| Energy Transfer by heating Questions | Energy Transfer by heating Answers |
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| 1. What does "emit" mean? | To give off |
| 2. What determines whether a body will emit or absorb IR radiation? | Temperature difference between the body and surroundings |
| 3. Give an advantage and a disadvantage of the Greenhouse effect. | It keeps living things warm but it also will cause melting of the polar ice caps |
| 4. Why doesn't conducted or convected heat come from the Sun? | Conduction and convection does no occur in a vacuum |
| 5. What factors affect the rate at which IR heat can be emitted or absorbed? | Size, surface area, temperature difference, volume |
| 6. What are the three states of matter and the names of the processes which cause changes from one form into another? | Solid, liquid, gas; freezing and melting, boiling and condensing, sublimation |
| 7. Describe what determines a good and bad conductor. | Particles close together and if there are free electrons |
| 8. Give FOUR examples of where convection currents occur. | Sea, River, Wind, smoke rising |
| 9. What factors determine the rates of evaporation and condensation? | Surface area, temperature, creating a draught across the surface |
| 10. Describe how and explain why a desert fox survives in the desert. | They have big ears to cool their blood as there is a large surface area in contact with the air |
| 11. Explain why it is necessary for | They have a large specific heat capacity |

| Electrical Energy Questions | Electrical Energy Answers |
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| 1. Why is electrical energy so useful? | It can be transferred into a useful energy form at the flick of a button |
| 2. Name 5 appliances that transfer electrical energy into something useful. | Kettle, oven, fridge, tv, hairdryer |
| 3. What is the equation for power? | Power=Energy/time |
| 4. What is meant by power and what are the two distinctive units for power? | How quickly energy is transferred and it is measured in J/s OR W |
| 5. Why Kilowatt-hours used as units of electrical energy rather than Joules? | They are a larger unit of energy |
| 6. What is the equation for working out the cost of an electrical bill knowing the number of Units used and the cost per unit? | Cost = cost per unit x number of units used |
| 7. What is meant by "cost-effectiveness" and therefore "Payback" time? | It's how long it takes for you to get your money back. |
| 8. Give 5 ways of reducing heat lost in the home. | Loft insulation, cavity wall insulation, draught excluders, carpet, double glazing |

| Waves Questions | Waves Answers |
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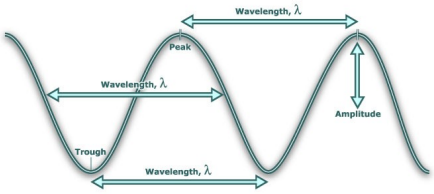
| 1. What is the definition of a wave? | Waves transfer energy |
| 2. What is the difference between a longitudinal and transverse wave? | Transverse vibrate at right angles to the direction they're moving: Longitudinal vibrate in parallel to the direction they're moving |
| 3. What is a rarefaction? | An expanded part of the wave (opposite to compression) |
| 4. Draw a wave and label the amplitude and wavelength. |   |
| 5. What is the wave equation? | Wave speed = frequency x wavelength |
| 6. Define amplitude and wavelength. | Amplitude: maximum distance from midpoint to peak; wavelength: distance between peak and next peak |
| 7. What is the law of reflection? | Angle of reflection=Angle of Incidence |
| 8. What is the difference between a virtual and real image? | Virtual is imaginary, Real is Real |
| 9. Define refraction and describe what happens to the waves speed, frequency and wavelength as it passes | When a wave changes direction as it passes from one medium to another. Wave speed decreases, wavelength |