STEAM Project Funding Proposal 2017

POWER OF STEAM

SCIENCE TECHNOLOGY ENGINEERING ART MATHEMATICS

Learning Hub Limerick STEAM Project

This project aims to make Science, Technology, Engineering, Arts and Maths programmes a reality for over 1000 children in 2017/2018. To do this we need a STEAM coordinator to work alongside our existing Science, Arts and Health programmes.

The ideal person will be an educator who loves the idea of building investigation, discovery and imagination into learning environments. They will have a background in education technology and be enthusiastic about making and creating in a classroom.

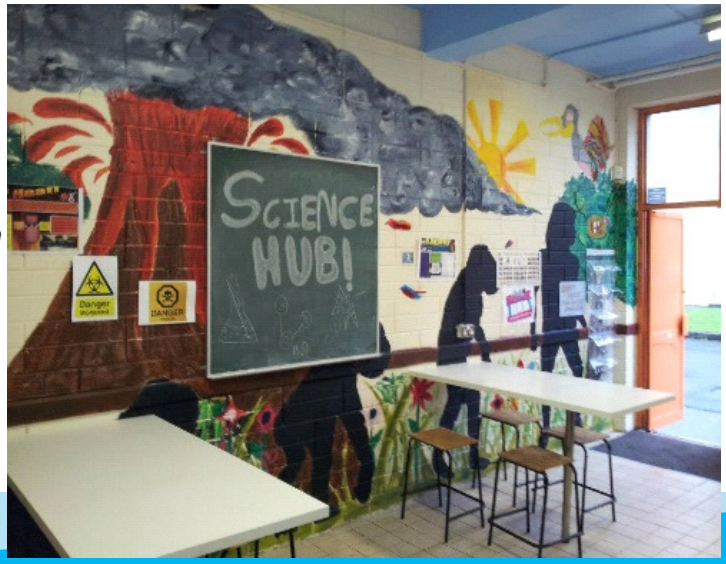
We are fundraising to hire this person!

What is STEAM Curriculum?

STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking. The end results are students who take thoughtful risks, engage in experiential learning, persist in problem-solving, embrace collaboration, and work through the creative process. These are the innovators, educators, leaders, and learners of the 21st century!

In the summer of 2011, Learning Hub Limerick, in collaboration with UL, launched a new project called “Science Hub”. The Science Hub model has been hugely successful and we want to incorporate engineering and technology alongside our creative programmes at Learning Hub Limerick .

Your donation will help us to employ a STEAM focused co-ordinator specialising in engineering, maths and technology for 30 hours per week.



Why Learning Hub Limerick?

We are based in Kileely. We are 10 mins walk form the city centre and have a wonderful view of the Shannon. Last year over 23,000 visitors came to the Learning Hub to engage in various activities. We serve over 150 children on average each week with many involved in multiple activities. We prioritize children attending DEIS (designated disadvantaged schools) but aim to reserve over 40% of our place for children from other areas of the city to ensure a positive social mix for all.

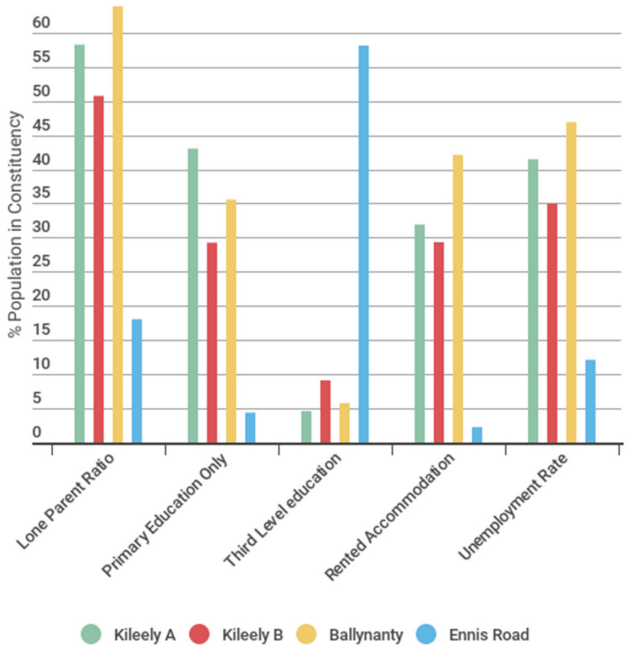
Last year we had a record number of visits from schools all over the city and county, including several from Clare and Tipperary. Schools are very keen to access the Science/Technology programmes on offer as many teachers feel underconfident in delivery of such programmes.

