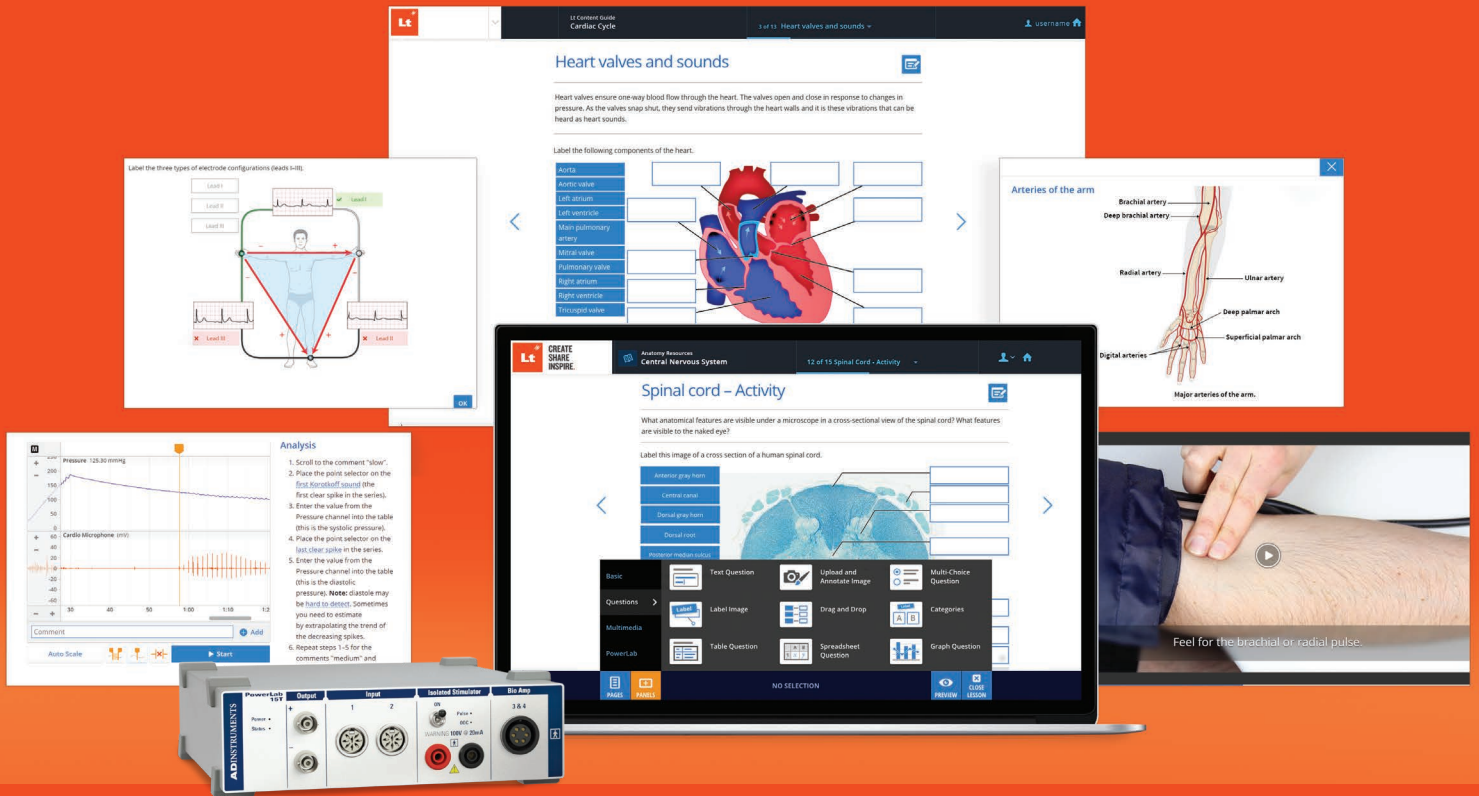




**CREATE  
SHARE  
INSPIRE.**

# Lt Collections Overview

Engage students in active learning in the lab or remotely







Lt is an online learning platform with 500+ ready-to-use, interactive, and fully-customizable lessons for life sciences, nursing, and medicine.

