

## Product Information Sheet

### Force Sensor



Our range of science experiment kits will equip you with all you need to carry out each of the practical experiments included in your LJ Create science program.

The kits can be used for teacher demonstration, individual student, or group activities.

The Data Logging equipment has been produced for ease of use in a wide range of science and technology applications.

This data logging sensor has been designed for performing experiments that require force measurements to be recorded and stored for analysis.

- Sampling speed up to 20us intersample time
- Supplied with Spring, solid and rubber cushioned stops, hook
- Measures compressive and extensive forces. In collisions only measures compressive forces
- PC Software function can change force to inverse

The sensor can be used in a range of teaching applications, including:

- Simple harmonic motion in a spring
- Centripetal force in a pendulum
- Bungee (impulse, momentum, conservation of energy and resultant forces)
- Newton's laws of motion e.g. action and reaction
- Frictional forces
- Hooke's law
- Resultant forces – static and dynamic
- Impulse and collisions

#### Sensor Specifications:

- Range:  $\pm 50\text{N}$
- Resolution: 0.1N

#### Examples of some extension and advanced ideas include:

- Changes in the circumference of a tree during a 24 hr period
- Buoyant force (flotation and resultant forces)
- Forces and moments in levers
- Triangle of forces
- Demonstration balance
- Muscle fatigue test

#### Items Included:

- Sensor and Force Spring

#### Other Items Required:

- Data logger (520-01)
- LJ Create Science Content and Computer

#### General Information:

Packed Volume: Approx. 0.0005 m<sup>3</sup>  
Packed Weight: Approx. 0.2 kg

**Order Code: 520-02**

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