Children are at risk of poverty in the areas immediately surrounding Learning Hub Limerick.

Our primary focus is on serving young people and families living in the immediate population surrounding the Learning Hub, (Kileely A and B) who continue to experience up to 50% unemployment and increased levels of household poverty. With over 600 people claiming disability allowance within both of these EDs, very few children are growing up in households with a working adult. This has its own psychological and social impact on the lives of children and young people as well documented in the Growing up in Ireland Studies. Add this to an over 50% rate of lone parent families in the same communities, children are at significantly increased risk of living in poverty.

Child poverty, defined as children living in households where income is below the poverty line, rose in Ireland from 18 per cent in 2008 to 28.6 per cent in 2012 and we can extrapolate from this national figure that well over 50% of local children living in areas surrounding the Learning Hub are living in poverty.

Educational attainment /Unemployment levels in the area surrounding Learning Hub Limerick:



What will our STEAM Co-ordinator do?

Our STEAM Co-ordinator will develop curriculum that encourages active engagement with engineering, maths and technology. They will work with Science and Art teachers to ensure that children learn using a blended curriculum.

The STEAM Schools Project

Every week we will invite a different group of 4th – 6th class pupils from a primary school to the Hub for a total of 4 hours spread over 2 morning workshops. The pupils are split into groups of 4 or 5 and each group has a "Learning Buddy" (mentor).

These mentors are usually science/technology/education students from the University of Limerick, Mary Immaculate College and LIT. In the first part of the workshop the children learn about how to work safely in a "laboratory" type environment. For the remainder of the workshop the children work in groups on games or build it type projects. For the most part there is NO sitting down! Children use discovery and making skills to achieve an output.

GOAL: 1000 primary students visiting Learning Hub Limerick for a STEAM experience in 2017/2018.

The STEAM After School Project

The after school project is aimed mainly at 5th and 6th class pupils and runs for 12 weeks per group. Each week the group (usually 15 children approx) looks at a different projects. The initial 6 workshops focus on topics from the Primary Science curriculum and the final 6 incorporate more elements from the Junior Certificate. The aim is to help ease the transition from primary school science into second level so that it is not such a shock for the pupils. Helping to demystify STEAM subjects for the children before they enter second level may lessen their fears regarding these subjects and hence allow them to make informed decisions when choosing their elective subjects.

STEAM Summer and Easter Camps

Children living in our local areas have limited access to household budgets for additional holiday activities. We provide low cost added value educational experiences in a safe and well supervised setting.

Goal: 100 children accessing Easter and Summer STEAM education camps in 2017 (60% local children 40% citywide)

Relevance to the Curriculum

Science, technology and engineering type curriculum at primary school level is often ignored to allow more time to focus on literacy and numeracy skills, especially in schools where these skills may already be below average. At the Learning Hub we aim to integrate the development of these skills into our during and after school activities so as to provide ***added value to the day to day educational experience.*** The curriculum is being explored using new methodolgies while literacy and numeracy are also being improved.The experience is also valuable for teachers as it gives them ideas which they can then use in their own class plans thereby linking STEAM thinking directly to the classroom as an important approach.