Lt is the world's only cloud-based learning platform with data acquisition and analysis capabilities, allowing students to record and analyze their own physiological signals to make science a truly hands-on learning experience.

Create, customize, and deliver your own interactive content that students can access anywhere, anytime. 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 optimized to look great.

Building engaging 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:



+



+



Active learning software and multimedia content

**PowerLab**  
High performance data acquisition

Education kits and transducers

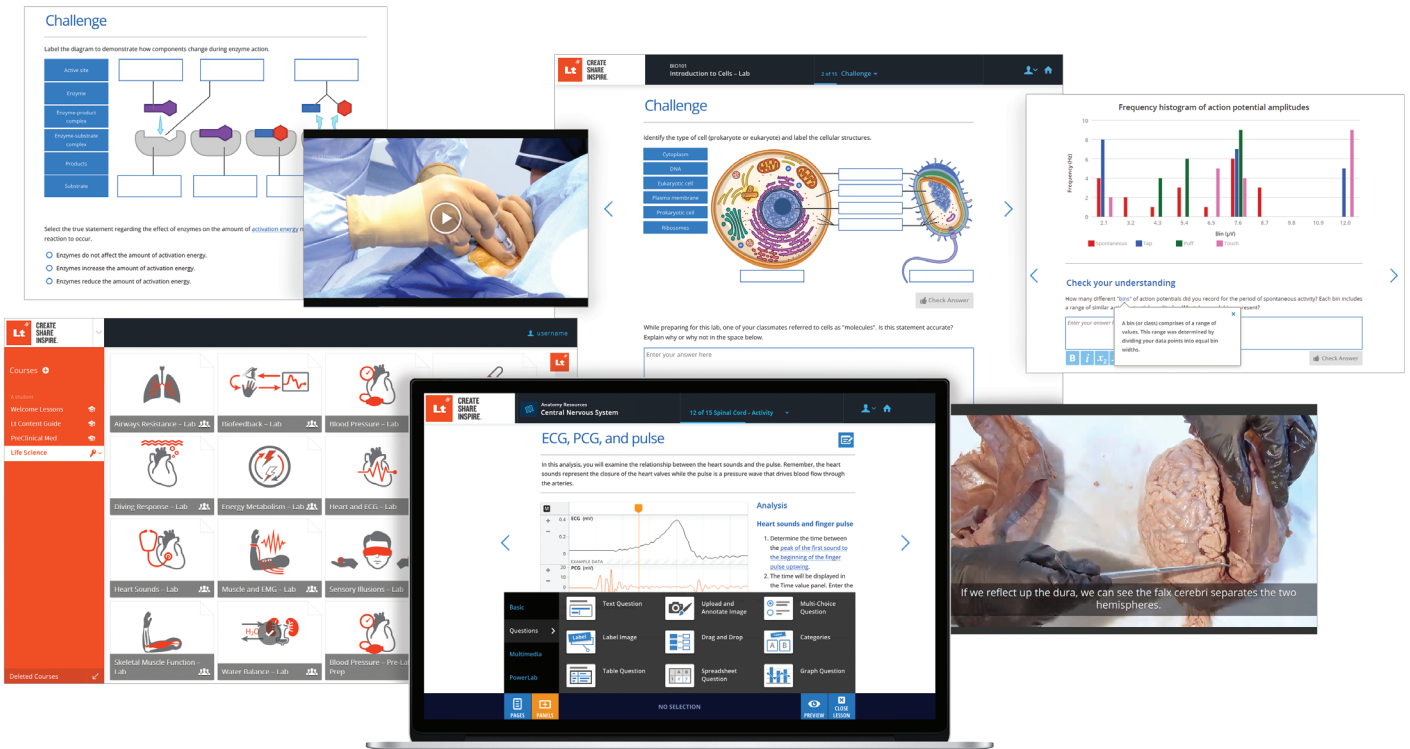
### Courses and content:

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



# Software Highlights

Lt's cutting-edge functionality allows you to customize ready-made content to suit your teaching style, saving you time and boosting student engagement.

