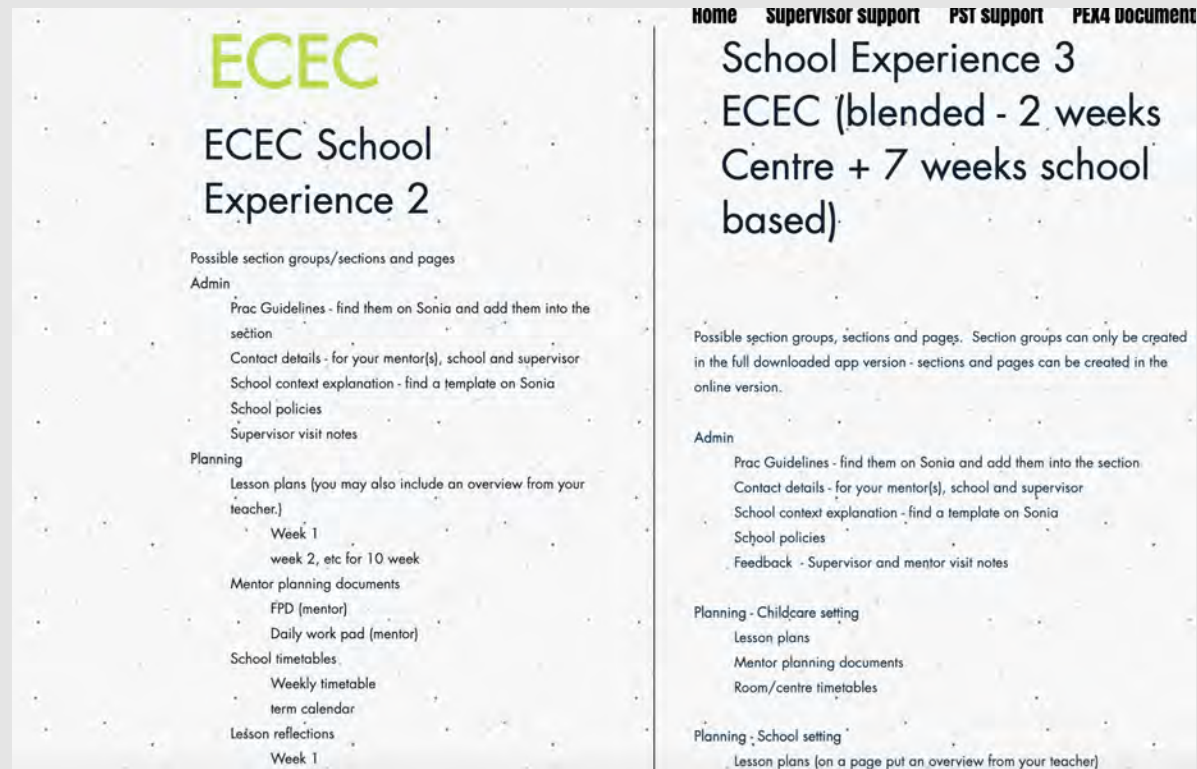
No set up costs

No extra investment

Minimal training for staff or students

One click share link for all users

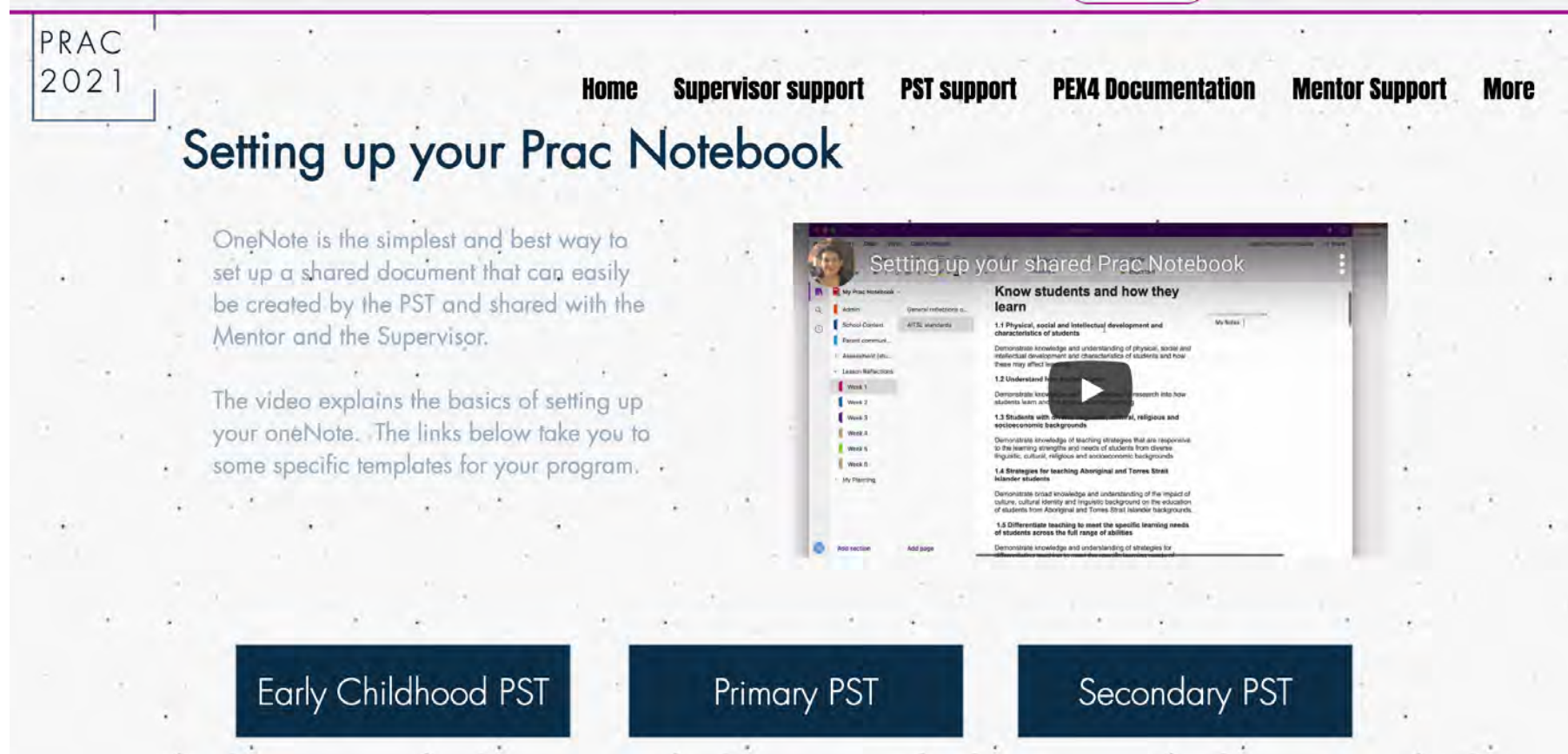
Process of deployment



- We created a simple template for each of the years of prac placement based on our general requirements

Process of deployment

We made a website with full details – written and video format



The screenshot shows the PRAC 2021 website. In the top left corner, there is a logo that says "PRAC 2021". To the right of the logo is a navigation bar with links: "Home", "Supervisor support", "PST support", "PEX4 Documentation", "Mentor Support", and "More". Below the navigation bar is the main heading "Setting up your Prac Notebook". Under this heading, there is a paragraph of text: "OneNote is the simplest and best way to set up a shared document that can easily be created by the PST and shared with the Mentor and the Supervisor." Below this paragraph is another paragraph: "The video explains the basics of setting up your oneNote. The links below take you to some specific templates for your program." To the right of the text is a video player showing a thumbnail of a person with the title "Setting up your shared Prac Notebook". Below the video player are three dark blue buttons with white text: "Early Childhood PST", "Primary PST", and "Secondary PST".

