

## Improving Gender Balance

### Gender friendly physics

The following document provides a brief summary of the key elements of this project.

#### 1. Introduction

<b>Establishment / title</b>	Lomond School / Gender friendly physics
<b>Contact name and details</b>	Alan McBeath Lomond School, 10 Stafford Street, Helensburgh, G84 9JX
<b>About the establishment</b>	Lomond school is an independent co-educational day and boarding school in Helensburgh. Its current role is just over 400 pupils aged from 3 to 18 years old.
<b>Main tags</b>	Secondary STEM Science Gender balance Equalities and inclusion

#### 2. Project information:

<b>Overview</b>	<p>The Physics department at Lomond School noted the gender imbalance in the uptake of Physics at Higher and made tackling this a focus for the department. They decided they wanted to broaden the view of physics so pupils could see it as a tool and as a useful key to access other areas of STEM.</p> <p>They focussed on reframing topics to emphasise contexts and applications. The key concepts were delivered under the themes of Engineering, Space and Pure Physics. Alongside this they developed an enrichment programme for the secondary pupils based around Space. This appeared to have a very broad appeal to all genders, as well as tying in with the cosmology content in the national qualifications.</p> <p>The enrichment strand sat outside teaching hours and includes activities such as:</p>
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	<ul style="list-style-type: none"> <li>- P7 pupils were introduced to programming with the Raspberry Pi</li> <li>- S1/2 pupils had an opportunity to visit the Euro Space Centre in Belgium for a 5 day residential</li> <li>- S3 took part in the Young Engineers' challenge with a focus on rocket building</li> <li>- Assisted S4 pupils to complete applications for the Strathclyde Space School (this predominantly attracted girls)</li> <li>- S5/6 took part in the CanSat project, which involved building, testing and launching a small satellite, along with marketing and social media (this was also popular with girls and worked particular well at engaging with parents.)</li> </ul> <p>The school also celebrates scientific achievements with the whole pupil body, conferring awards for science at the same time as celebrating sporting and musical achievements.</p>
<b>Impact</b>	<p>In 2015, 14% of those taking Higher Physics were girls. Since the school started the enrichment streams, this rose to 44% in 2018.</p> <p>Teachers had previously noted that girls appeared to be more reluctant to take leadership roles in STEM activities. After these interventions, girls appeared more comfortable.</p> <p>"The school doesn't have a visible issue with science or STEM being seen as geeky. The general feel is that it is cooler to be a geek due to increased visibility of digital, IT and programming jobs."</p>
<b>Next steps</b>	<p>The department are aware that careers education needs to be introduced much earlier than currently. As such, they are planning to expand the enrichment programme further into the primary.</p> <p>They have also highlighted that there is still a gender imbalance in Biology, with more girls taking the subject than boys. Through evaluations with the pupils it has been suggested that the boys tend to prefer the genetics topic, and are generally less aware of the cross-over of opportunities in life sciences. The department aims to tackle this by highlighting more careers in this field, such as prosthetics, biomechanics and biophysics.</p> <p>Lastly the school are working with senior pupils to lead STEM projects with younger pupils and other local schools.</p>

### 3. Additional information

<b>Contacts</b>	
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