



**There is a celebration,  
and your class is invited!**

## What is Biomechanics?

*Biomechanics* is a multidisciplinary science, which studies human and animal movement and the physical biology of living tissues. Biomechanics incorporates many STEM disciplines, such as physics, biology, chemistry, and math.

## What is National Biomechanics Day?

National Biomechanics Day is a celebration of biomechanics that will be held simultaneously in university labs across New Zealand. The movement began in the US as a way to expose secondary school students to hands-on experiential learning activities centred around biomechanics research. The event has become so popular that National Biomechanics Day is being celebrated by thousands of students and teachers across international borders, including UK, Canada, Brazil, and NEW ZEALAND!

## Why participate in National Biomechanics Day?

Your students will have access to state of the art equipment for collecting motion, muscle function and strength, and force. They will actively participate in lab demonstrations that show how biomechanics is applied to:

- ✓ Sport Performance
- ✓ Medicine and Medical Devices
- ✓ Physiotherapy and Health
- ✓ Animal Sciences
- ✓ Creative Arts and Media Production

## What Learning Outcomes will my students achieve?

The New Zealand National Biomechanics Day has been adapted to align with key points in all three action areas of *A Nation of Curious Minds – He Whenua Hihiri/Te Mahara*, and also addresses achievement outcomes (TKI levels 5-8) that are outlined in the New Zealand curriculum.

Specific Science Outcomes include:

- ✓ Understand that scientists' investigations are informed by current scientific theories and aim to collect evidence that will be interpreted through processes of logical argument.
- ✓ Investigate how physics knowledge is used in a technological or biological application.
- ✓ Investigate physical phenomena (in the areas of mechanics, electricity, electromagnetism, light and waves, and atomic and nuclear physics) and produce qualitative and quantitative explanations for a variety of unfamiliar situations.
- ✓ Use physics ideas to explain a technological, biological, or astronomical application of physics and discuss related issues.

Specific Physical Education Outcomes include:

- ✓ Apply relevant scientific, technological, and environmental knowledge and use appropriate resources to improve performance in a specialised physical activity.
- ✓ Critically analyse and experience the application of scientific and technological knowledge and resources to physical activity in a range of environments.
- ✓ Devise, apply, and evaluate strategies to improve physical activity performance for themselves and others.

## How do I get involved?

Visit our facebook page: <https://www.facebook.com/NZ-National-Biomechanics-Day-582100951994801/>

Send us an email: [nz.biomech.group@gmail.com](mailto:nz.biomech.group@gmail.com)