PRAC 2021

Home Supervisor support PST support PEX4 Documentation Mentor Support More

Setting up your Prac Notebook

OneNote is the simplest and best way to set up a shared document that can easily be created by the PST and shared with the Mentor and the Supervisor.

The video explains the basics of setting up your oneNote. The links below take you to some specific templates for your program.

Setting up your shared Prac Notebook

Know students and how they learn

1.1 Physical, social and intellectual development and characteristics of students

Demonstrate knowledge and understanding of physical, social and intellectual development and characteristics of students and how these may affect learning

1.2 Understand how students learn and how to research into how students learn and how to research into how students learn

1.3 Students with diverse backgrounds, cultural, religious and socioeconomic backgrounds

Demonstrate knowledge of teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds

1.4 Strategies for teaching Aboriginal and Torres Strait Islander students

Demonstrate broad knowledge and understanding of the impact of culture, cultural identity and linguistic background on the education of students from Aboriginal and Torres Strait Islander backgrounds

1.5 Differentiate teaching to meet the specific learning needs of students across the full range of abilities

Demonstrate knowledge and understanding of strategies for differentiation to meet the specific learning needs of students

Early Childhood PST Primary PST Secondary PST

Process of deployment

We ran online sessions for all supervisors and mentors about the use of the Onenote



Process of deployment

We built the use of OneNote into our 1st and 2nd year ICT courses

Creating your OneNote for Professional Experience



You will need a OneNote - this site explains the sections and how to create your OneNote for your School experience.



Prac 2021 Site

1. Open OneNote Online - log in to Office365 using your Uni email.
2. Create a new OneNote and name it your name and your School Experience number eg Joe Bloggs School Experience 2 Prac Notebook
3. Find the share button on the top right. Ensure it says 'anyone with the link can edit'
4. Copy the share link and add it into Sonia + send the link to your mentor and to your supervisor (do this by the beginning of Week 1).



What does a PST OneNote look like?

- Absolutely amazing!
- Full of detail
- Planning, assessment and other details are all visible

OneNote School Experience 3

File Home Insert Draw View Help Tell me what you want to do

Calibri Light 20 B I U A Styles Tags abc

School Experience 3

Lesson Reflections

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Mentor Documents a...

Timetables and Ro...

Mentor Feedback

Supervisor Feedback

Evaluation

Planning

Lessons

Forward Planning ...

Add section Add page

Duty Roster

Thursday, 22 April 2021 9:38 am

TERM 2 2021
PLAYGROUND DUTY ROSTER

TIMES	AREAS	MON	TUES	WED	THUR	FRI
8.05-8.30	OPEN	Thomson	Creed	Thomson	Creed	Thomson
10.30-10.45	PRE-PRIMARY	Mel P	Mel P	Mel P	Cass	Cass
	JUNIOR	Cass	Cass	Daniella	Rose	Thomson
	SENIOR	Creed	Thomson	Creed	Thomson	Creed
10.45-11.00	RECESS	Maria	Maria	Maria	Lucy	Lucy
	JUNIOR	Olivia	Kahli	Thomson	David	Deirdre
	SENIOR	Kylee	Kylee	Celeste	Olivia	Kahli
1.00-1.25	1 st LUNCH	Kahli	Olivia	Celeste	Deirdre	David
	1 st LUNCH	Celeste	Chris	Lucy	Kahli	Olivia
1.25-1.50	2 nd LUNCH	Deirdre	Deirdre	Olivia	Celeste	Lucy
	2 nd LUNCH	Thomson	Celeste	Kahli	Kylee	Kylee
1.00-1.40	OVAL	Chris	N/A	Chris	N/A	N/A
		Creed	N/A	Creed	N/A	N/A
1:10-1:40	LIBRARY	Open	Open	Open	Chess Club (Creed)	Open

Lesson Plans

OneNote

File Home Insert Draw View Help Tell me what you want to do

Calibri Light 20 B I U

ool Experience 3

Lesson Plans

Week 1 Reading

Week 2 Maths - Perimeter

Week 3 Maths - Area

Week 4 Reading

Week 5 Reading

Week 6 Art

Week 7 Perimeter & Area

Week 8 Maths - Length

Week 9 Grammar

Week 10 Reading

Mentor Documents a...