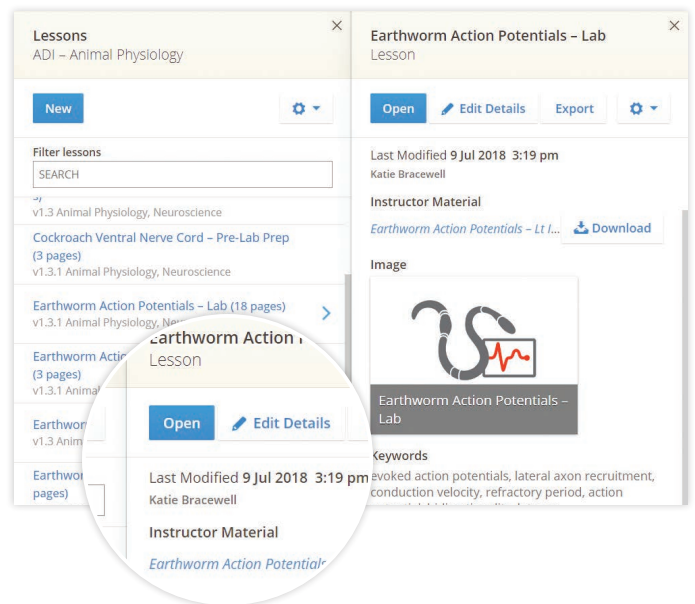
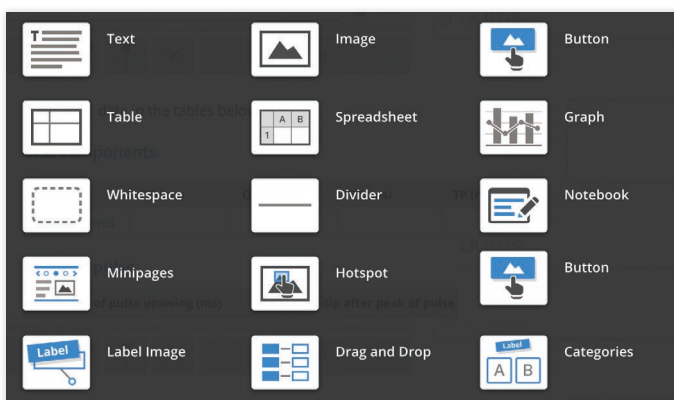


## Lessons

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 context for selected text using popups.

## Authoring

Creating and editing lessons in Lt is easy. Use our pre-built content straight out of the box, customize it, or create your own in real-time, wherever and whenever you need. Drag-and-drop a range of content types onto your page, including video, audio, images, questions, and text.



