



GCSE ENGINEERING

Non-Exam Assessment

For candidates entering for the XXXX examination
To be issued to candidates at the start of the final academic year of their course of study.

Information

- The assessment is designed to be completed in approximately 30 hours.
- The assessment period is not required to be continuous.
- There are restrictions on when and where students can work on this brief. Please see the Teachers' Notes that accompany this brief for more information about these restrictions.
- Submission may be paper-based or electronic using CD/DVD.
- Students will need to complete and sign a Candidate Record Form (CRF) which declares that the work is entirely their own. This must be countersigned by the teacher.
- Students are expected to complete **one** task from **one** context only.

Context

People have a huge impact on the environment. From the waste we produce to the energy we consume, we are constantly using limited resources.

Engineers often focus on ways of limiting the impact humans have on the planet. Below is a problem that engineers face on a day-to-day basis. Your task is to identify a solution to the problem outlined below and produce an engineered product to help solve the problem.

In addition to the problem there are three examples of how the problem could be solved. You can choose a solution from this list or you can create your own.

Your solution must include both mechanical and electronic components to provide an integrated product.

Problem

It is often necessary to sort through waste products such as litter. Due to the fact that this can be unhygienic, it is helpful if this can be done mechanically. Your task is to engineer a solution to this problem that will reduce the negative impact on the people who are involved in collecting or sorting litter.

Examples of possible solutions

Engineer a product that someone can use outdoors to pick litter without bending over.

Engineer a product or system that reduces the bulk of litter.

Engineer a product or system that sorts three objects of different sizes.