Timetables and Ro...

Mentor Feedback

Supervisor Feedback

Evaluation

Planning

Lessons

Forward Planning ...

Perimeter & Area

Saturday, 1 May 2021 9:28 am

Maths: (Supervisor Visit)

Perimeter and Area Combined - Summative Assessment

Maths

perimeter

LESSON PLAN
SCHOOL OF EDUCATION

Time: 9:45-10:30 EYLF Links:

Year Level: 5

Content Descriptors:
Calculate perimeter and area of rectangles using familiar metric units (ACMNS1206)

Students' Prior Knowledge:
Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMNS084) (Year 4)
One lesson plan was explicitly focused on perimeter
One lesson plan was explicitly focused on area

General Capabilities (not necessarily for inclusion in the lesson)

Literacy	Numeracy	ICT competence	Critical and creative thinking	Ethical behaviour	Personal and social competence	Intercultural understanding
Cross-curriculum priorities (may be addressed in the lesson)			Sustainability			
Aboriginal and Torres Strait Islander histories and cultures		Asia and Australia's engagement with Asia		Sustainability		

Lesson Objectives (i.e. anticipated outcomes of this lesson, in point form beginning with an action verb)

As a result of this lesson, students will be able to:

- State what perimeter and area is.
- Calculate and show working out for the perimeter and area of a quadrilateral shape.
- Design and create a card showing the average perimeter of each school enclosure using correct metric measurements.

WALT: Calculate the perimeter and area of a quadrilateral shape.

WILF: Show all of your working out
Accurately adding and multiplication
Use correct units of measurement in your answer.

Teacher's Prior Preparation / Organization: Provision for students at educational risk:

Daily Work Pads

	TIMES	Link to the Aust Curriculum (code) WALT / WILF	ASSESSMENT (WHAT & HOW)	LEARNING EXPERIENCE including PROVISIONS FOR LEARNER DIVERSITY and KEY QUESTIONS	RESOURCES
	8:30-9:30	YEAR 5 SCIENCE (Kyle's Lesson)			
	9:30-10:30	DOIT			
	10:30-11:00	RECESS			
	11:00-1:00	LITERACY BLOCK			
	11:00-11:15 15 mins	INTEREST PRESENTATIONS			
	11:15-11:40 25 mins	READING GROUPS Comprehension Activity relating to the comprehension skill of, "inferring" Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts (ACELY1713) WALT: Use the comprehension skill of "inferring" to find hidden messages in texts. WILF: Individually, write what inferring is. State what the character would be feeling.	Teacher is able to observe students learning and use a checklist to assess students on the comprehension skill of "inferring" to find hidden messages in texts. Students will be assessed on: • If they are able to state what inferring is • State what the character would be feeling	Learning Experience: • Teacher asks students what inferring is. (prior knowledge) • Students write it on their whiteboard and 'chin it' when they are ready to share. • Students brainstorm as a group what inferring is. (share ideas) • Teacher to explain what the comprehension skill of inferring is. • They will complete a 'show don't tell' activity based on a small text. • Read the text. • Have discussion about the text. Ask questions: • Do you understand what the author has written? Does it make sense? • Do you feel as if you're right there at the ball field, seeing and hearing what's happening? • Which groups of words showed you what the narrator did? • Can you pick one group of words and show me what this baseball player did? Did the author tell you about the narrator's feelings or did she show you? • Can you give an example? • What other hidden messages did you get from this small text? • Students answer the questions on their seesaw template. • Pull apart key words • Character emotions • Exit ticket: students write what inferring is. Provisions for learner diversity: Literacy groups- Literacy groups are different based on student's literacy skills and abilities. Each lesson could be slightly adjusted to suit each literacy groups levels of learning. Ellie- Able to work one on one with support and guidance	• Seesaw activity • Mini whiteboards