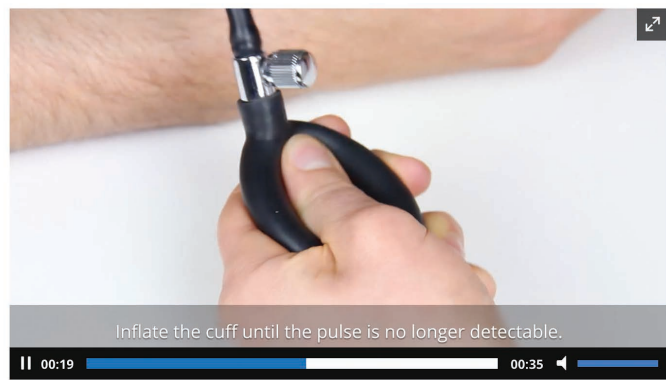
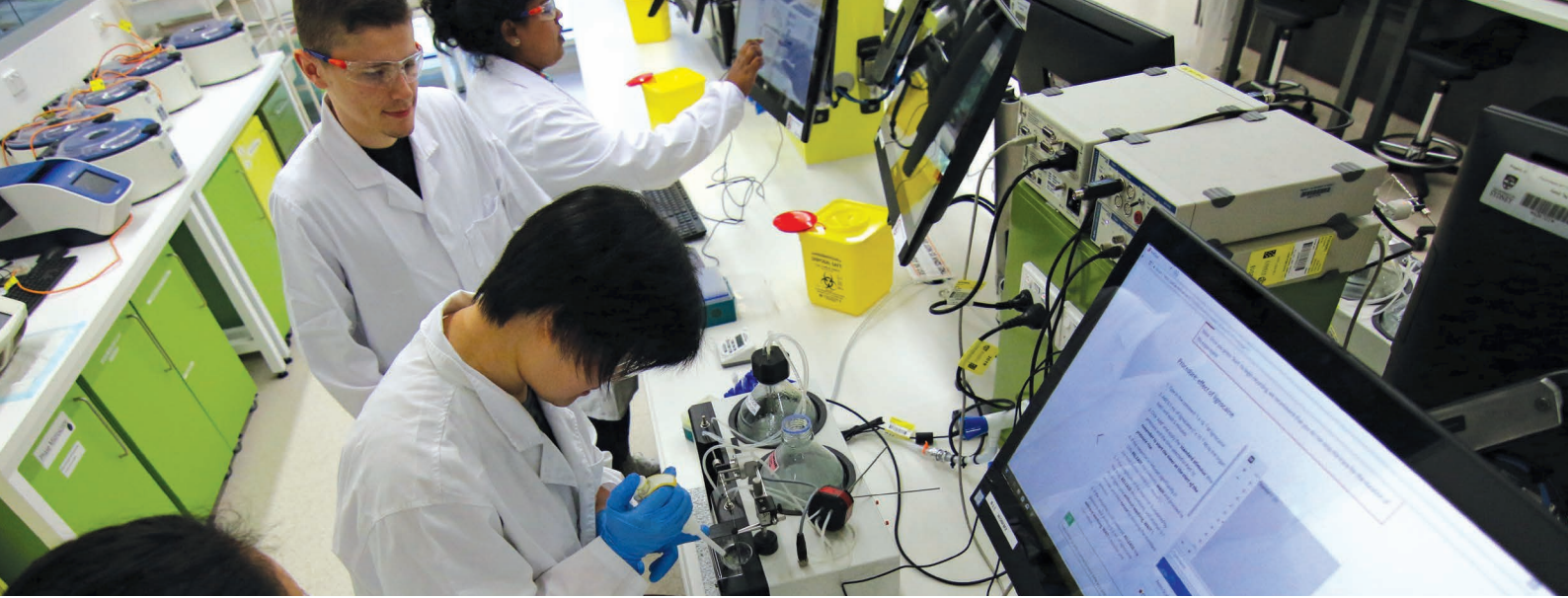
## Question Panel Types

Lt has standard Text and Multiple-Choice questions, as well as Label Image, Upload-and-Annotate Image, Categories, Table, 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.





Palpation procedure

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

## Multimedia Panels

Video and Audio files can be added to enhance your lessons. Lt's Preclinical Medicine Collection includes our Patient Case 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. Videos include 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 empowers students to record and analyze 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 analyze their recorded data.

