



**CREATE
SHARE
INSPIRE.**

Lt Collections Overview

Engage students in active learning in the lab or remotely

Lt is an online learning platform with over 360 ready-to-use, interactive and fully customisable lessons for life science, nursing and medicine.

Lt is the world's only cloud based learning platform with data acquisition and analysis capabilities, allowing students to record and analyse their own physiological signals to make science a truly hands-on learning experience. Create, customise and deliver your own interactive content that students can access anywhere. Lt's cloud-based platform means students can learn on almost any device that connects to the internet. Whether they use iOS or android, tablet, mobile or laptop, lessons will be resized and optimised to look great. Building media-rich lessons is simple. Lt uses a wide range of content types to create interactive exercises including multiple choice questions, short form written answers and image annotation. Share content and workload with your fellow educators and teaching assistants. Set varying levels of access to allow others to review content, add content, or publish revisions online.

-  Improved efficiency
-  Increased student engagement
-  Improved results in theory and clinical practice
-  Increased student pass rates

"We have seen high student engagement and satisfaction, and widespread adoption over many courses."

Sharon Herkes,
Senior Lecturer: Physiology,
University of Sydney

Creating a custom education system is easy:

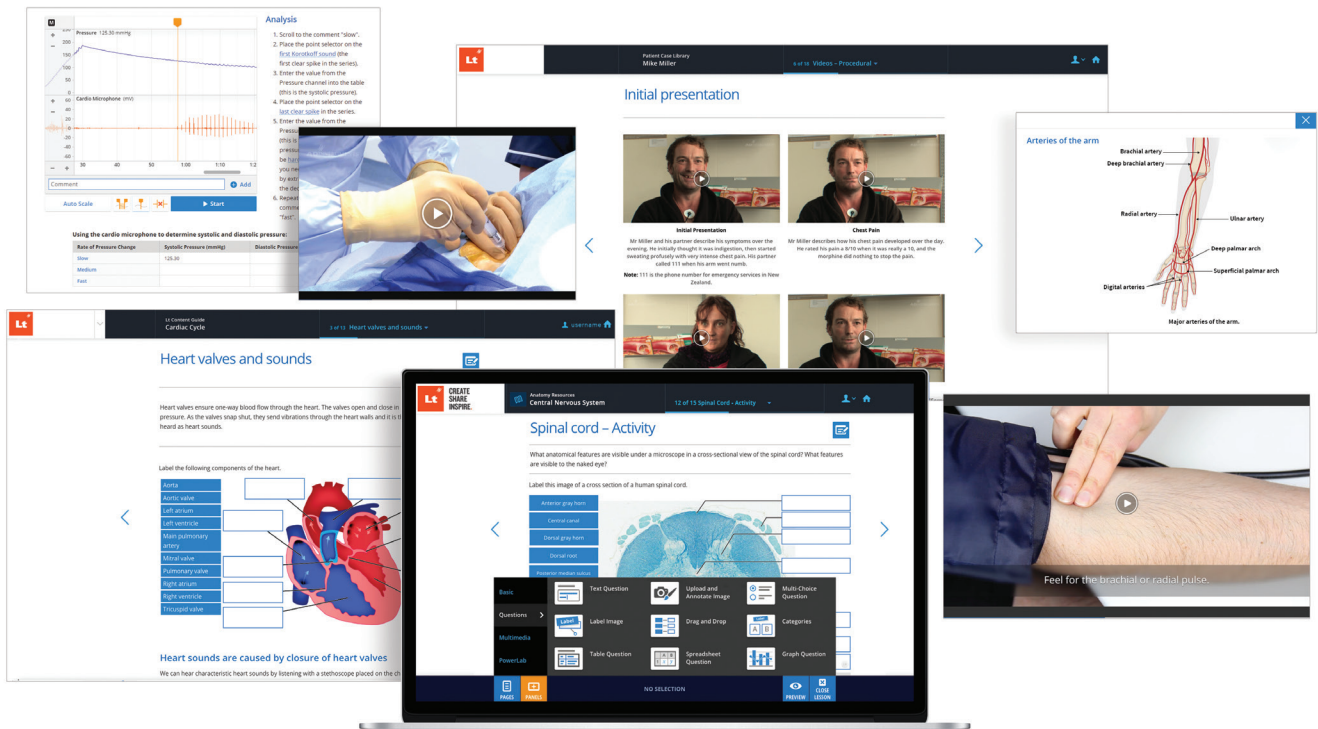
Courses and content:

- Anatomy • Animal Physiology • Biology • Exercise Physiology • Human Physiology
Medicine • Neuroscience • Nursing • Pharmacology • Psychophysiology



Software Highlights

Lt's cutting edge functionality allows you to fully customise features to adapt to your teaching style, saving you time in preparation – and encouraging greater engagement with your students. Since Lt is cloud-based, users can log in from anywhere with an internet connection. Students can even use their mobile devices to work on their lessons on the go.