Assessment records

File Home Insert Draw View Help Tell me what you want to do

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hool Experience 3

Writing: Warm Write

Sunday, 23 May 2021 10:08 am

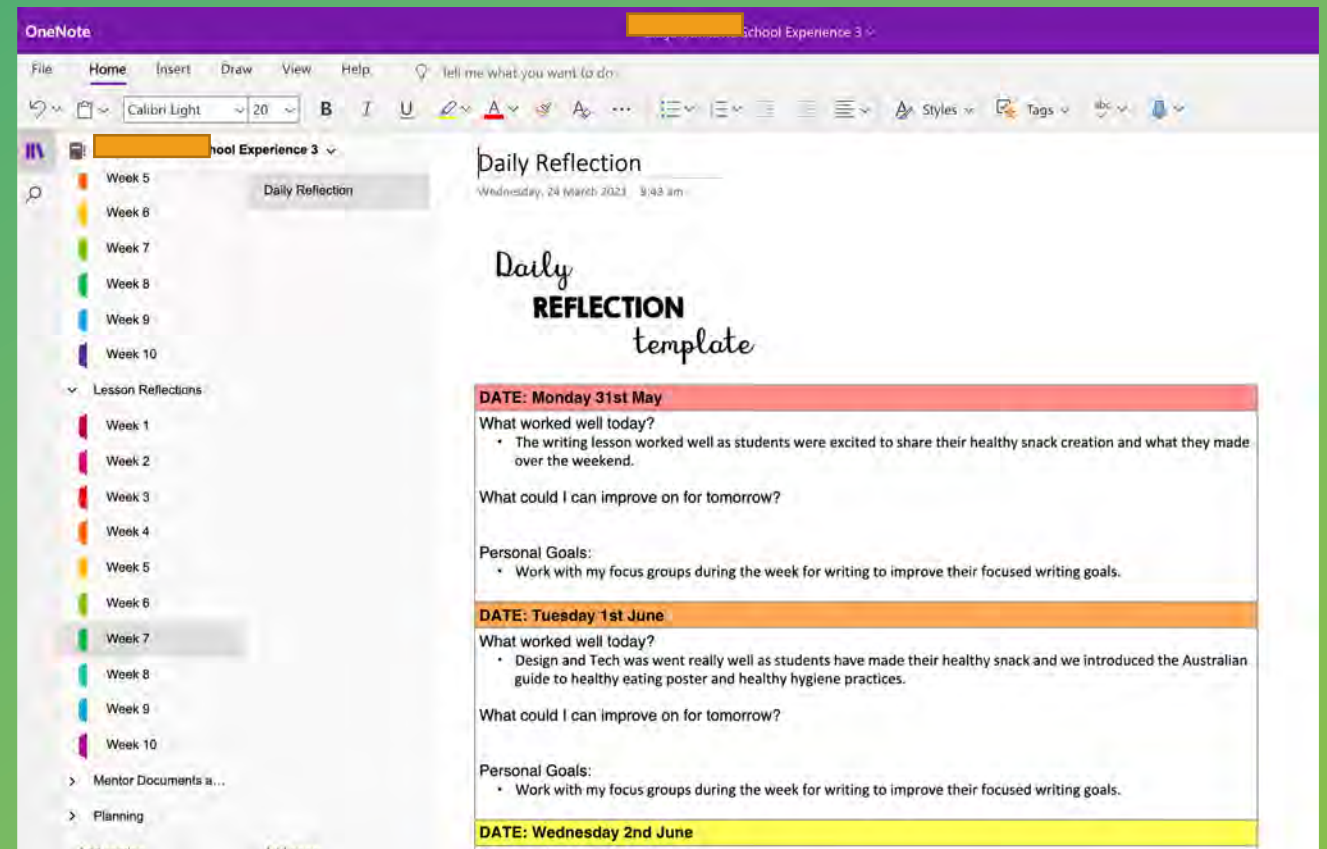
Writing: Week 6 - 25th and 26th May
Unit - Procedural Texts
Formative Assessment: Warm Write