## Data Acquisition and Example Data

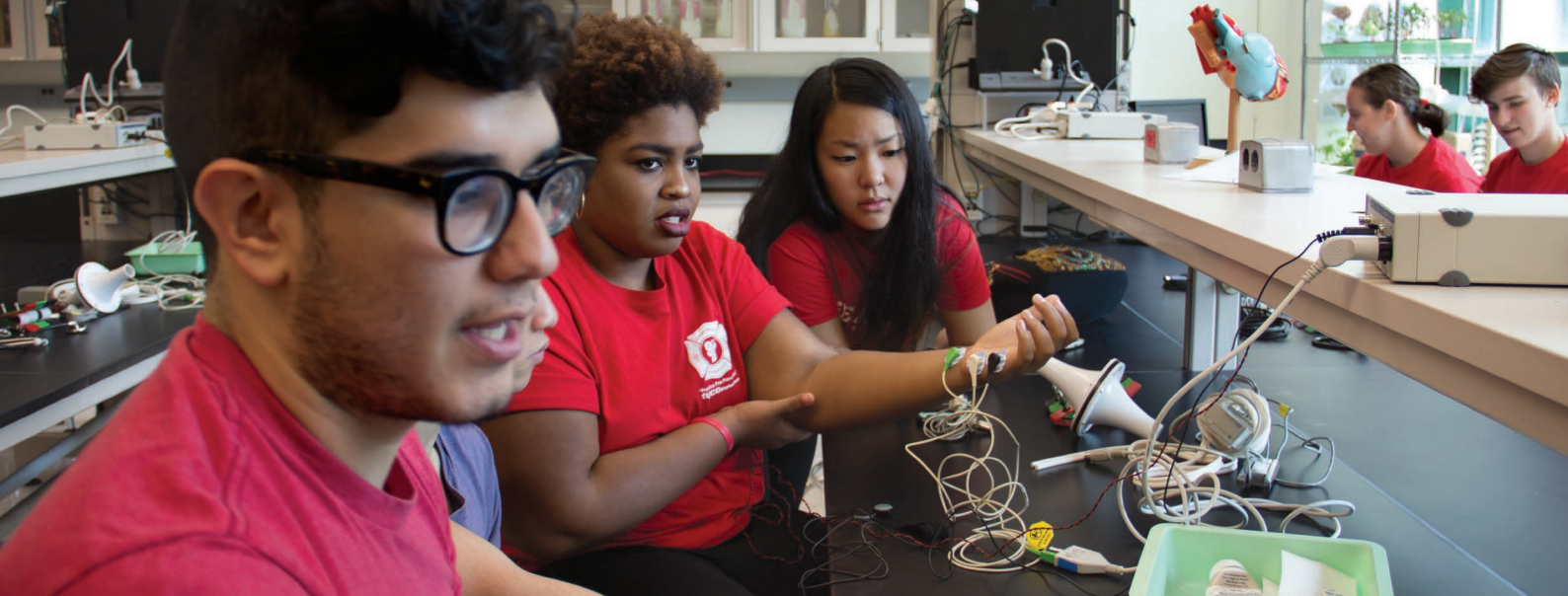
Using real biological data deepens student engagement, whether teaching in-person or remotely. Students can record signals from their own body in the lab environment, or access Lt's built-in Example Data. Lt is built for uncertainty, and Example Data are especially useful when teaching remotely, or in 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, Pulse, and Heart Rate.



PowerLab is the ideal high-quality data acquisition solution for 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 instructions 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.

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	1	1	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

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 Commit their work. Selecting Show Report converts a page into a Report page with all of the questions in the lab listed. Students can download a PDF of their report, or send it to a selected recipient for grading.

A characteristic of signals are conducted from place to place by means of the action potential in single fibers are of great 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)

