**Research Ideas**

***Human Performance Measures***

With any measure of human performance, you should only collect data on members of your group.

Measures

* Reaction speed (button, distance sensor)
* Memory (button)
* Proprioception (ability to sense body position) (distance sensor)
* Balance
* Force generation (Load cell)

***Environmental Conditions Measures***

* Light levels (photoresistor)
* Temperature (temperature sensor)
* Wind velocity (anemometer)

***Physics/Material Science Measures***

* Oscillatory dynamics of a mechanical system (accelerometer)
* Beam bending of a rod (distance sensor)
* Hooke’s law experiment (load cell and distance sensor)
* Rubber band elasticity and temperature (distance sensor or temperature sensor)
* Force required for failure of a material (load cell)
* Heat transfer from heat source through metal rod (temperature sensor)

Sensors available in addition to those in the kit:

* Accelerometer <https://learn.adafruit.com/adafruit-analog-accelerometer-breakouts/overview>
* Accelerometer <http://wiring.org.co/learning/basics/accelerometer.html>
* Load Cell (HX711) <https://www.sparkfun.com/products/13879> <https://www.sparkfun.com/products/13329>
* Rotary Encoder <https://www.adafruit.com/product/377>
* Anemometer <https://moderndevice.com/product/wind-sensor/>
* Wheel Encoder <https://www.youtube.com/watch?v=oLBYHbLO8W0>