"*Learning Buddies" – Our Mentoring Strategy*

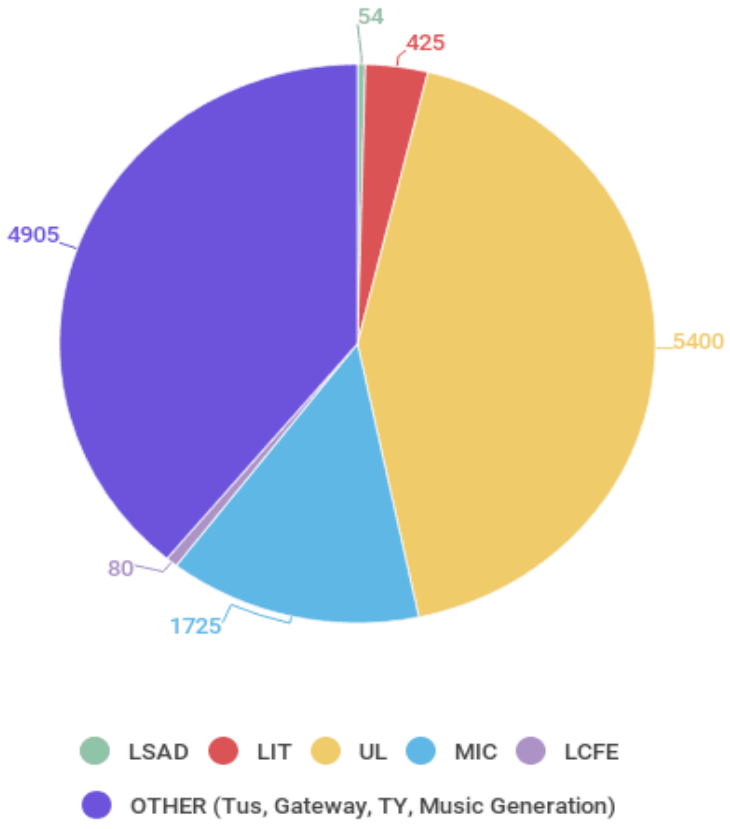
All of the projects and activities we run rely heavily on volunteer support from local 3rd level institutions. We use the Learning Buddies mentoring model where small groups of young people are paired with a volunteer 3rd level student mentor for the duration of a workshop. It allows the children to engage and interact with adults who are actively involved in science and this allows them to ask questions about what it is like to be 'a real scientist'. The students, particularly those involved in Science Education, also benefit as it allows them to get some teaching practice in an alternative educational setting. In the case of Science Hub these mentors usually come from the University of Limericks Science and Science Ed programmes, many of whom are completing an Alternative Education Experience with us as a compulsory part of their degree programme.

These volunteers are vital to the projects we run. Volunteer hours for 2016 are shown below.

Please note the figures reflect hours volunteered across all Learning Hub activities

12,589

The number of hours donated to the Learning Hub by our Volunteers in 2016



User Testimonials & Feedback from existing programmes:

"[Science Hub] was excellent and we look forward to coming back in the near future" – Michael (Teacher)

"The programmes were extremely relevant to the aims of the curriculum. A number of strands were covered." - Ms. Synnott (Teacher)

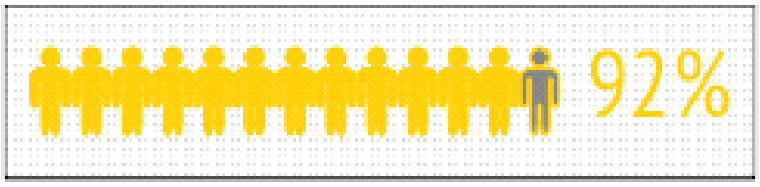
"Most definitely would recommend this programme [to other schools]" - Gearoid (Teacher)

"Very nice project! I was very impressed with the enthusiasm and engagement of the students" - Judge, BT Primary Science Fair

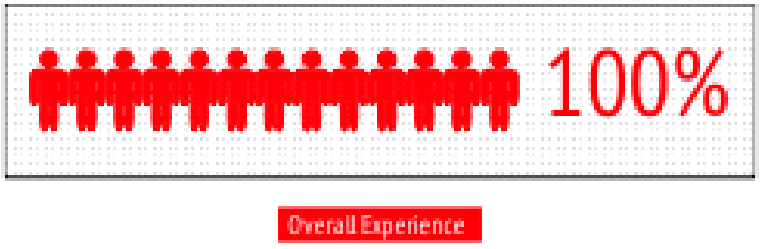
"I never knew it [science] could be so fun" - child from afterschool Science Club
"Now I try safe experiments at home" - child from afterschool Science Club

"I was focusing to hard on all of the facts instead of the fun you can have with them" - child from afterschool Science Club

92 % of teachers thought the Science Hub was 100% relevant to the Primary Science curriculum



100 % of teachers rated their overall experience of the Science Hub as being "excellent"



What does your contribution achieve?

Your funding can also help us to leverage funding support from other sources including corporate donors and philanthropists. For example, our Science Foundation Ireland funding was matched by Regeneron in 2016 faciliating the employment of a Science teacher 30 hours per week.

- €2000 provides 20 children with 1 hour of after school STEAM club weekly for 12 weeks
- €1000 provides STEAM workshops for 10 class groups (approx 300 children)
- €650 provides 50 children from local primary schools wtih 2x2 hour of STEAM workshops in school
- €560 provides 20 children with 5 hours of STEAM Easter/Summer camp access
- €500 provides 10 children with access to the after school STEAM Club fro 1 hour per wek for 12 weeks
- €30 provides one child with access to after school programmes for 1 hour each week x 12 weeks.

