

## Animal Physiology Collection

Giving students a clear understanding of core concepts



### Lt is a cloud-based learning platform that allows you to run labs without headaches.

Our Animal Physiology Collection includes customizable modules, which include a combination of a pre-lab prep and a lab. Combine lessons with our hardware teaching systems and kits to provide a true-to-life, practical learning experience for your students.

#### **Professionally developed lessons**

Zoology and Physiology students can investigate basic and applied concepts in neuro and muscle physiology. Courses are designed with common undergraduate insect, annelid, amphibian, and mammalian preparations.

Each media-rich lesson is designed to maximize 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. Lessons can be grouped, and ordered per your course needs.

#### "I have 500 students each semester, but my labs run smoother with Lt."

- Aura Grandidge, Manager Biology Labs, Anatomy and Physiology, University of Rhode Island



Improved efficiency

Increased student engagement



Improved results in theory and clinical practice



Increased student pass rates





Lt Animal Physiology Medicine Brochure 2018-A4 V2-0



### **Animal Physiology Collection**

#### **Cockroach Sensory Nerve**

Record CAPs, examine CAP amplitudes and frequency, and identify different "classes" of CAP.

#### **Cockroach Ventral Nerve Cord**

Record extracellular action potentials and determine the nerve conduction velocity.

#### **Earthworm Action Potentials**

Record extracellular action potentials, examine threshold voltage, 'all-or-none' response, refractory period, and conduction velocity.

#### **Earthworm Smooth Muscle**

Investigate the response of smooth muscle to neurotransmitters, temperature, and ions, and measure contraction rate and force.

#### **Frog Heart**

Measure the contraction force of cardiac muscle and an ECG to explain the relationship between stretch of cardiac muscle and the force of contraction.

#### **Frog Nerve**

Measure CAPs to explore the basic physiological properties of nerve impulses including the threshold, refractory period, and conduction velocity.

# Lt

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## **11** MODULE COLLECTION

#### **Frog Neuromuscular Junction**

Use an isolated frog gastrocnemius with an intact sciatic nerve to explore twitch recruitment, muscle fatigue, and the effects of tubocurarine.

#### **Frog Skeletal Muscle**

Investigate twitch recruitment, effects of muscle stretch, summation, tetanus, and fatigue.

#### **Getting Started with Lt**

An introduction to data sampling in Lt where students practice recording and analyzing some finger pulse data, and becoming familiar with features of Lt.

#### **Gin Trap Closure Reflex**

Record and analyze EMG data from a Manduca sexta pupal preparation.

#### **Intracellular Action Potentials**

Use a leech to become familiar with an intracellular amplifier and glass microelectrodes. Record and analyze both resting potentials and action potentials.

"Lt is very easy to use and make lessons myself."

 Anuj Bhargava, Physiology, The University of Auckland, New Zealand

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