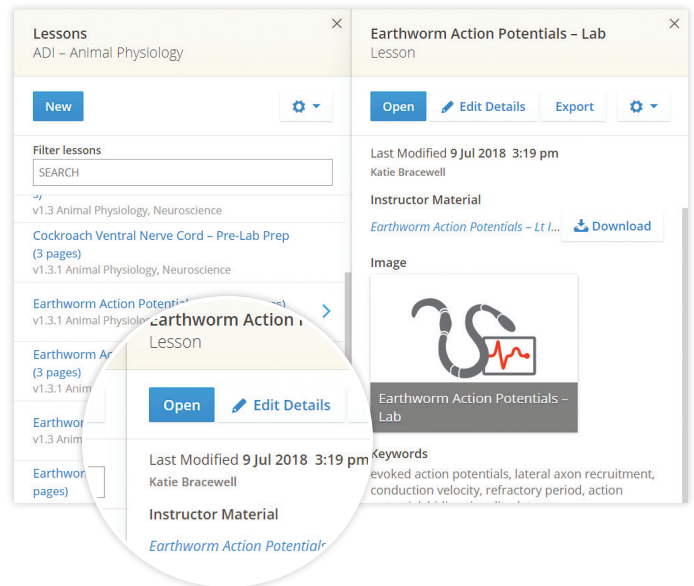
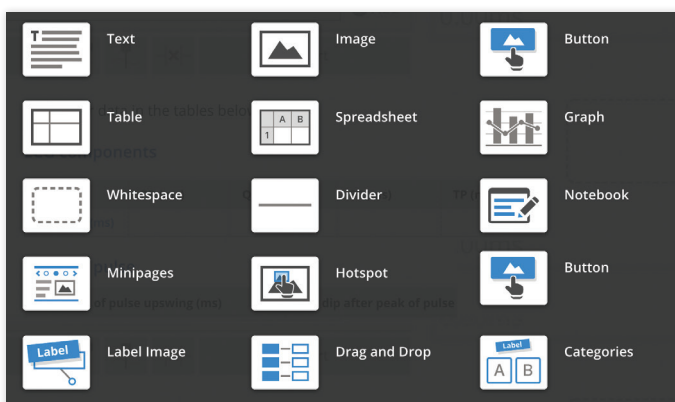


Lessons

Lt makes it easy to author beautiful and interactive lessons. Lessons can be anything from a tutorial, lecture, presentation, lab, or an assessment. Each lesson is filled with different panel types that allow you to add in information, questions, and multimedia aids to get your students engaged in the material. Lessons can be stand-alone or grouped together into modules. Add extra information for those students who need it via the Background page, or include additional layers of content to selected text using popups.

Authoring

Creating and editing lessons with Lt is easy. Use our ready-to-use content straight out of the box, customise it, or create your own in real-time, wherever and whenever you need. Drag-and-drop a range of content types including video, audio, images, quizzes and text directly onto your page.

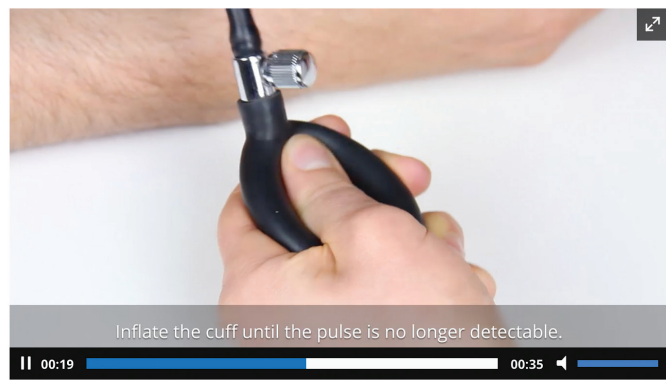


Question Panel Types

Lt has standard Text Question and Multiple-Choice questions, as well as Label Image, Upload and Annotate Image, Categories, Table Questions, and Drag and Drop questions to allow you to teach the way you want to teach. Mix and match panels to make engaging, memorable lessons!

Modules

Multiple lessons can be bundled together into a Module to publish to students. This allows you to control the lesson completion order.