Median fiber  
Lateral giant fiber  
Segmental sensory and motor fibers

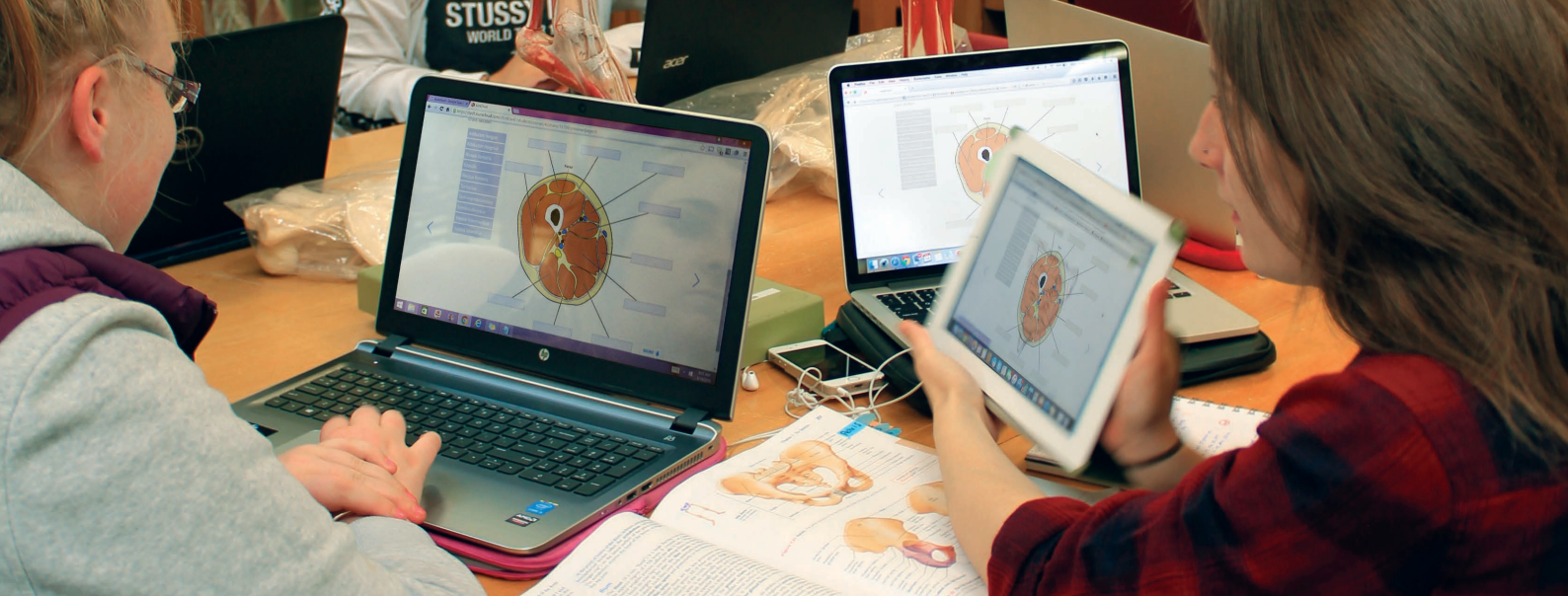
## Drag-and-Drop Content

Create lessons quickly using Lt's drag-and-drop feature. You can drag text and images from existing resources and drop them into 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

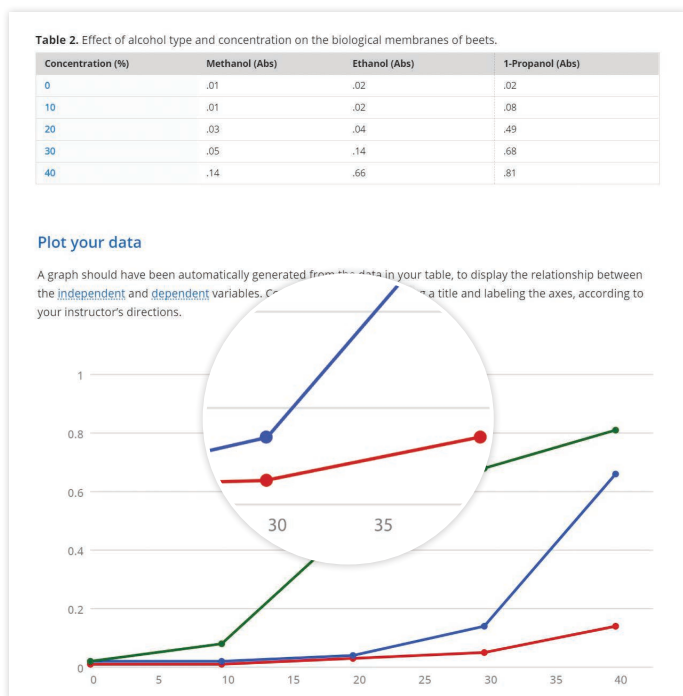
Lt supports a wide variety of content and media types. Easily create and deliver a variety of interactive lesson content. Select from 30+ panel types, including the new Hotspot Panel. This panel allows students to interact with images at different magnifications. Teachers can use it to direct student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





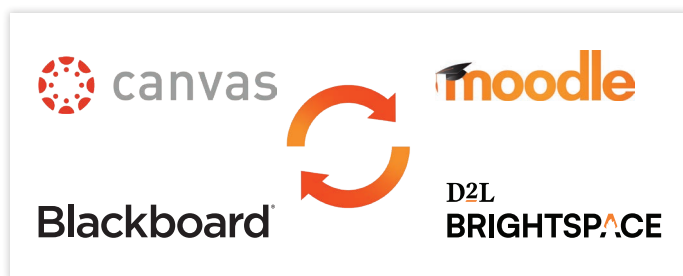
## Group Work

Lessons can be set to allow groups of students to log in and work together. Students can record and analyze data, and answer questions, as a team. If the group doesn't commit the lesson at the end of their session, individual students can log in later on to edit their answers before submitting for a final, individual grade.



