



CONTENTS	Page
1.0 INTRODUCTION.....	1
2.0 MISSION STATEMENT .....	1
3.0 AIMS & OBJECTIVES .....	1
4.0 STUDENT STEM GROUP .....	2
5.0 DISPLAY AREAS.....	2
6.0 FOSTERING PARTNERSHIPS.....	3

### 1.0 INTRODUCTION

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**Implementation:** It is the responsibility of line managers to ensure that staff members are aware of and understand this policy and any subsequent revisions.

**Compliance:** This policy complies with all relevant regulations and other legislation as detailed in the Compliance with Regulations & Legislation Statement.

### 2.0 MISSION STATEMENT

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“The UK engineering and science industries are recognised as a vital element of the overall UK economy, however, skills shortages in these areas will threaten the UK’s capacity for growth.”  
*The STEM cohesion programme: final report DFE*

“A study published in November 2012 in the *Journal of Autism and Developmental Disorders* found that people with an autism spectrum disorder (ASD) are drawn to STEM fields more often than the general population or people with different disabilities.”

<http://stemwire.org/2013/07/24/unlocking-potential-the-bridge-between-autism-and-stem> Courtni Kopietz

**Mission Statement:**

STEM education is more than its constituent parts of science, technology, engineering and mathematics. Effective provision of STEM requires a foundation of strong subject teaching but it also requires an interdisciplinary approach to learning that ensures young people are aware of the rich and varied opportunities that STEM study opens up for them. By reaching outside their own classroom, teachers can collaborate across subjects, enhance and enrich the school curriculum, make links with the world of work, and use varied contexts to help pupils relate school STEM subjects with their real-world experience. Hillingdon Manor will, over the next two years set about implementing a whole school approach to integrating STEM studies in order to improve life skills and improve outcomes for our students upon leaving school.

### 3.0 AIMS & OBJECTIVES

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**Aims:**

By implementing a cross curricular, integrated approach to STEM education Hillingdon Manor will aim to:

- Improve engagement across the curriculum by leveraging pupils’ existing strengths and interests in science, technology, design and mathematics.
- Stimulate cross curricular collaboration between staff and pupils and break down the barriers between subjects.
- Raise pupil self-esteem and aspiration for their future.



- Raise awareness of the broad range of training and career opportunities available in STEM industries.
- Increase our students analytical and problem solving skills for use in education and in the wider context of their life.
- Increase opportunities for work experience in STEM industries and look into encouraging local businesses to consider ASD internship schemes such as those growing in popularity around the world.

### Objectives:

In order to meet these aims Hillingdon Manor will:

- Create a STEM steering committee of staff representing: primary and secondary education, STEM and non-STEM subjects and representing national curriculum and ICLS classes.
- Create cross curricular learning opportunities at both, primary and secondary sites through:
- Themed STEM days with a series of activities leading up to the day.
- **At primary:** continuing to encourage topic and project based learning whilst providing additional CPD training to teachers and investment in STEM resources.
- **At secondary:** developing more collaborative work between STEM subjects and providing additional training to improve the quality teaching of these subjects.
- Introducing the new subject of **Smart Product Design** bringing design technology and computing disciplines closer together.
- Create a STEM display area, at both sites in a prominent position in the school. This area will contain:
- Examples (physical and photographic) of interesting STEM work produced at school
- A “Hall of Fame” of people with autism who have been successful in STEM industries including famous people and ex HMS pupils
- Notices about upcoming STEM events
- Frequently changing information about career opportunities in STEM industries in order to raise awareness of the broad range of STEM career paths.
- Assemble a student STEM group who will be offered the opportunity to attend STEM workshop sessions and talks from special guest speakers in STEM industries.
- Endeavour to foster relationships with local businesses in STEM industries in order to provide visits to industry and work experience opportunities for our students.
- Actively seek out opportunities to enter competitions and other public events where STEM skills are the focus.

## 4.0 STUDENT STEM GROUP

Although Hillingdon Manor will be developing a STEM curriculum that ensures access by all, some of our students demonstrate exceptional abilities in various areas related to STEM subjects. A number of our students, already have aspirations of work in STEM industries. The school will offer such students the opportunity to become part of a student STEM group. Students in this group will be offered places at specialist workshops and talks with guest speakers. Members of the group will also be offered places on trips to industry to expose them to a wider range of career paths and industries. In addition to this, members of the group will be given some responsibility for planning of future STEM events for the wider school community.

## 5.0 DISPLAY AREAS

An important aim of this policy is to raise aspirations amongst our students. To this end a “Hall of Fame” will be created in prominent areas at primary and secondary sites. This will provide some information about individuals with autism who have been successful in any area of STEM. This will include famous people and past pupils of Hillingdon Manor who are currently working and succeeding in STEM jobs.

In addition to the “Hall of Fame” these display areas will be used to: celebrate good STEM work, post STEM related school news and provide information about upcoming STEM events.



## 6.0 FOSTERING PARTNERSHIPS

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Another key aim of this policy is to maximize the potential for our students to engage with a booming British STEM industry in order that; the community, our students and their families benefit. Therefore, will seek to build mutually beneficial relationships with local business. Potential advantages to each party are set out below but will surely evolve as this relationship develops.

### Advantages for Hillingdon Manor:

- Visits for small numbers of pupils to STEM industry work places.
- Guest speakers from local business on topics related to STEM.
- Access to additional funding/sponsorship.
- Potential post 16 workplace training opportunities.
- Raised awareness of Hillingdon Manor in our local community
- Raised awareness of the potential offered by the autistic community.

### Advantages for local business:

- Positive publicity for internal and external communication.
- Positive contribution towards:
- Investors in people
- Demonstrating meeting the requirements of the Equality Act
- Engagement with an underdeveloped potential workforce.
- Support from Hillingdon Manor in how to provide an autism friendly work place.
- Support for any organisations considering an Autism Internship Program.