Inflate the cuff until the pulse is no longer detectable.

Palpation procedure

Multimedia Panels

Video and Audio files can be added to enhance your lessons. Lt's Preclinical Medicine Collection includes our Patient Case Study Library, a rich resource of video interviews with patients, relatives and health care professionals as well as video of clinical examinations and key medical procedures, including subtitles and captions.

Analysis

1. Select the **record** that best shows the threshold voltage. Use the **Auto Scale** and **compression** buttons, or **scrolling** if needed.
2. Place the **Marker** at the start of the stimulus artifact and position the **point selector** at the beginning of the action potential.
3. **Enter** the value from the Time **value panel** into the table. This is the latency.

Time: 5.55ms

Fiber Type	Latent Period (ms)
Median giant fiber	

Data Analysis

Lt gives students the unique ability to record and analyse their own physiological signals, encouraging active learning and giving students an engaging, immersive learning experience. Students can use the region selector, point selector, marker, and value panels to analyse their recorded data.

lt Content Guide
Cardiorespiratory Effects of Exercise - Lab
10 of 12 Effects of exercise: Respiration and H...

Effects of exercise: Respiration and heart rate

Analysis

1. **Scroll** to the start of your "resting" data and compress the horizontal axis using the x-axis **compression buttons**.
2. Using the **region selector**, select the first minute of data. Making sure not to select the area with **no respiratory rate** recorded yet.
3. **Enter** the heart rate, respiratory rate, and time

Maximum Volume
● Volume No selection

Minimum Volume
● Volume No selection

Zero Inputs Start
Auto Scale Delete Data

Data Acquisition and Example Data

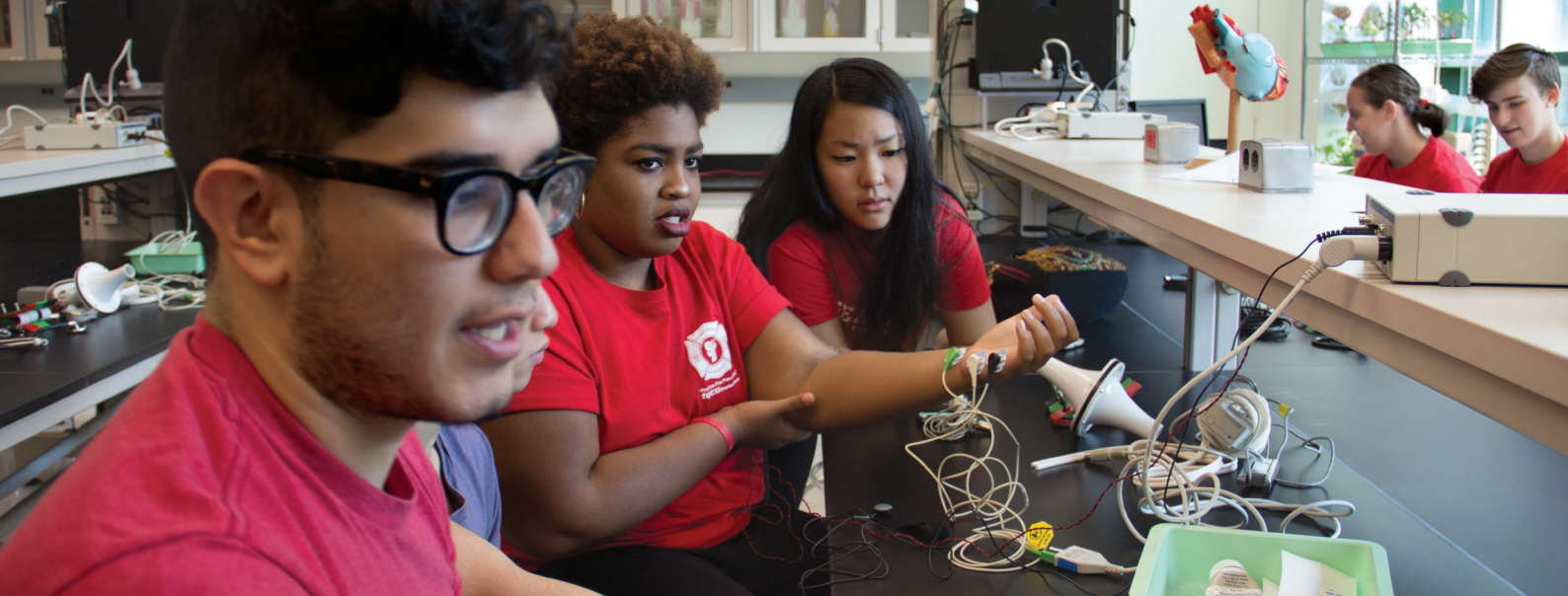
Using real biological data deepens student engagement, whether teaching in-person or by remote. Students can record signals from their own body in the lab environment, or access Lt's built-in Example Data for their online learning. Lt is built for uncertainty, and Example Data is especially useful when teaching remotely, online, or in a class or lab that doesn't have data recording capabilities.