Key:
✓ Developed
— Developing
● Needs further development

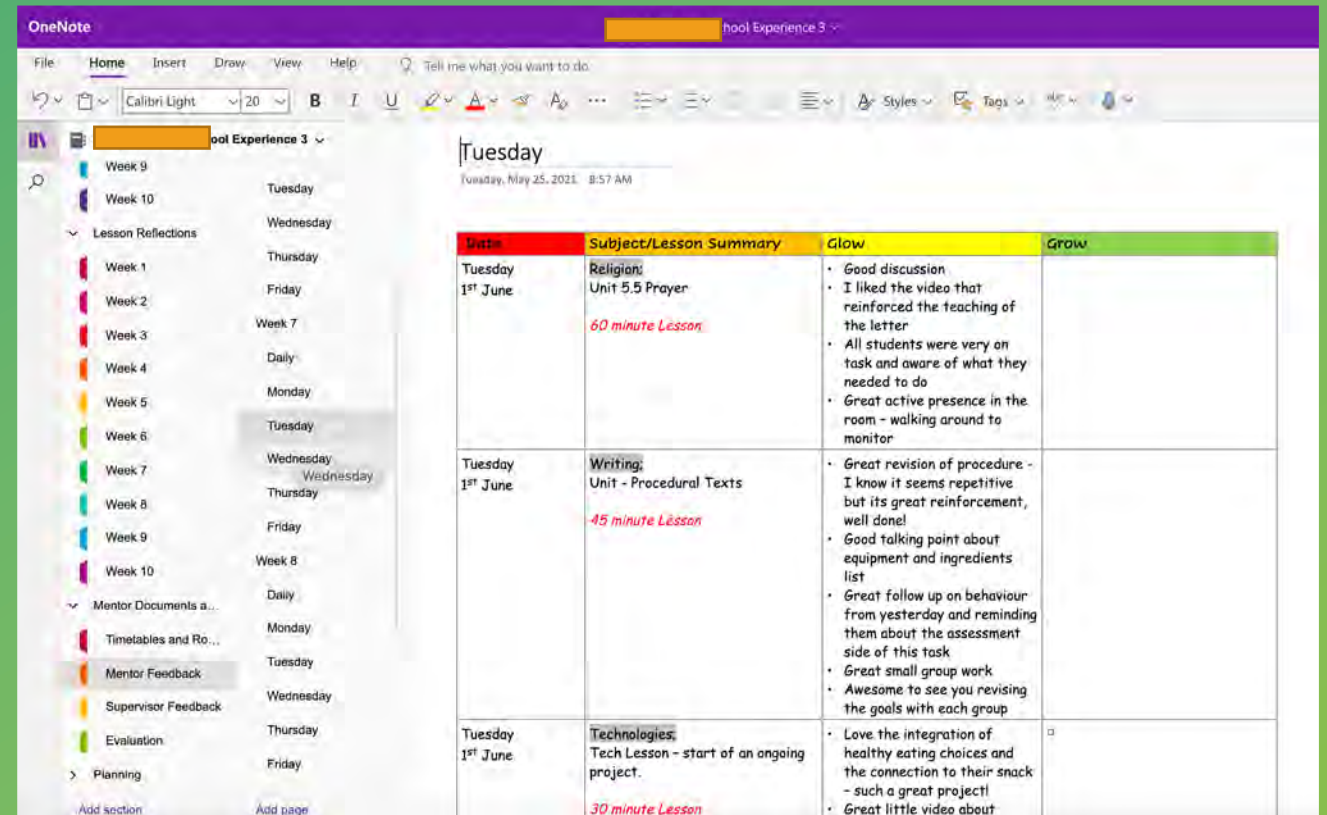
Students	Follows the correct structure of a procedural text	Includes language features in their procedure highlighting the verbs, adverbs and time connectives	Has accurate grammar, punctuation and concise sentences	Other Notes
	✓	✓	—	
	—	—	●	
	✓	✓	—	
	✓	—	—	
	—	●	●	
	✓	✓	—	
	—	✓	—	Didn't highlight but can see the time connectives, verbs and adverbs in the

