

LIFELONG LEARNING REPORT FOR 5th MARCH 2018 MEETING

1. Children Challenging Industry Project

This is an ongoing and very successful project which CSI has supported for a number of years. Their report for Autumn 2017 and Spring 2018 has been circulated

2. Greenpower Projects

This has continued to be a successful project with increasing numbers of schools taking part.

I visited Longfield School on 9th Feb and met some of the students involved. I wasn't allowed to take photos of the students so took one of the staff with the car. See comments from Danny Rich (teacher) and Tyler Graham (student) below). Tyler has been involved with the project for over 2 years.

Longfield Academy of Sport received £1000 to contribute towards the funding for a new car which was to promote STEM to girls aged 12-13. They were very grateful for the funding contribution. Mr Rich the teacher managed to get a free car which needed a lot doing to it and the money will be used to get this car on the road. New cars cost over £3000 and this was a great way to get a car that would be operational with the funding available. The young girls were quite involved and were looking forward to working on the car with the help of Cummins Ambassadors and their teachers. They had a brief chat with me about CSI's involvement with the project and have promised to send me any in house or media publicity.

From Danny Rich (teacher)

"We managed to source an old car for free and would like to spend the money on the following:

The car has not been used for a number of years and as a result all the foam in the car is rotten and will need replacing.

As a result of this we will also have to change the body work on the car.

Some of the spec for Greenpower has changed since the car was last run, so we will have to comply with these changes (nose cone protection)

The car will also need new tyres and inner tubes.

We would also like to use some of the money to change the gearing on the car to make it more competitive.

If we have any money left after these changes to the car (to make it safe) we would use it towards overalls for the girls."

Tyler Graham student Longfield Academy of Sports

"Greenpower allows you to experience teamwork and the feeling of achievement that normal lessons don't. It makes you see the full practical side of engineering and lets you experience it first hand, working with a wide range of tools and equipment to create a finished car that you are proud of. You then get to compete with your team nationally and internationally to participate in races and improve your car along the way. I have enjoyed working with Greenpower and Cummins to create our Longfield Infinity car."



St Joseph's were granted £250 in January and I have spoken to their enthusiastic teacher to arrange a date for my visit. They would like a quote from us as a sponsor and it will be good to get one from the President.

3. **VEX Robotics projects.**

Nunthorpe School, Acklam Grange School and Kings Academy are continuing with their projects. Inspire2Learn has got the other kits which are being widely used by schools.

My planned visits to Nunthorpe school and Kings Academy have had to be postponed due to the inclement weather.

King's Academy – update from teacher Robert King

The five Year 9 students who have been working on this VEX Robotics project are looking forward to being able to talk about what they've been working on, and what they are hoping to do with the project in the future. Now they have grasped the basics of the kit, they are all keen to continue working with Vex robotics.

We received a grant of £300 to help support a VEX Robotics club at The King's Academy. Since the start of this academic year, five Year 9 students have been meeting weekly at a robotics club. They have developed their skills by building the VEX Robot and tweaking the original design.

£125 of the money was spent registering the team with Vex Robotics. For this money, the five Year 9 students received a pack of competition instructions and the competition props to practice with. The students then used their weekly sessions to attempt to make their robot more adapted to the challenge received after registering. The registration cost also covered entry fees into any local VEX competitions. A trip to the local competition (Nissan Factory, Sunderland) was organised to take place on 19/01/2018. Unfortunately, due to a bereavement within the organising committee of the local competition, we found out shortly before the competition was due to take place that it had been postponed to 09/02/2018. Despite our best efforts, it was unfeasible for our trip to the competition take place on the rearranged date. This was due to a large number of trips taking place from the Academy that day, along with the short notice of the date change.

Although a little disappointed they didn't compete, the students are still meeting weekly and are enjoying working with their robot to make it better. There is £175 remaining in the fund. This can either be used to buy spare parts as necessary or register the team again next year to receive the competition props and hopefully enter a local competition.

Nunthorpe's Gravity Racing car was collected by Andrew Stogdale at the request of the school and is now being used by Ingleby Manor School which I will try and visit this term.

I have pasted Andrew Stogdale's update on the Gravity Car and VEX below

Gravity Racer Kit - update

Inspire2Learn was approached by Nunthorpe Secondary School in January regarding the gravity racer. The teacher was concerned that it was no longer being used and was unlikely to be in the future because of change of staff and in school focus.

