

## The possible uses for the Edulogger-sensors

Subject = Biology

Edulogger - Sensor	Cat. code	What apparatus can sensor be used in conjunction with or enhance?	Possible Experiments	Level
Carbon dioxide	900-230	Photosynthesis Teaching Model (niC) Investigating photosynthesis (124) and Microslide set (p124); O <sub>2</sub> ; humidity and light sensors	Anything connected to photosynthesis;	KS3, KS4, KS5
		Teaching Cell Respiration (p64)	Experiments on respiration at all levels including germination of seeds	KS3, KS4, KS5
Oxygen	900-205	Photosynthesis Teaching Model (niC) Investigating photosynthesis (124) and Microslide set (p124); CO <sub>2</sub> ; humidity and light sensors; soil moisture sensor	Anything connected to photosynthesis;	KS3, KS4, KS5
		Teaching Cell Respiration (p64); CO <sub>2</sub> Sensor humidity Sensors	Experiments on respiration;	KS3, KS4, KS5
		pH sensor; turbidity and light sensors	Experimental fieldwork where variations in oxygen levels, for example in fresh water can be investigated.	KS5 mostly
Spirometer	900-226	Lung volume kit on p.91; The breathing fitness lab (p.92); Heart fitness lab (p.92);	Measure the FEV1 of individuals before and after exercise. A good measure of fitness levels.	KS3, KS4, KS5
UVB	900-240	Quartz cuvettes containing material of interest e.g. DNA	Examine the efficacy of different sun blockers	KS5
UVA	900-242	Plastic Film	Examine the efficacy of different sun blockers	KS5
		Cuvettes; skin model(s) p.108	Measure levels of NADH in a solution	KS5
Temperature	900-203	Any of the above sensors	Effect of temperature on photosynthesis or respiration etc - many uses	KS4, KS5

Edulogger - Sensor	Cat. code	What apparatus can sensor be used in conjunction with or enhance?	Possible Experiments	Level
Heart rate and pulse	900-208	Functioning heart and circulatory system (p103) Heart fitness lab (p.92); Lung volume kit on p.91; The breathing fitness lab (p.92); Heart model(s) p. 112; Human torso (p.102); stethoscope (p.112); GSR sensor; spirometer	Measure the pulse rate of individuals before and after exercise. A good measure of fitness levels. For any investigations involving lung volume and fitness.	KS3, KS4, KS5
			Look at the pattern of the heart beat to illustrate systole and diastole	KS4, KS5
			Use with GSR sensor as a Lie detector	KS4, KS5
EKG	900-228	Heart fitness lab (p.92); Heart model(s) p. 112; Human torso (p.102); stethoscope (p.112)	Look at EKG patterns before and after exercise.	KS5
Turbidity	900-241	Filtration apparatus; O <sub>2</sub> and CO <sub>2</sub> sensors	On field trip look at turbidity as an abiotic factor	KS5
Soil moisture	900-239	Du-all box (NiC); Use along with CO <sub>2</sub> and oxygen sensors	The germination of seeds under different conditions. Water concentration in different soil types and altitudes.	KS4 and KS5
Respiration	900-246	Functioning heart and circulatory system (p103) Heart fitness lab (p.92); Lung volume kit on p.91; The breathing fitness lab (p.92); Heart model(s) p. 112; Human torso (p.102);	Any experiment that involves respiration	KS3, KS4, KS5
Blood pressure	900-232	Functioning heart and circulatory system (p103) Heart fitness lab (p.92); Lung volume kit on p.91; The breathing fitness lab (p.92); Heart model(s) p. 112; Human torso (p.102);stethoscope (p.112)	Look at blood pressure before and after exercise	KS4, KS5

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Galvanic skin response	900-227	Brain models p107; endocrine system model activity set p105; human torso models p102; As part of forensics investigation kits in solving crimes.	Look at aspects of the autonomic nervous system and how we react to various stimuli	KS4, KS5
Light	900-204	Photosynthesis Teaching Model (niC) Investigating photosynthesis (124) and Microslide set (p124); O <sub>2</sub> ; humidity and light sensors	Anything connected to photosynthesis;	KS3, KS4, KS5
Anemometer	900-260	All field study apparatus	Measure wind speed - Use on Field trip for Biology or Geography.	KS4 and KS5
Dew Point	900-262	All field study apparatus		KS4 and KS5
Humidity	900-207	Photosynthesis Teaching Model (niC) Investigating photosynthesis (124) and Microslide set (p124); O <sub>2</sub> ; humidity and light sensors	Anything connected to photosynthesis;	KS3, KS4, KS5
Colorimeter	900-229	Pestle and Mortar; centrifuge; Plant pigments and photosynthesis p150.	Analysis of colours of pigments from leaf	KS5
Nitrate	900-259	All soil products and Sachs medium	Soil analysis along with soil moisture	KS3; KS4; and KS5

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Spirometer	900-223	Use along with stethoscope; Spirometer; lung volume kit	For any investigations involving lung volume and fitness	KS3, KS4, KS5
Exercise Heart Rate	900-265	Spirometer sensor. Treadmill/other exercise equipment.	Allows accurate Heart rate measurement whilst exercising	KS4/5