STEM report 2021-22

The COVID pandemic brought challenges to all areas of school life, but extracurricular and enrichment activities were hit particularly hard, with very little being able to run over the space of nearly two years. Because of this, I was keen to bring STEM events back to St Laurence in a big way. With student leadership being a key aim for the school moving forward, it was great to see a number of 6th Form students offering to help out in younger year groups' STEM lessons.

Once it was possible to run clubs again, I re-launched STEM club, initially focusing on the EEPI Lego Mindstorms Robotics Competition, which we had entered to varying levels of success in previous years. We quickly built a core of about 15 students attending most weeks, splitting into smaller groups to design robots to enter various challenges.

We entered the regional heat for this competition in June 2022, with our final team of nine students and myself travelling down to Exeter College with Mr Minghella kindly helping out with his minibus driving skills. We quickly realised that every school taking part had different ideas for the robot, and we learned a lot from looking at their designs and comparing them to our own. We then promptly proceeded to blow most of the competition out of the water by achieving the second fastest time in the entire country on the robot speed challenge! Sadly, the overall fastest was also in our heat and so, by a fraction of a second, we finished second in this event.

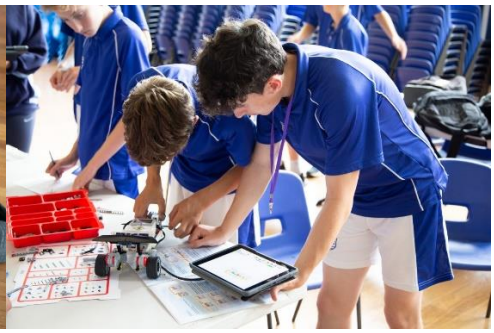
We also had the opportunity to take our robot onto the challenge mat, although due to struggles with the coding element we didn't pick up many points. We had more success in the teamwork challenge (where the team's enthusiasm for all things LEGO shone through) and the robot design presentation, which involved students explaining the process to a nuclear engineer. The team were so well-prepared and inspirational that we ended up winning the overall design award for the South West regional heat, which now takes pride of place in the school trophy cabinet!

In addition to STEM club, I was able to organise various events throughout the year. For instance, approximately 50 students from across Key Stage 3 were able to travel to Birmingham's National Exhibition Centre for the first Big Bang Fair in three years. This was an invaluable opportunity for students to meet real-life STEM professionals from a range of companies and learn about how they could also pursue a future in one of these fields.

On a smaller scale but similar to this event, we had a huge number of STEM-based companies appearing at the school's own careers fair towards the end of the academic year. Over the course of the day almost every student visited these stands and learned about potential future jobs in the local area, and feedback

was extremely positive. Excitingly, we have also formed a connection with AB Dynamics through this event, who are keen to bring some of their projects to the school in the future and run workshops with students, which promises to be another standout event in the STEM calendar.

We were also extremely lucky to be offered a STEM day in school by The Smallpiece Trust, who partnered with Siemens Mobility to provide an autonomous vehicle challenge for a number of Year 10 students. This was a fantastic day in Trinity Hall, where students learned about an exciting new piece of technology before learning to code a vehicle to follow a path and integrate crash detection.

Despite easing back into things with a slow start, it was a busy year for STEM at St Laurence School! As always, my thanks go to the STEM Ambassadors in 6th Form, as well as all the members of staff who supported events in any capacity and the external companies who ran events, either on-site or externally. Next year we plan to increase STEM provision even further, with multiple clubs running at once as well as interviews with St Laurence alumni in STEM careers and visiting speakers. I think it's fair to say that this is an exciting time for STEM at St Laurence School!

Matthew Morris (STEM Co-ordinator)

September 2022