

## Advanced Higher Physics – Success Criteria

### Formal Assessments:

- ✓ Percentage achieved in Formal Assessments.
- ✓ Consistency shown in Formal Assessments.
- ✓ Areas of strength and areas for development as a result of Formal Assessments.
  - Knowledge and understanding
    - **Rotational motion and astrophysics**
      - kinematic relationships
      - angular motion
      - rotational dynamics
      - gravitation
      - general relativity
      - stellar physics
    - **Quanta and waves**
      - introduction to quantum theory
      - particles from space
      - simple harmonic motion
      - waves
      - interference
      - polarisation
    - **Electromagnetism**
      - fields
      - circuits
      - electromagnetic radiation
    - **Units, prefixes and uncertainties**
      - units, prefixes and scientific notation
      - uncertainties
      - data analysis
      - evaluation and significance of experimental uncertainties
  - Scientific inquiry and investigation skills
    - planning and designing physics experiments/investigations, using reference material and including risk assessments, to test a hypothesis or to illustrate particular effects, selecting information from a variety of sources and presenting detailed information, appropriately, in a variety of forms
  - Analytical and problem-solving skills in a Physics context
    - critically evaluating experimental procedures by identifying sources of uncertainty, suggesting and implementing improvements, analysing and evaluating scientific publications and media reports

### Informal Assessments:

- ✓ Areas of strength and areas for development as a result of Informal Assessments.
- ✓ Consistency shown in Informal Assessments.
- ✓ Structure of answers and examples used in written responses.

### Investigation – 30% of overall SQA grade:

- ✓ That I can clearly follow the success criteria for the investigation.
- ✓ Create an abstract – aim(s), finding(s)/conclusion(s)
- ✓ Introduction – underlying physics

- ✓ Procedure including completion of practical investigation
- ✓ Results – including uncertainties
- ✓ Discussion – conclusion(s) and evaluation
- ✓ Structure

**Class/Homework:**

- ✓ That I have full and clear notes on all topics covered in the course.
- ✓ I will engage in learning and complete the activities asked of me to the best of my ability.
- ✓ That I respond positively to any advice on homework and try to improve this area.

**What will be taken into consideration when deciding on a teacher-estimated grade for Advanced Higher Physics?**

- Performance in the Formal Assessment(s) e.g. End of Unit assessments/FAB.
  - Weighting – 40% Unit 1, 70% FAB 1, 100% FAB 2
- Performance in the informal assessments, which are ongoing throughout the year:
  - Form quizzes on teams
  - Practice timed questions in class.
- The completion of the assignment (30% of overall SQA grade).
- Commitment and Quality in class
- Commitment and Quality of homework.