

ACTIVITY 6 – sample student work

Physics

Paper 1P, Q6(a)(ii)

- ① Using different voltages on the power pack to change the voltage
- ② ^{Record} ~~Records~~ the readings from the voltmeter (voltage) and Ammeter (current) ^{for} each time
- ③ Repeat the experiment
- ④ plot a graph ~~at~~ with ^{voltage} ~~current~~ against ~~voltage~~ current.

Use a voltmeter to measure the voltage

Use an ammeter to measure the current

Repeat each set of values three times to find a mean score (value).

place the voltmeter in parallel.

place the ammeter in series.

Measure the current & the voltage across the circuit and

the bulb with the switch closed. Then ~~measure~~ increase the ~~on~~ voltage, measure it and then measure the current.

Continue to repeat these steps. Once ~~done~~ done, repeat

the ~~whole~~ whole experiment another 3x and then take an average.

Paper 1P, Q12(b)

Right before the dough is dropped, all the energy is in the gravitational potential store. Just before it hits the floor, all the energy in the gravitational potential store is transferred mechanically into the kinetic store. After the dough has hit the floor, energy from the kinetic store is transferred mechanically into the thermal and sound store.

Before the ball is dropped it gains gravitational potential energy which is then converted to kinetic energy as the ball is dropped as it loses gravitational potential energy as it gains kinetic energy. After the dough has hit the floor it loses kinetic energy and then the remaining energy is wasted as ^{thermal} heat energy and sound energy which is given off into the surroundings.

energy cannot be created nor destroyed only transferred.

Before the dough is dropped it has a store of Gravitational potential energy. Just before it hits the floor almost all of this has been transferred to a kinetic energy store. After the dough has hit the ground the kinetic energy has been transferred to the ground. Then from the ground to the dough causing it to lose its shape.

Paper 1PR, Q4(b)(ii)

The plastic cover traps ~~po~~ air and the water which prevents any circulation and convection currents. The air trapped is a poor conductor of heat so thermal energy transfer by conduction is reduced.

Plastic is a ^{heat} insulator therefore it doesn't allow heat to escape / be lost from the pool. The water ~~doesn't~~ doesn't cool down at night, only a little. As little amounts of heat is lost through small holes or uncovered areas. No heat is allowed to enter so the temperature of the water remains the same for as long as it is covered.

Plastic is a good insulator so it doesn't let the heat from the pool escape, this allows water to stay cool for a longer time. Plastic is a good ^{insulator} ~~conductor~~ because it has no free electrons to carry thermal energy emitted by the hot water molecules.

Paper 1PR, Q2(a)(iii)

Irradiation is when a material is exposed to ~~radio~~ ionising radiation but doesn't become radioactive itself. Contamination is when unnecessary radioactive isotopes end up on a material, making it ^{release} radioactive emissions.

Contamination is when the daughter nuclei reacts with the atom forming a waste material or around it, ~~as a~~

Contamination is the entrance of unnecessary substances as waste while irradiation is when harmful radiation escapes from the system.