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| Topic heading | Syllabus Ref | Idea cluster | Question |
| Electrical circuits | KS3 P3.1 | Electrical circuits | The correct definition for a current is:   1. Rate of flow of charge past a point 2. No. of electrons flowing past a point. 3. Total no. of electrons in a circuit. 4. How hard it is for an electron to flow. |
|  | KS3 P3.2 | Electrical circuits | The unit of electrical charge is:   1. Ohm 2. Volts 3. Ampere 4. Coulomb |
|  | KS3 P3.3 | Electrical circuits | Which of the following is a series circuit:  a)    b)    c)    d) |
|  | KS3 P3.4 | Electrical circuits | Explain how an ammeter measures current:   1. Connected in parallel so current flows through it 2. The quantum electron deflector measures flow. 3. Connected in series so current flows through it. 4. Connected in parallel so current cannot flow through it. |
|  | KS3 P3.5 | Electrical circuits | Why is current constant throughout a series circuit?   1. The electrons follow the same route, they cannot disappear. 2. Electrons travel at the same speed; it always adds up. 3. Excess electrons disappear. 4. Current is controlled by the power source. |
|  | KS3 P3.6 | Electrical circuits | What effect would a junction in a circuit have upon the current flowing?   1. Current is split at this point. 2. Current is doubled at this point. 3. Current is halved at this point. 4. Current is unaffected at this point. |
|  | KS3 P3.7 | Electrical circuits | If the reading on ammeter 1 I 4 A what will the reading on the second ammeter be?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.46.15.png   1. 4 A 2. 8 A 3. 2 A 4. 3 A |
|  | KS3 P3.8 | Electrical circuits | What is potential difference?   1. Energy transferred to electrons. 2. How much push electrons experience? 3. Difference in the flow of electrons. 4. How long a battery lasts for. |
|  | KS3 P3.9 | Electrical circuits | In which circuit is the voltmeter correctly positioned to measure the voltage of the lamp?  A Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.48.37.png  B Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.49.03.png  C Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.49.20.png  D Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.49.50.png |
|  | KS3 P3.10 | Electrical circuits | What is the common word for potential difference?   1. Voltage 2. Volts 3. Coulombs 4. Potential difficulty |
|  | KS3 P3.11 | Electrical circuits | If the reading on the first voltmeter is 6 V what will the reading on the second voltmeter be?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.58.29.png   1. 6 V 2. 12 V 3. 3 V 4. 2 V |
|  | KS3 P3.12 | Electrical circuits | What will the readings be on voltmeters 1 & 2?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 06.59.41.png   1. V1 6V, V2 6V 2. V1 3V, V2 3V 3. V1 6V, V2 3V 4. V1 4V, V2 2V |
|  | KS3 P3.13 | Electrical circuits | What is the formula for Ohm’s law?   1. V = IR 2. V = I/R 3. V = R/I 4. Ω = VI |
|  | KS3 P3.14 | Electrical circuits | What is the total resistance in this circuit?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.06.18.png   1. 8Ω 2. 16Ω 3. 4Ω 4. 32Ω |
|  | KS3 P3.15 | Electrical circuits | What is the total resistance in this circuit?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.07.01.png   1. 0.67Ω 2. 2Ω 3. 6Ω 4. 8Ω |
|  | KS3 P5.1 | Electromagnetism | What charge does an atom have?   1. Equal amounts of positive and negative charge. 2. Positive 3. Negative 4. Expensive |
|  | KS3 P5.2 | Electromagnetism | If electrons are rubbed off a material, what is the resultant charge?   1. Positive 2. Negative 3. Neutral 4. No charge |
|  | KS3 P5.3 | Electromagnetism | Which diagram correctly shows the direction of the magnetic field around a simple bar magnet?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.11.59.png |
|  | KS3 P5.4 | Electromagnetism | What would a physicist define as a field?   1. An area where an object experiences forces without touching. 2. An area where an object experiences forces with touching. 3. An area where an object experiences no force. 4. An area to grow things. |
|  | KS3 P5.5 | Electromagnetism | Which diagram best describes what happens to charge when a rubbed balloon is attracted to a wall?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.13.57.png |
|  | KS3 P5.6 | Electromagnetism | A compass is placed between two bar magnets as shown in the diagram below. In which direction will the compass point?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.15.28.png |
|  | KS3 P5.7 | Electromagnetism | What happens to the iron filings when the switch is closed?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.15.58.png  Iron core   1. They will vibrate 2. They will be attracted to the ends of the iron core 3. They will be attracted to the middle of the iron core 4. They will be repelled from the iron core |
|  | KS3 P5.8 | Electromagnetism | What happens to the wire when the switch is closed?  N  S   1. The wire will spin 2. The wire will be repelled from between the magnets 3. The magnets will spin 4. The magnets will become hot |
|  | KS3 P6.1 | Forces in fluids & gases | What happens when a balloon is inflated?   1. Air particles colliding with a surface and imparting a force on it. 2. Air particles on outside holding it inflated. 3. Air particles expanding to inflate the balloon. 4. Fewer air particles on outside allowing balloon to expand. |
|  | KS3 P6.2 | Forces in fluids & gases | If a balloon was inflated on the moon where there is no air what would happen and why?   1. The balloon would inflate just like it does on Earth. 2. The balloon would inflate more slowly because there is less gravity on the moon. 3. The balloon would explode because there would be no air pressure pushing back against the balloon. 4. The balloon would explode because there is so much air pressure on the moon. |
|  | KS3 P6.3 | Forces in fluids & gases | Which is the correct equation for pressure?   1. P = F/a 2. P = F x a 3. P = F x a2 4. P = a2/F |
|  | KS3 P6.4 | Forces in fluids & gases | When a cork is in water two forces act upon it, weight and upthrust. Which picture best describes the forces on the cork when it is floating on the surface?  B  A  C  D |
|  | KS3 P6.5 | Forces in fluids & gases | Which statement explains best why the person can float and read the newspaper?   1. Upthrust from the sea is greater than the weight as the sea is denser. 2. Upthrust from the sea is less than weight as the sea is denser. 3. Upthrust from the sea is greater than weight as the sea is less dense. 4. Downthrust from the person is less than the sea. |
|  | KS3 P6.6 | Forces in fluids & gases | Which is the incorrect arrangement of the density equation?   1. ρ = m/v 2. m = ρv 3. v = m/ρ 4. ρ = m x v |
|  | KS3 P6.7 | Forces in fluids & gases | Why do ships float of the surface of the water?   1. Density of the ship is more than the sea. 2. Density of the ship is less than the sea. 3. Density of the ship is equal to the sea. 4. Density of the sea is less than the ship. |
|  | KS3 P6.8 | Forces in fluids & gases | Why do submarines have thick external walls?   1. Because water pressure decreases with depth. 2. pressure is constant at any depth. 3. Because water pressure increases with depth. 4. To keep out the cold. |
|  | KS3 P7.1 | Speed | Which is the correct equation for speed?   1. s = d/t 2. s = d x t 3. s = t/d 4. s = mph |
|  | KS3 P7.2a | Speed | Which graph shows constant speed?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.41.39.png |
|  | KS3 P7.2b | Speed | Which graph shows greatest distance travelled?  Macintosh HD:Users:Richard:Desktop:Screen Shot 2017-01-14 at 07.42.22.png |