Lt has built-in presets for various applications including EMG, Blood Pressure, ECG, Spirometry flow and volume, and Pulse and Heart Rate.



PowerLab is the ideal high quality data acquisition solution for Lt life science classroom experiments, and is designed to handle repeated and heavy use by students while maintaining data accuracy and reliability.

PowerLab 26T features a dual Bio Amp, isolated stimulator, trigger input, 4 analog inputs, 8 digital inputs, and 8 digital outputs. Independent ADCs keep channel data perfectly in sync.



Grading

Student answers can be easily graded using auto-graded question types or with quick and easy manual grading. You can add notes and model answers for your graders that appear alongside each student's answer. The Lt grading matrix allows you to quickly see which questions need to be graded and the students' total grade.

SHOW GRADING TABLE

Student Answer Student Help / Model Answer

Label the components of an atom.

Electrons

Neutron

Nucleus

Proton

Grading & Analytics
Atomic Structure
GRADING

Filter students by section here

	P2	P3	P4	P5
6	4	1	0	8
7	6	1	1	1
8	7	6	1	1
9	1	1	1	1
10	1	1	1	1
11	1	1	1	1
12	1	1	1	1
13	1	1	1	1
14	1	1	1	1
15	1	1	1	1
16	1	1	1	1
17	1	1	1	1
18	1	1	1	1
19	1	1	1	1
20	1	1	1	1
21	1	1	1	1
22	1	1	1	1
23	1	1	1	1
24	1	1	1	1
25	1	1	1	1
26	1	1	1	1
27	1	1	1	1
28	1	1	1	1
29	1	1	1	1
30	1	1	1	1
31	1	1	1	1
32	1	1	1	1
33	1	1	1	1
34	1	1	1	1
35	1	1	1	1
36	1	1	1	1
37	1	1	1	1
38	1	1	1	1
39	1	1	1	1
40	1	1	1	1
41	1	1	1	1
42	1	1	1	1
43	1	1	1	1
44	1	1	1	1
45	1	1	1	1
46	1	1	1	1
47	1	1	1	1
48	1	1	1	1
49	1	1	1	1
50	1	1	1	1

Click on a question to start grading

ADI - Pharmacology
Airways Resistance - Lab 15 of 15 Report

Lesson Report

Congratulations! You've completed this lab.

[Save PDF](#)

Report Page

Add Completion Pages to the end of lessons to allow students to Complete or Commit their work. Selecting Show Report converts a page into a Report page with all of the questions listed by page. If PDF grading is enabled, students can download or email a PDF of the report to a selected recipient.

A characteristic of signals are conducted from place to place by ... of the action potential in single fibers are ... of importance. Annelids (such as the common earthworms; Lumbricus species) and arthropods have a ventral nerve cord that is analogous to the dorsal spinal cord of chordates.

(enter text)

Drag and Drop content

Create lessons quickly using Lt's drag and drop feature. You can drag text and images from existing resources and drop them in Lt to create different questions and even tables. Panels can be easily moved around so that your page always looks beautiful.