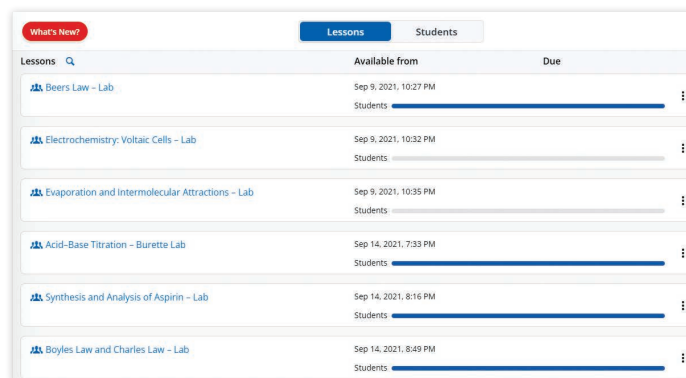
## Tables and Graphs

Students can enter data into tables or spreadsheets, and use Lt to create beautiful Bar, Line, or Scatter Graphs.



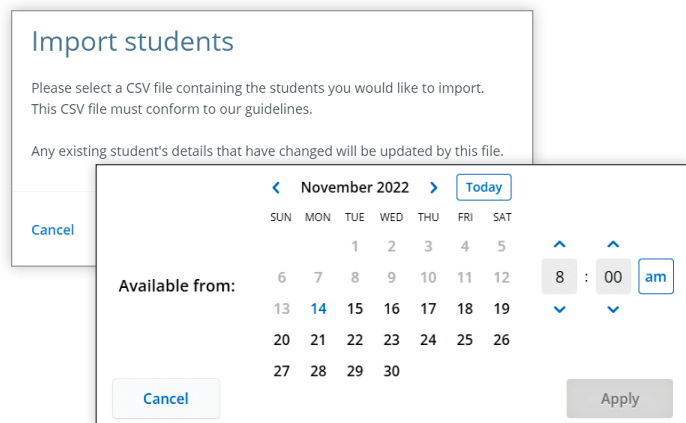
## LMS integration

Lt is a content development and delivery platform that works with your existing LMS. Lt currently integrates with Canvas, Blackboard, Moodle, and D2L Brightspace, so you can easily manage students. Synchronize students and grades, and create direct links to Lt lessons in your LMS.



## Analytics

Our analytics allow you to view class progress in each lesson and section in your course, and provide valuable insights about where and how students are interacting with course material.

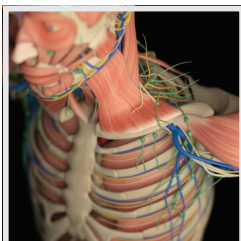


## Student Management

Students can be added individually, through .csv import or via LMS integration. Lt lets you sort your students into Sections, which means you can control which students access content. Send invites to Sections when you are ready. Sections also allow you to share specific students' work with graders. Lessons and Modules can be scheduled so that students can access content only at set times. You can also export student lists and get student emails from Lt.

Lt has 500+ interactive, fully-customizable lessons that integrate with advanced hardware to provide a true-to-life, active learning experience for your students.

Our science and healthcare collections include media-rich tutorials, pre-lab preps, labs, case studies, practices, quizzes, and evaluations designed to maximize engagement, with a strong focus on student outcomes. Use our lessons off-the-shelf or easily tailor any lesson to suit your curriculum.



## Lt Anatomy Collection

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

- 6 Dissection Lessons/Labs
- 14 Histology Lessons/Labs
- 9 Model Lessons/Labs



## Lt Animal Physiology Collection

Guide students toward 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 and teaching kits to provide an engaging, hands-on learning experience that helps prepare students for further research work.