If a company makes a donation of over €250 to Learning Hub Limerick, the company can claim a deduction for the donation as if it were a trading expense. The company benefits from the tax relief. (Irish Charity No. CHY 17180)

Partner acknowledgement will appear on any banners, flyers and posters used to promote the project and will be displayed at any events we organise designed to engage the general public in STEAM activities.You will also receive biannual reports to keep you updated on the progress of all STEAM and Learning Hub Projects.

Contact Details

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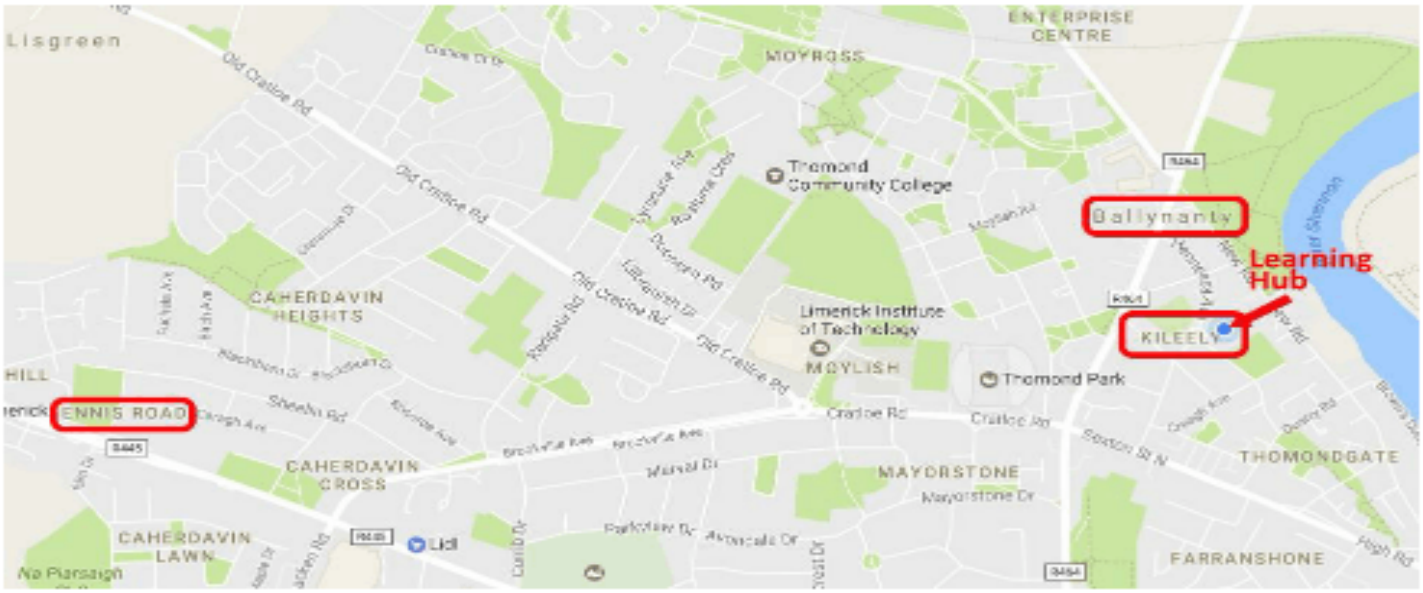
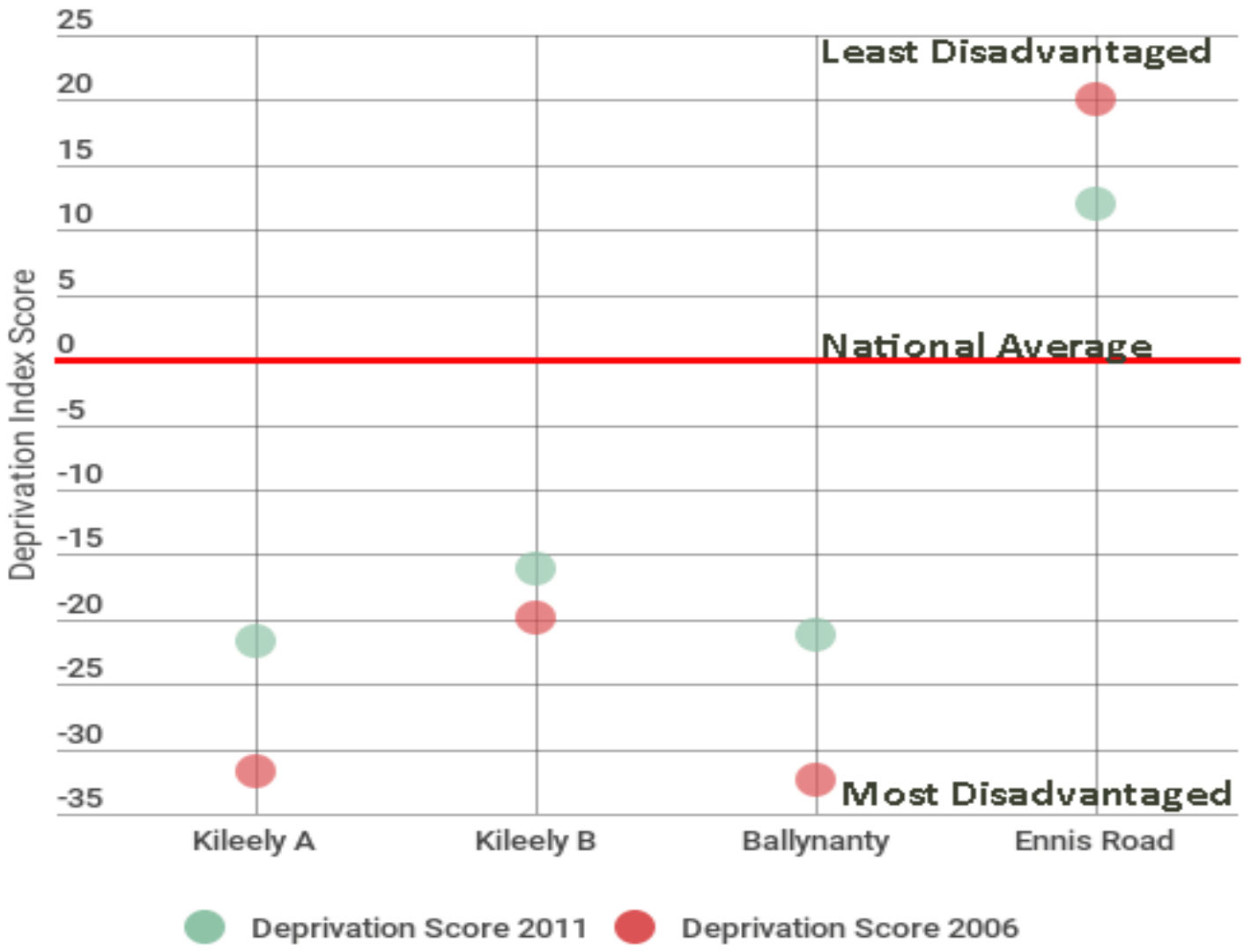
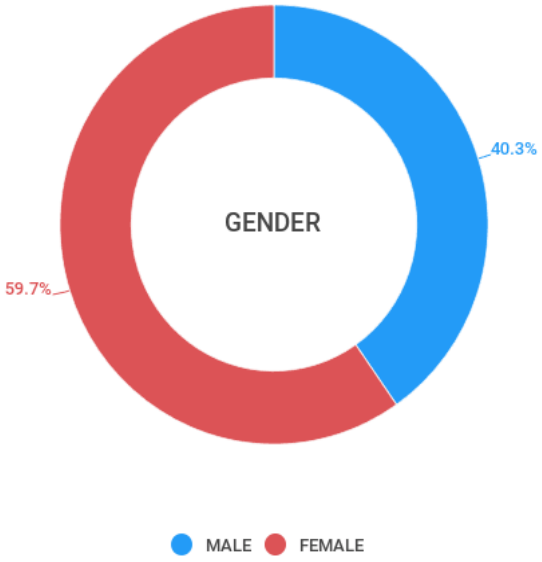
Website: http://www.learninghub.ie **Facebook**: https://www.facebook.com/learninghublimk/

Socio-Economic Statistics (Limerick 2011)