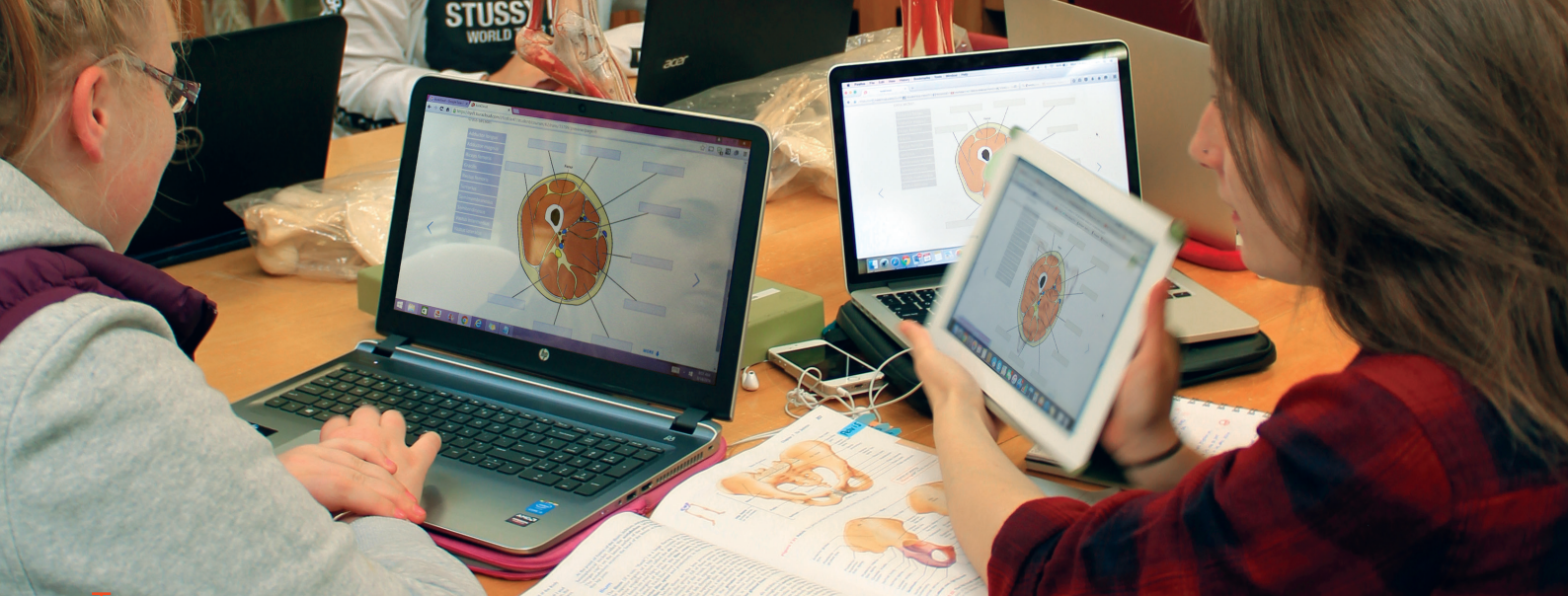
Minipages

Hotspot

Label Image

Drag and Drop

Lt supports a wide variety of content and media types. Easily create and deliver a variety of interactive lesson content. Select from 30+ panel types, including the new Hotspot Panel. This panel allows students can interact with images at different magnifications. Teachers can use it to direct student attention to specific features, and provide further information to bridge the micro and macro levels of learning life science.



Group Work

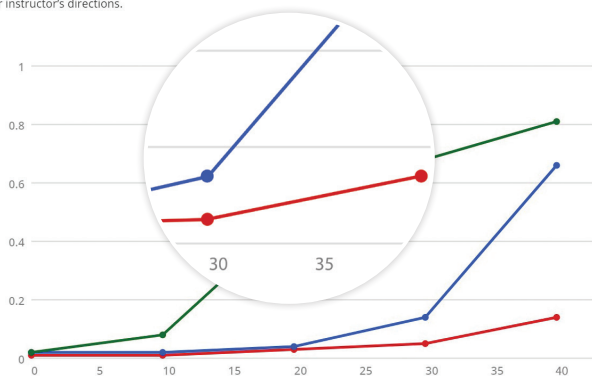
Lessons can be set to allow groups of students to log in individually or as a group to work together, analyse data, and complete the lesson together. If they don't commit the lesson they will be able to log in individually later to edit their answers.

Table 2. Effect of alcohol type and concentration on the biological membranes of beets.

Concentration (%)	Methanol (Abs)	Ethanol (Abs)	1-Propanol (Abs)
0	.01	.02	.02
10	.01	.02	.08
20	.03	.04	.49
30	.05	.14	.68
40	.14	.66	.81

Plot your data

A graph should have been automatically generated from the data in your table, to display the relationship between the independent and dependent variables. Complete the graph by adding a title and labeling the axes, according to your instructor's directions.



Tables and graphs

Students can enter data into tables or spreadsheets and choose how to plot this data on graphs, or use Lt to create beautiful Bar, Line, or Scatter Graphs.