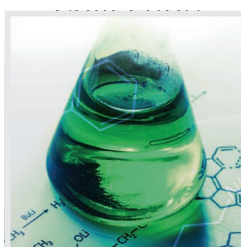
- 11 Pre-lab Prep Lessons
- 11 Interactive Laboratories



## Lt Biology Collection

The Lt Biology Collection, developed in partnership with Vernier® Science Education and Bio-Rad™ Laboratories, addresses core concepts in first-year undergraduate introductory biology. The collection introduces a variety of fundamental biology and biochemistry concepts, including enzyme action, spectrophotometry, microscopy, photosynthesis, DNA replication, pH, CRISPR, and PCR. Combine with Vernier's Go Direct® Sensors and Bio-Rad kits to provide an engaging, hands-on learning experience for students.

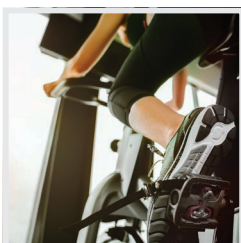
- 34 Interactive Laboratories



## Lt Chemistry Collection

The Lt Chemistry Collection, developed in partnership with Vernier® Science Education, addresses core concepts in first-year chemistry courses. The collection introduces a variety of fundamental chemistry concepts, including acid-base titration, states of matter, heats of reaction, synthesis, buffers, and equilibria principles. Combine with Vernier's Go Direct® Sensors 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, cardiorespiratory 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.

- 8 Pre-lab Prep Lessons
- 8 Interactive Laboratories
- 4 Tutorials



## 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. Use with Lt Sensors for simple, cost-effective data acquisition. Combine with Lt's Anatomy Collection for a complete A&P course on a single delivery platform.

- 29 Pre-lab Prep Lessons
- 34 Interactive Laboratories
- 46 Bioscience Tutorials

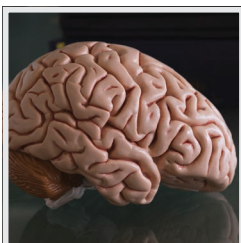




### Lt Medical and Preclinical Medicine

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.

- 13 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 toward 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. Students record their own biological signals directly into Lt using our hardware and teaching kits, making scientific theory relevant and real.

- 23 Pre-lab Prep Lessons
- 25 Interactive Laboratories
- 11 Tutorials



### 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 19 Clinical Skills Modules focus on core nursing practices to 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.

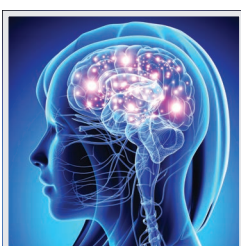
- 31 Real Patient Case Studies
- 15 Immersive Nursing Modules
- 19 Clinical Skills Modules



### Lt Pharmacology Collection

Engage your students with hands-on experiments exploring ligand-receptor binding and dose-response relationships using a variety of different tissue preparations. Record biological signals directly into Lt using our hardware and teaching kits.

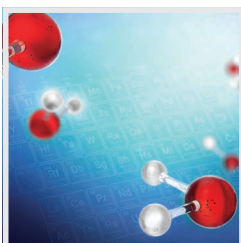
- 14 Pre-lab Prep Lessons
- 14 Interactive Laboratories



### 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
- 16 Interactive Laboratories
- 3 Tutorials



### Understand Your Chemistry

Understand Your Chemistry is an online, active-learning resource designed to help first-year students understand general chemistry via interactive questions, diagrams, and imagery. Students learn concepts fundamental to introductory physical and inorganic chemistry in lessons designed to be completed in 60 minutes or fewer.

- 40+ Lessons
- 600+ Diagrams
- 1400+ Interactive Multi-format Questions



### Understand Your Physiology

Developed by world-leading experts, Understand Your Physiology is an 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
- 2000+ Diagrams
- 3900+ Interactive Multi-format Questions



## 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.



### 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.”

### Customize 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 customize 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 its 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/lr](https://adi.to/lr)

Visit [adstruments.com](https://adstruments.com) or contact your local ADInstruments representative for more information

Australia | Brazil | Europe | India | Japan | China | Middle East | New Zealand | North America | Pakistan | South America | South East Asia | United Kingdom

[adstruments.com](https://adstruments.com)



**ADINSTRUMENTS**