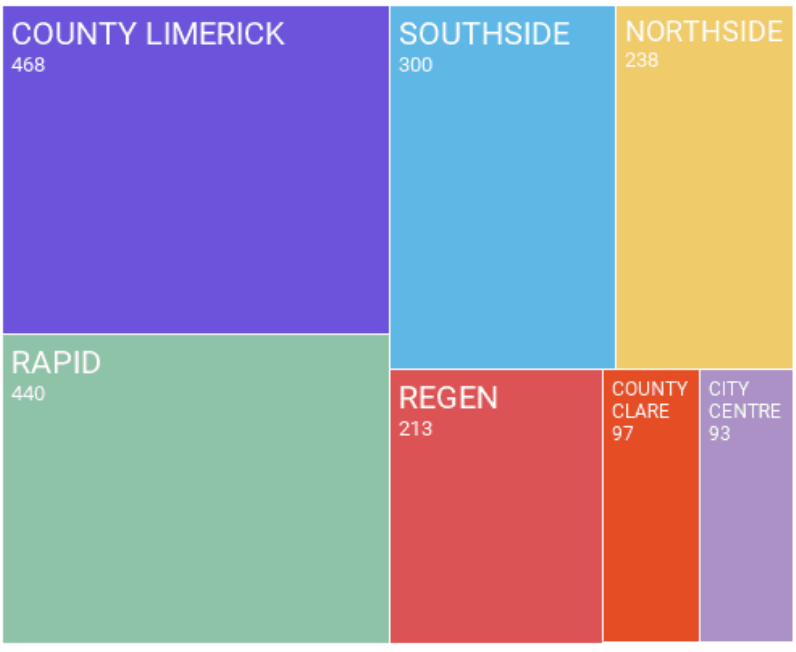




USER BREAKDOWN BY GENDER 2016



User Breakdown by Region



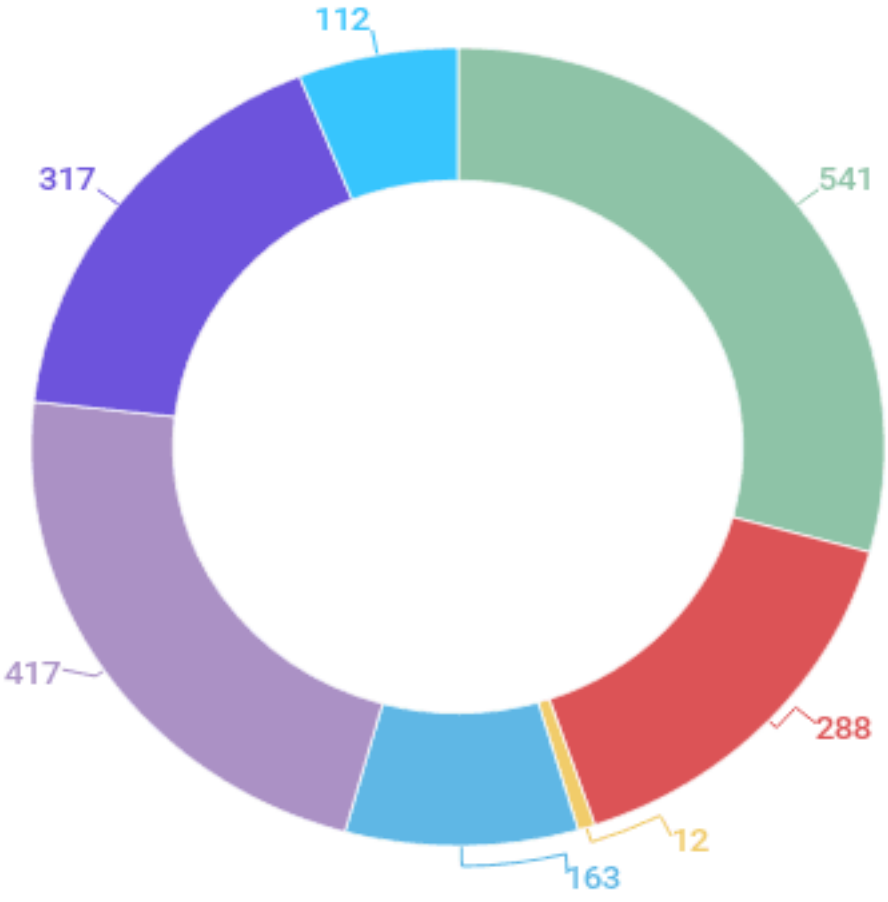
Footfall Figures 2016 - On Site Activities

23,520

Children and young people used the Hub in 2016

62%

Increase on footfall for 2015



Volunteer Numbers by Institution