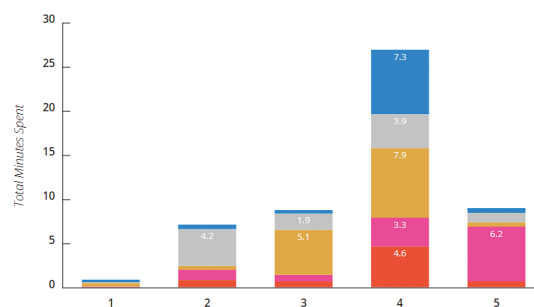


LMS integration

Lt is a content development and delivery platform that is complementary to your existing LMS. Lt currently integrates with Canvas, Blackboard Learn and Moodle, so you can use your LMS for what it was designed for, managing students. Synchronise students into your Lt course easily and send Lt grades directly back to your LMS with just one click.

Time in Lesson

Each color represents one student.



Analytics

Easily monitor the performance and engagement of your course with Lt analytics. Start by observing overall course trends before drilling down by student, section, and lesson, for more in-depth insight on how your students are engaging. Lesson analytics can be used to understand the performance of individual questions and inform improvements to your lessons.

Import students

Please select a CSV file containing the student details. This CSV file must conform to our requirements.

Any existing student's details that match will be updated.

[Cancel](#) [Help](#)

Set availability date and time

Select a time for when the lesson will become available to students. Add a commit time to stop students from making changes after a set duration.

Make Available to Students

01-Mar-2018 09:03 PM MDT

Commit Lesson

08-Mar-2018 09:03 PM MDT

[Remove lesson commit time](#)
Duration is set for 7 days

[Cancel](#)

[Done](#)

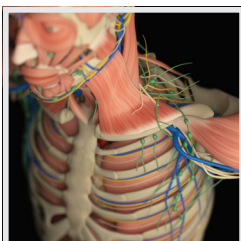
Student Management

Students can be added individually, through .csv import or via LMS integration. Once added Lt allows you to sort your students into Sections so that you can send invites when you are ready and gain further control over access to published content. Sections allows you to share specific students' work with graders. You can even export entire student lists or get student emails by section. The availability of Lessons and Modules can be scheduled so that students can access the lesson between set times.



Lt Content Collections Overview

Lt has over 360 fully editable, ready to teach lessons that we've matched to professionally developed lessons with the right lab equipment to provide a true-to-life, practical learning experience for your students. Our lab and healthcare collections include media-rich lessons which can include a combination of a tutorial, a pre-lab prep, and a lab designed to maximise engagement and suit diverse learning styles, with a strong focus on student outcomes. Use our lessons off the shelf or tailor any lesson to suit your curriculum and your teaching preferences. Our services and training team can also provide help to convert your existing curriculum into our cloud or lab-based learning platforms.



Lt Anatomy Collection

The Anatomy collection comes with rich and detailed histology and dissection media for teaching and assessments, including cadaveric dissection images, animal organ dissection videos and images, stylised images, and exploration of anatomical models. Created in partnership with ToLTech, world leaders in anatomical imagery.

- 6 Dissection Lessons/Labs
- 6 Model Lessons/Labs
- 11 Histology Lessons/Labs
- + Additional Labs and Tutorials



Lt Animal Physiology Collection

Guide students towards a deeper understanding of homeostatic processes by having them investigate basic and applied concepts in neuro and muscle physiology with professionally designed lessons and labs, including common undergraduate insect, annelid, amphibian, and mammalian preparations. Combine animal physiology lessons with our hardware teaching systems and kits to provide an engaging, hands-on learning experience that helps prepare students for further research work.

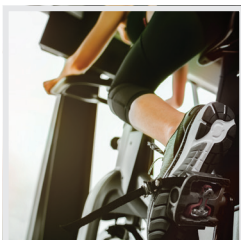
- 11 Pre-lab prep lessons
- 11 Interactive laboratories



Lt Biology Collection

Lt for Biology includes our new collection developed in partnership with Vernier, covering core concepts in first year undergraduate introductory Biology. Our collections introduce a variety of concepts fundamental to biology and biochemistry, including enzyme action, spectrophotometry, photosynthesis, and pH. Combine our collections with Vernier's Go Direct® sensors or ADInstruments hardware teaching systems and kits, to provide an engaging, hands-on learning experience for students.

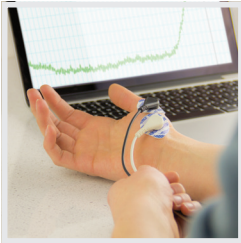
- 19 Interactive laboratories



Lt Exercise Physiology Collection

Lt's Exercise Physiology Collection comes complete with professionally designed lessons and labs, featuring metabolism, cardio-respiratory effects of exercise and energy expenditure during exercise. Students record their own biological signals directly into Lt using our hardware and teaching kits, making scientific theory relevant and real.

