5901977838

# Gateway Science

## OCR GCSE J645 Physics Unit B655

## Skills Assessment Record

| | | | |
|---|---|---|---|
| **Centre Name** | | | |
| **Centre Number** | | **Candidate Number** | |
| **Candidate Name** | | | |

The Moderator appointed by OCR will require a completed copy of this Skills Assessment Record for each of the candidates whose work is required for moderation. The assessed Science in the News report and cover sheet should be enclosed within this Skill Assessment Record for each of these candidates.

Centres will need to keep adequate records of the attainment of all of their candidates for GCSE Gateway Science, and may use this form as a means of keeping records. However, centres are free to devise and develop their own record-keeping systems, providing that such a system will (if required by OCR for moderation purposes) allow each candidate's performance in all of the Can-Do tasks and for the assessed Science in the News report to be verified by a Moderator.

### Summary of Skills Assessment Attainment

| | | | |
|---|---|---|---|
| Can-Do Tasks | Mark out of **24** | | |
| Science in the News Report | Mark out of **36** | | |
| Transfer this total to the MS1 form and submit by January 10th in the year of entry for this unit | **Total mark out of 60** | | |
| Name of teacher completing this form | | | |
| Date of completion and submission of marks | | Date | |

| Candidate Name | Centre No | Candidate No |
|---|---|---|
| | | |

| | | **Basic : 1 point Can-Do Tasks** | Date | Pt |
|---|---|---|---|---|
| 1 | P1a<br>P1d<br>P2a | I can accurately measure the temperature of an object in $^0$C. | | 1 |
| 2 | P1c | I can design a demonstration to show a convection current. | | 1 |
| 3 | P1e | I can draw a ray diagram to show the path of a ray of light along an optical fibre. | | 1 |
| 4 | P1e | I can identify analogue and digital signals on equipment. | | 1 |
| 5 | P1h | I can calculate the time I can safely spend in the Sun from a knowledge of normal burn time and the SPF of a sun screen. | | 1 |
| 6 | P2a | I can use a voltmeter to measure voltage. | | 1 |
| 7 | P2c | I can read a domestic electricity meter. | | 1 |
| 8 | P2e | I can use a compass to find the direction of a magnetic field. | | 1 |
| 9 | P2f | I can use ICT to produce a labelled model of our Solar System. | | 1 |
| 10 | P5a | I can show two types of orbit of an artificial satellite on a world globe. | | 1 |
| 11 | P5f | I can produce an interference pattern in a ripple tank. | | 1 |
| 12 | P5g | I can project a visible spectrum onto a screen using a prism. | | 1 |
| 13 | P5h | I can use a convex lens to project a real image onto a screen. | | 1 |

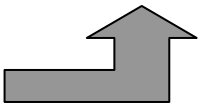
| | | **Intermediate : 2 point Can-Do Tasks** | Date | Pts |
|---|---|---|---|---|
| 14 | P1a<br>P1d | I can use a thermogram to identify areas of different temperature. | | 2 |
| 15 | P1b | I can use secondary sources, eg the internet, to compare the effectiveness of different insulating methods of different combinations of insulating materials. | | 2 |
| 16 | P1c | I can plot an accurate line graph of a cooling curve. | | 2 |
| 17 | P1g | I can send and receive a message in Morse code. | | 2 |
| 18 | P2b | I can use an oscilloscope to measure the maximum voltage of AC. | | 2 |
| 19 | P2c | I can use meter readings to calculate the cost of using electricity. | | 2 |
| 20 | P2d | I can describe how to handle radioactive sources safely. | | 2 |
| 21 | P2e | I can use a plotting compass to map the magnetic field around a coil or magnet. | | 2 |
| 22 | P2g | I can make a telescope from a pair of lenses. | | 2 |
| 23 | P2h | I can use ICT to find out about the stages of a star's life cycle and to put the stages in the correct order. | | 2 |
| 24 | P6a | I can wire a simple series circuit, to include resistors, from a circuit diagram. | | 2 |
| 25 | P6g | I can build a logic gate circuit using either an AND or an OR gate to perform a particular job. | | 2 |

| | | **Advanced : 3 point Can-Do Tasks** | Date | Pts |
|---|---|---|---|---|
| 26 | P1a | I can carry out an experiment to find out the energy needed to melt ice. | | 3 |
| 27 | P1c | I can carry out an experiment to compare the performance of different insulating materials. | | 3 |
| 28 | P1d | I can present a balanced argument in favour of or against the positioning of a mobile phone mast. | | 3 |
| 29 | P1e | I can find the critical angle of glass / Perspex. | | 3 |
| 30 | P1f | I can use information about transmitter location and frequencies to tune a radio. | | 3 |
| 31 | P2a | I can carry out an investigation to find out how the voltage produced by a photocell varies with distance from a light source. | | 3 |
| 32 | P2b | I can use an oscilloscope to measure the frequency of AC. | | 3 |
| 33 | P2c | I can find the energy transferred in an electrical circuit using an ammeter, voltmeter and a timer. | | 3 |
| 34 | P2f | I can use data on sizes and distances to design a model of our solar system to fit inside the laboratory or onto the school grounds. | | 3 |
| 35 | P5b | I can perform an experiment with electrical or electronic equipment and then calculate the acceleration due to gravity, | | 3 |
| 36 | P5g | I can measure the angles of incidence and refraction and use the values to calculate the refractive index of material. | | 3 |
| 37 | P5h | I can construct my own refracting telescope. | | 3 |
| 38 | P6b | I can design and construct a potential divider circuit to achieve a given output pd. | | 3 |
| 39 | P6c | I can build a model dc electric motor. | | 3 |
| 40 | P6d | I can build a model generator. | | 3 |
| 41 | P6e | I can construct and explain a model high voltage power line. | | 3 |
| 42 | P6f | I can build a full-wave rectification circuit. | | 3 |
| 43 | P6h | I can build a logic gate circuit using at least two AND or OR gates to perform a particular job. | | 3 |

**Determining the total attainment on this component**

Choose the best **eight** highest scoring Can-Do Tasks which have been successfully completed.

Click in the points box at each of the **eight** Tasks which have been chosen.

| | | **Number of Tasks** | **Points** |
|---|---|---|---|
| Basic Tasks | 1 point | | |
| Intermediate Tasks | 2 points | | |
| Advanced Tasks | 3 points | | |
| **Totals** | | **/8** | **/24** |

**This total transfers to the box on Page one**