**ACTION PLAN – Challenge Programme**

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| **ORGANISATION**  Creative Spark is a not-for profit social enterprise who provides a place to learn. It offers mentoring and training programmes in creative skills, entrepreneurship, innovation and creativity. We seek to raise the level of educational benefits to the community by developing accredited programmes with local educational institutions and to increase the level of participation in STEAM outreach programmes by schools and community groups.  We aim to develop the local cultural and creative sector and activate culture and creativity in the community. Today’s Youth will be tomorrow’s Professionals and we seek to develop impactful training programmes for young people to ensure we have a high quality of entrepreneurs going into the future. Our mission is to deliver diverse programmes that reach and activate cultural and creative entrepreneurial people in our community by building capacity and staying ahead of requirements for successful and innovative entrepreneurship.  Since 2012 Creative Spark voluntary Board of Directors and a team of experienced professionals, with support from funders and stakeholders, work to achieve our vision. By 2030, one job out of two will have disappeared, and 60% of jobs that will be performed do not exist yet. We want to be a key driver ensuring that our region is prepared.  Creative Spark aims to advance education and benefit the community and wider region through providing opportunities to improve core skills, aid learning processes, raise confidence and self-esteem, key competences for lifelong learning.  Our vision is to provide a collaborative environment where learners, educators, innovators, start-ups, SMEs, creative industries and the local community can meet and exchange ideas, knowledge and best practice – to provide economic opportunity and development across our region. |
| **OBJECTIVE**  The Enterprise FabLab @ Creative Spark has a defined ambition to stimulate Enterprise, Creativity, Innovation and Education in the North-East region. A FabLab is a place to create, to learn, to mentor, to invent, to play: a place for learning and innovation. A central location which provides access to the environment, the skills, the materials and the advanced technology to allow anyone anywhere to make (almost) anything.  FIRST® LEGO® League Challenge involves students from 6th class to 16 years of age, from across the country battling it out to be crowned regional champions of FIRST® LEGO® League UK and Ireland in their region.  FIRST® LEGO® League gives students the opportunity to research, design and make prototype solutions to solve real world issues. Students experience working as an engineer over a period of several months as they prepare for their tournament. The competition is designed to help students build important life skills and practical, hands on experience that they can use throughout their studies and in their future careers.  Each year, FIRST® LEGO® League presents a new and exciting Challenge to ignite creativity. Young people work together to explore a given topic and to design, build and program an autonomous LEGO® robot. There are four  parts of FIRST® LEGO® League Challenge:  Robot Game  Teams build, design and program a LEGO® MINDSTORMS® or SPIKE™ Prime robot to autonomously complete a series of missions on a specialised field to score as many points as possible.  Robot Design  Teams must communicate to the judges the development in the design of their robot, as well as their programming and mission strategy.  Innovation Project  Teams research the annual theme, explore different ideas, and identify a problem. They design a solution to solve it and develop a presentation to communicate their ideas.  Core Values  Teams need to demonstrate the FIRST® LEGO® League Core Values which include innovation, teamwork and inclusion. Being respectful and having a great time are central to what makes FIRST® LEGO® League so special.  STEAM Education & outreach is fundamental to the FabLab project and seeks to invite, young and old, to explore, engage and upskill in Science, Technology, Engineering, Arts and Maths. By involving people as early as possible in STEAM we can inspire future generations to develop the competences needed to thrive and shape our ever-changing world and to spark excitement and enthusiasm in STEAM careers in the North East.  With support from Change X, we seek to achieve equality of learning and access to STEAM education at the primary school level. Globally there is a deficit of graduates in Science, Technology, Engineering and Mathematics (STEM) subjects and a disjointed approach across Europe to Science, Technology, Engineering, Arts and Maths (STEAM) STEAM education.  This project will enable us to broaden the participation of an underrepresented and educationally disadvantaged group in STEM by focusing on reaching, Delivering Equality of Opportunities in Schools (DEIS) schools or schools with low engagement in STEM in the North East region. |
| **TIMELINE**  **DEIS School 1:** September – May (30 children) |
| **ENGAGEMENT PER SCHOOL**   * 6th CLASS – 30 Students - (28 weeks available) * Spike Essential - 2 hours p/w (6 weeks) – Units 3-5 (21 models) * Challenge - 2 hours p/w (12 weeks) - 12 lessons * Tournament prep – 2 hours p/w (4 weeks)   Unit 3 “Happy Traveller” Unit 4 “Crazy Carnival Games” Unit 5 “Quirky Creations” |
| **TOURNAMENT**  At a tournament, teams will be assessed on each of the four parts of FIRST® LEGO® League: Robot Game, Robot Design, Innovation Project and Core Values. The students will showcase their skills in robotics, computer programming, teamwork, research, problem solving and communication, demonstrating the FIRST® LEGO® League Core Values, which include teamwork, problem-solving and innovation. We will work with FIRST® LEGO® League to host one of the regional tournaments in the Enterprise FabLab, where teams compete for the chance to qualify for the National and International Finals. |