- 7 Pre-lab prep lessons
- 7 Interactive laboratories



Lt Human Physiology Collection

Engage your students in hands-on learning for a deeper understanding of core physiological concepts. Lt's Human Physiology Collection comes complete with professionally designed lessons and labs including ECG, Spirometry, and EMG. Students record their own biological signals directly into Lt using our hardware and teaching kits, making scientific theory relevant and real.

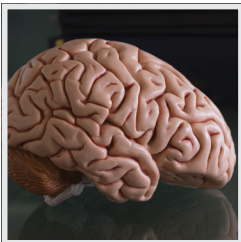
- 28 Pre-lab prep lessons
- 31 Bioscience tutorials
- 28 Interactive laboratories



Lt Medical and Preclinical Medicine

Engage your medical and pre-med students and help them bridge the gap between theory and practice with our preclinical medicine labs. 30+ real patient case studies make theory relevant and real. Each module in Lt's Preclinical Medicine Collection is designed to build learners' understanding of normal physiology and pathophysiology with self evaluation and built-in active learning, and helps them to apply this knowledge to a patient's condition.

- 14 Preclinical medicine modules
- 31 Real patient case studies



Lt Neuroscience Collection

With a combination of human and animal-based neuroscience labs, Lt's Neuroscience Collection guides students towards a deeper understanding of the nervous system and the brain, exploring central and peripheral nerve function, brain activity (non-invasive), and intracellular and extracellular action potentials.

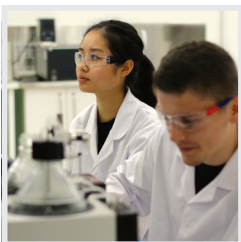
- 22 Pre-lab prep lessons
- 22 Interactive laboratories



Lt Nursing Collection

With 30+ real patient case studies, reflective learning, and a focus on clinical skills, Lt helps you bridge the gap between theory and practice. Lt's 18 Clinical Skills Modules focus on core nursing practices prepare students for the clinical simulation aspects of your courses, and allow for practical assessment of key nursing skills, with checklists to ensure key skills are demonstrated and assessed.

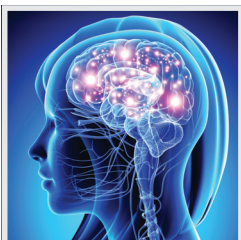
- 31 Real patient case studies
- 14 Immersive nursing modules
- 18 Clinical skills modules



Lt Pharmacology Collection

Explore ligand-receptor binding and dose-response relationships using a variety of different tissue preparations by record biological signals directly into Lt using our hardware and teaching kits. Engage your students with hands-on experiments, exploring dose-response relationships and concepts in ligand-receptor binding, using a range of different drug and tissue preparations.

- 14 Pre-lab prep lessons
- 14 Interactive laboratories



Lt Psychophysiology Collection

Lt's Psychophysiology Collection explores cognitive neuroscience in a series of professionally designed lessons and labs, featuring biofeedback, classical conditioning, electrodermal response, perception, reaction time, and psychological bias. Lt helps students to explore methods in psychophysiology, cognitive neuroscience, and experimental psychology by recording their own biological signals directly into Lt using our hardware and teaching kits.