Add section Add page

Personal Reflections



Mentor feedback



OneNote

hool Experience 3

File Home Insert Draw View Help Tell me what you want to do

Calibri Light 20 B I U

hool Experience 3

Week 9 Tuesday

Week 10 Wednesday

Lesson Reflections

Week 1 Thursday

Week 2 Friday

Week 3 Week 7

Week 4 Daily

Week 5 Monday

Week 6 Tuesday

Week 7 Wednesday

Week 8 Wednesday

Week 9 Thursday

Week 10 Friday

Mentor Documents a...

Timetables and Ro...

Mentor Feedback

Supervisor Feedback

Evaluation

Planning

Add section Add page

Tuesday

Tuesday, May 25, 2021 8:57 AM

Date	Subject/Lesson Summary	Glow	Grow
Tuesday 1st June	Religion: Unit 5.5 Prayer <i>60 minute Lesson</i>	<ul style="list-style-type: none">• Good discussion• I liked the video that reinforced the teaching of the letter• All students were very on task and aware of what they needed to do• Great active presence in the room - walking around to monitor	
Tuesday 1st June	Writing: Unit - Procedural Texts <i>45 minute Lesson</i>	<ul style="list-style-type: none">• Great revision of procedure - I know it seems repetitive but its great reinforcement, well done!• Good talking point about equipment and ingredients list• Great follow up on behaviour from yesterday and reminding them about the assessment side of this task• Great small group work• Awesome to see you revising the goals with each group	
Tuesday 1st June	Technologies: Tech Lesson - start of an ongoing project. <i>30 minute Lesson</i>	<ul style="list-style-type: none">• Love the integration of healthy eating choices and the connection to their snack - such a great project!• Great little video about	

Uni documents

OneNote

School Experience 3

File Home Insert Draw View Help Tell me what you want to do

Calibri Light 20 B I U

Collection Points

Friday, 30 April 2021 9:57 am

Collection points

Professional Experience 3 (TM2) - Things to bring along in Week 4

Items to collect ready to bring along for our Reflective Practice week

Ready for Monday debrief session

- Take 15 minutes at the end of week 3 to write down what you have learned in the first three weeks of your school experience about children, planning, assessment and the teaching profession

Ready for Monday - Behaviour Management/Data collection

- Take photos of the classroom and the learning areas around the school. (Don't forget to ask permission from your school)
- List a variety of attention getting/maintaining techniques used by your mentor or other teachers
- Record any low key management strategies used by your mentor or other staff - [Simple summary](#)
- If you observe a conflict, note what lead to the conflict, what the student did and what the teacher did and how it was resolved - [simple summary of ABC](#)
- Interview your mentor teacher about their ideas around student/teacher relationships. Ask them how they develop great relationships and what they consider most important. If you have time interview another teacher and record how they develop good relationships with students
- Ask if you can record a lesson or even just the first ten minutes of audio instructions - alternatively write down a detailed summary of an instructional session/mat session
- Collect data on 3 children that you will use as your focus children. Choose a low, middle and high ability student. This data can be general but try to tailor it to the FPD you will be creating for the final 5 weeks of your school experience. Collect data on content knowledge, behaviour, prior knowledge and other items that may be useful for your planning.

Ready for Tuesday - Planning

- Over the first few weeks record the different teaching strategies used by your teacher/other teachers you observe - [Simple summary of strategies](#)
- Bring along all your planning documents - use your OneNote to store these documents.