She asked that I take the kit and make use of it. As always I am happy to make use of kit on behalf of all schools in the Tees Valley but I couldn't immediately see a way that it would fit

with existing I2L activity. However, following a conversation with a teacher from Ingleby Manor, it was clear that they would be able to make use of the kit. I have since deposited the kit there and will follow up with some degree of feedback by Easter break. I made it clear it was a loan kit and that if they were going to use it then great, but if they do not then I would take it back and see who else might like it. They were very happy with that but assured me that it would be used.

VEX

The original league idea was very much bought into by all the schools who got kits but when we actually tried to make it work we realised that it contained too many variables and the keenest schools were left disappointed when their opponents called off. This changed in year two to challenges every half term which the schools came to Inspire2Learn to complete. This improved engagement but what was becoming evident was that finding time to build, adapt and learn to drive the robot was very difficult in a very packed school offer. This year we have tweaked the model again. I2L have bought a substantial number of new kits, competition arenas and game pieces (about £5000). These have been used to ensure that the keen schools now have two kits so they can play the team games and see how different engineering solutions contribute to a complex game situation as well as making the events more exciting. Instead of a challenge that they work towards each half term, we have used the days to welcome experienced and new teams together. So experienced teams get to play games and start on adapting design, new teams can literally begin to build on the day. This has created a strong community feel.

Where we do need to improve is to increase the number of events, it will probably be four by the end of the academic year. The intention is also to host a 'Tees Valley VEX Competition' in the summer so that every school can come and compete for prizes. I intend to run it annually as a celebration of what they have been doing all year.

Secondary VEX has been slower going but working with Leila, when we had managed to recover unused kits I have redistributed them on VEX days to new schools. We have only had one secondary event so far and it had two schools, but at least they turned up. I have bought the competition arena (the only one in the NE) and the current championship game pieces as a stimulus. This is something I hope to build on in the near future.

4. Whitby Technology Tournament

This annual event continues to interest and motivate the young people to solve problems on a STEM based task.

The event this year will take place on **15th March at Whitby Spa**. Adrian and Leila will be attending. CSI will have a table this year and Leila is hoping to have the CSI banner, information about Engineering and Green Power as suggested by Adrian. Leaflets produced by Adrian for the Bring it On event which has details of how to apply for funding will also be available. Any other suggestions are welcome. If anyone else intends to go to the event please let me or the organisers know so that they can complete their arrangements.

Each school / college enters a team of 4 students in the following groups:-

Foundation-key stage 3 (12-14 years)

Intermediate-key stage 4 (14-16 years)

Advanced- key stage 5 (16+)

The basic project is common to all three age groups but with increased difficulty built in for the older age groups. The project is to plan, design, build and test a working model constructed from supplied materials and using specified tools.

The highlight of the day is the testing session when the teams can see the designs and performance of competing solutions to the same problem..

5. Generating Geologists

There is a continued demand for this curriculum related project and the teachers appreciate the expertise of the Teesmouth Field Centre Staff. I visited the Centre on Mon 26 Feb and was pleased to find out that the uptake by schools had been excellent and the project would be completed soon. I intend visiting the centre again on Monday 5th March because students will be working on the project CSI funded. I discussed the Interim report on the new application form which they have completed and is attached.



6. Bring it On

CSI has been a major sponsor of this event held for the first time to raise awareness of the exciting and varied opportunities available in the wide ranging field of engineering in the North East. The pre and post event feedback from the schools sampled indicate very clearly that the perception of the young people attending the event about engineering changed dramatically and positively as a result of the event. A lot of information was included in my November AGM Report. The Bring It On Impact Report has been included with the papers for this meeting. About 25% of the primary and secondary school children taking part were from the Tees Valley

7. Applications for Funding

Successful Applications Sept 2017- Jan2018

- Greenpower – Longfield Academy – Girls in Engineering – secondary
Approved £1000 which has been received
- Teesmouth Field Centre – Generating Geologists – Primary **Approved £4200 in 2 installments** which has been received.
- Kings Academy VEX Robotics **Approved £300** which has been received

• Applications submitted for the March meeting

- Bring It On ' Paul Shelton is covering it -Agenda Item Governance
- Greenpower Tees Valley – Inspire2Learn