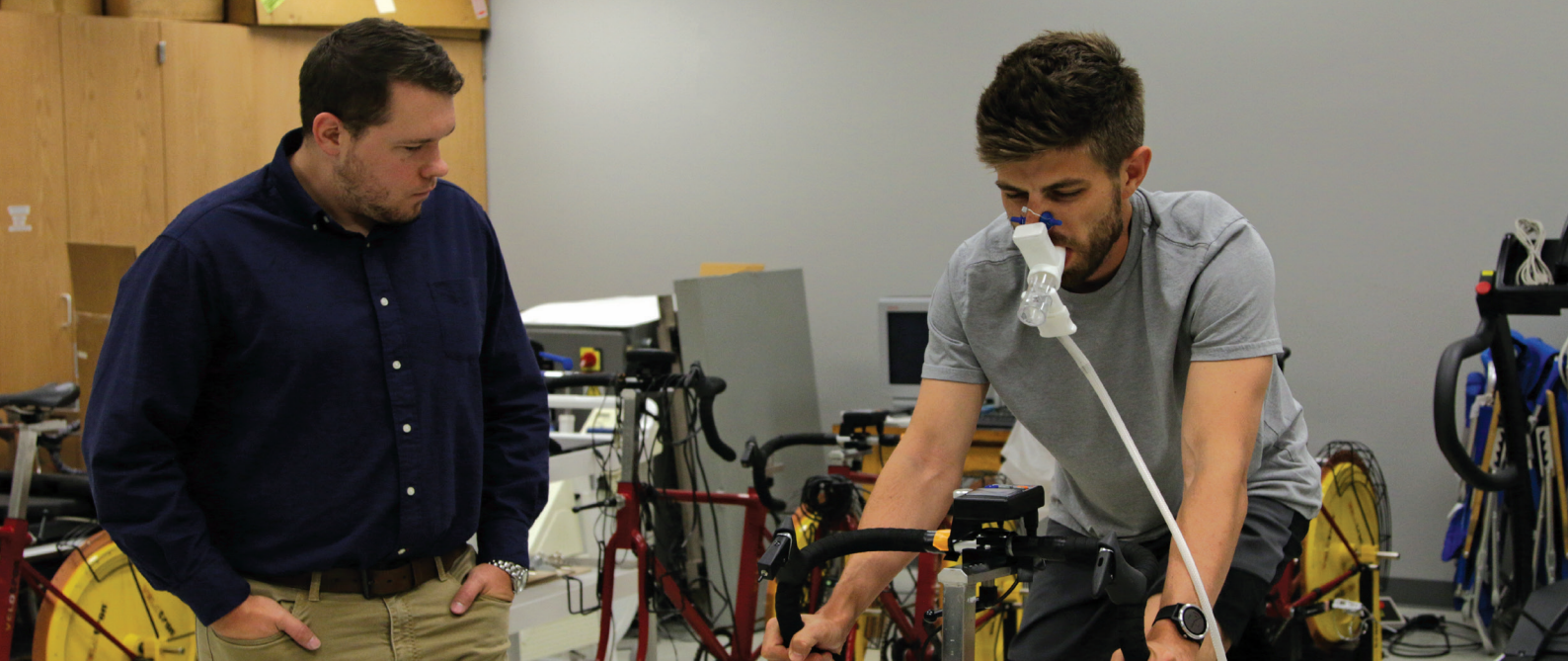
- 14 Pre-lab prep lessons
- 14 Interactive laboratories



Understand Your Physiology

Developed by world-leading experts, Understand Your Physiology is a new online active-learning resource designed to help first year students understand physiology via interactive questions, diagrams, and imagery. Students learn fundamental physiology concepts including regulation and control, body systems, and multi-system physiology in lessons designed to be completed in 60 minutes.

- 160+ Lessons
- 3900+ Interactive multi-format questions
- 2000+ Diagrams



CASE STUDY: How the University of Colorado engages 500+ physiology students in active learning by delivering hands-on, practical labs every year.

The Human Physiology team at UCCS pride themselves on a hands-on curriculum that turns out students who are critical thinkers, prepared for real-world research work.

In recent years, the University has experienced a sudden growth in student numbers. To accommodate this growth the teaching team successfully implemented Lt as a way to scale up quickly and easily, without compromising the quality of their curriculum and the hands-on nature of their physiology labs.



Scale up quickly and easily



Active learning for large classes



Customise course content



Connect theory and practice



Run labs more smoothly

Real experience with real equipment

The ultimate goal of the teaching team is to develop the skill set that students will need in their future professions. To do this the team wanted to give students the opportunity to gain experience with the same research-grade equipment that they might use in the real world.

James Pearson says, *“Lt is ideal because it integrates and works seamlessly with PowerLab hardware and LabChart for analysis - so students are essentially getting an introduction to the equipment they’d be using as researchers.”*

James notes, *“Students enjoy being able to see data being collected right in front of them and they enjoy being able to administer a perturbation to one of their fellow students and see how the physiology is altered in real-time.”*

Customise Lt’s content to suit your course

All of Lt’s content is fully editable, giving educators the flexibility to alter, add to, or delete any of the content within Lt. This capacity to customise is one of James Pearson’s favourite features.

“We originally started off by using exactly what Lt came with which was very useful. As time went on, we’ve used the editing functions in Lt to evolve those labs. We can expand on certain areas, and offer support to students in places where they need it.”

“We’re really able to be more adaptive when we use Lt’s edit function. I think the ease of editing and it’s modern tools, like drag and drop, are big benefits of Lt.”



“Lt is ideal for delivering practical labs, and it was ready to roll out to a large number of students very quickly.”

Professor Andrew Subudhi
Department Chair & Professor,
Human Physiology & Nutrition



**90-DAY
FREE TRIAL**

Sign up now adi.to/lc

For more information contact your local representative at info@animalab.eu or visit www.animalab.eu