Recorded lessons for supervisor

The screenshot shows the Microsoft OneNote application interface. The title bar at the top is purple and says 'OneNote' on the left and 'Practicum 4' on the right. Below the title bar is a ribbon with tabs: File, Home, Insert, Draw, View, and Help. The 'Home' tab is active, showing various text formatting options like font face (Calibri Light), size (20), bold (B), italic (I), underline (U), color, and background color. On the left side, there is a navigation pane with a search icon and a list of sections: Admin, Assessment, Filmed Videos for Su..., Week 3, Week 6, Week 9, GTPA, and Planning. The 'Science Year 7- Friction' section is selected and highlighted. The main content area on the right displays the title 'Science Year 7- Friction' in a large, bold font, followed by the date and time 'Wednesday, August 4, 2021 7:36 PM'. Below this, there is a 'Lesson Overview:' section with the text 'Filmed on Tuesday 3rd of August.' and a paragraph describing the lesson: 'Students were placed into a new seating plan at the start of the lesson. They were then introduced to advantageous and disadvantageous forms of friction. After this they were encouraged to complete their cut and paste activity from the previous day on the different types of friction, namely: sliding friction, rolling friction and static friction.' Two video thumbnails are shown below the text, both titled 'Practicum Video 1: Science 7' and 'Practicum Video 2: Science 7'. Each video thumbnail has a green circle with a white 'B' in the top left corner and a large orange rectangle covering the main content area.

Supervisor feedback

The screenshot shows a OneNote application window with a purple title bar. The main content area is titled 'Week 3' and contains feedback for 'Tuesday 4th May - Jenny Jongste'. The feedback is organized into sections for 'Maths' and 'Perimeter and Area Combined'. The 'Maths' section includes a table with five standards, each followed by a paragraph of feedback. The 'Perimeter and Area Combined' section includes a paragraph of feedback. The left sidebar shows a tree view of the notebook structure, with 'Supervisor Feedback' selected under 'Mentor Documents'.

OneNote

School Experience 3

File Home Insert Draw View Help Tell me what you want to do

Calibri Light 20 B I U

School Experience 3

Lesson Reflections

Week 1 Week 2 Week 3 Week 4 Week 5 Week 6 Week 7 Week 8 Week 9 Week 10

Mentor Documents a...

Timetables and Ro... Mentor Feedback Supervisor Feedback Evaluation

Planning

Lessons Forward Planning ...

Add section Add page

Week 3

Tuesday, 4 May 2021 11:54 am

Tuesday 4th May - Jenny Jongste

Maths:
Perimeter and Area Combined

You are doing an amazing job. You have established a great presence in the classroom and it is fabulous to see you interacting so well with the students. Excellent paperwork in all areas.

Name
Standard 1: Know the students and how they learn.
Great to see you interacting so positively with the students. You are handling the students so effectively. Great to see you catering for the individual needs of the students in your classroom - especially Ellie.
Standard 2: Know the content and how to teach it.
Excellent planning so far. Great to see you using the technology and integrating it easily into your lessons. You are absolutely nailing all of your paperwork. Excellent activity to develop the content.
Standard 3: Plan for, and implement for effective teaching and learning.
Great ideas and some excellent ideas for effective lessons with the age groups. Fabulous to see you thinking about your planning in context of the mentor plans and how to build concepts and skills progressively.
Standard 4: Create and maintain supportive and safe learning environments.
You have created a wonderful teacher/student rapport with the children. Well done. You were able to have them hyped up and then they settled well into the activities. Your constant moving around the room and personal interactions with the students is very natural and ensures the students are focussed and on task.
Standard 5: Assess, provide feedback and report on student learning.
You are doing a fabulous job of starting your assessment processes. Excellent to see. This can be an area to continue to use as a focus for the next few weeks- this is particularly useful for your teaching methods assignment.
Focus for next observation:
Some things to look at for next observation:

Issues we had...

Some PSTs saw it as double handling

Some PSTs, mentors and supervisors didn't like the digital format

Syncing issues – mostly resolved now

Next steps

- We continued it this year – it has been a gamechanger
- It is now part of our ongoing PST prac preparation



OneNote

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What did we learn?

We didn't need a bespoke solution

We could implement a change with minimal training if we used existing software

It only took one prac cycle to become fully implemented

Supporting web documents, and videos combined with face to face embedding sessions created 100% usage from PSTs, Mentors and Supervisors