

STEM Action Plan

2018– 2021

All College Action Plans adhere to the guidelines and ethos of Equality and Diversity

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Date of Origin	Last Updated	Proposed Review Date	STEM Date	Responsibility For Review
26/03/18	26/03/18	26/03/19	13/03/19	Vice Principal - Curriculum

STEM ACTION PLAN 2018/2021

Priority 1. Development of the Infrastructure	2018/19 Action	Progress to Date (April 2019)	Person(s) Responsible
<p>Objective 1.1 Establish a STEM HUB for the Region to address SG Stem Strategy based in NCL.</p>	<p>Work in partnership with key stakeholders, eg, DYW, Schools and Industry to establish infrastructure and governance.</p>	<ul style="list-style-type: none"> • Regional Hub chaired by Principal with representatives from across the region with key stakeholders. Several meetings have taken place in AY 18/19. • Sub-Group established chaired by HoF C&S with representation from key stakeholders within the Region. • College successful in securing funding from Education Scotland to take forward Regional Strategy, lead by HoF C&S. <ul style="list-style-type: none"> ○ Phase 1 – Desk research to support CLPL throughout the education pipeline across all sectors. ○ Phase 2 – Creation of STEM Unit within the Early Years curriculum delivered by ELC students on placement throughout Lanarkshire and East Dumbartonshire, multi-disciplinary cross-faculty approach. ○ Phase 2 – STEM Lanarkshire to support various methods of CLPL following outputs of Phase 1. 	<p>Principal HoFs</p>

<p>Objective 1.2 Establish STEM Ambassador Team incorporating all 6 Faculties.</p> <p>Establish learner STEM Ambassadors across faculties (as appropriate) with a cross-college focus.</p>	<p>Create role specification with clear alignment to STEM initiatives.</p> <p>Advertising to gauge interest across all Faculties. Carry out interviews and appoint successful candidates.</p> <p>Align STEM Ambassador role to national STEM agenda.</p> <p>FMT's to develop or grow STEM Ambassador scheme.</p>	<ul style="list-style-type: none"> • Decision to offer all appropriate staff the opportunity to be STEM Ambassadors and to be part of the scheme. Science Connects visited college and delivered STEM Ambassador scheme to staff, uptake is on-going. • STEM Ambassador scheme directly linked to national strategy and regional STEM strategy. • CLPL via Education Scotland successful bid supports cross college CPD. 	<p>HoFs/FMTs</p>
<p>Objective 1.3 Host/Participate in regular STEM event and activities.</p>	<p>Raise profile of the college's STEM Strategy and ongoing STEM ambition including launch of STEM Lanarkshire.</p> <p>Science Week (March 2019) hosting primary and secondary schools from the Region.</p>	<ul style="list-style-type: none"> • College hosted the launch of National STEM Strategy Review by Minister for FE, HE & Science Richard Lochhead in February 2019. • Launch of STEM Lanarkshire during Science week in March 2019 with 2 events taking place:- <ul style="list-style-type: none"> ○ Early Years – Step into STEM local nursery children engaged in STEM activities. ○ Cross Sector CLPL Event launching STEM Lanarkshire as the platform for STEM CLPL throughout the education pipeline. 	<p>Principal HoFs</p>

	<p>Create a Calendar of STEM Events and Activities.</p> <p>Including: Tomorrow's Engineers Big Bang Near Me Event</p> <p>VEX Robotics – School/College Partnership programme (2018/19).</p>	<ul style="list-style-type: none"> • Stepping into STEM events took place for Secondary in October 2018 May 2019 for Primary schools. • STEM Planner set up in Microsoft Teams includes all events for AY 18/19 and going forward for AY 19/20. • HoF for CC&I continues to lead and manage STEM activity within the college and Chairs STEM Activity/ Planning Sub-Group represented by Key Stakeholders. • HoF for Engineering continues to lead and manage STEM VEX Robotics partnership with great success. 	
<p>Objective 1.4 Investment in Staff CPD, Facilities and Resources to support the STEM Strategy for the Region. (Including relevant and valid Industrial Placements for Staff).</p>	<p>Review current practices, CPD, infrastructure to establish base line and create skills analysis.</p> <p>Continue to develop links with key stakeholders (employers, DYW, ESP, Chemical & Life Sciences Scotland).</p>	<ul style="list-style-type: none"> • Review superseded by engagement with STEM Ambassador scheme. • Regional Hub provides opportunities to work with key stakeholders. • College successful in securing funding from Education Scotland to take forward Regional Strategy. <ul style="list-style-type: none"> ○ Phase 1 – Desk research to support CLPL / CPD throughout the education pipeline across all sectors. ○ Phase 2 – STEM Lanarkshire to support various methods of CLPL following outputs of Phase 1. Also 	<p>HoFs</p>

Priority 2. Influencing the influencers	2018/19 Action	Progress to Date (April 2019)	Person(s) Responsible
<p>Objective 2.1 Engage with Local Authorities, DYW, Employers/Industry to support STEM Strategy and Action Plan for the Region.</p>	<p>Establish a STEM Partnership Group incorporating key stakeholders with strategic meeting points throughout the year in line with STEM Calendar.</p> <p>Establish professional learning opportunities for college and school staff to raise STEM awareness in the classroom.</p> <p>Plan and host events targeted at pupils, teachers, S4 leads and parents.</p>	<p>cross-faculty CPD to develop STEM Early Years curriculum.</p> <ul style="list-style-type: none"> • Regional Hub chaired by Principal with representatives from across the region with key stakeholders. Several meetings have taken place in AY 18/19. • Sub-Group established chaired by HoF for Care & Science with representation from key stakeholders within the Region. • Regional Strategy CLPL:- <ul style="list-style-type: none"> ○ Phase 1 – Desk research to support CLPL / CPD throughout the education pipeline across all sectors. ○ Phase 2 – STEM Lanarkshire to support various methods of CLPL following outputs of Phase 1. Also cross-faculty CPD to develop STEM Early Years curriculum. • Sub-Group established chaired by HoF C&S with representation from within the Region, ie Early Years, Primary and Secondary leads. • Launch of STEM Lanarkshire March 2019 advising of cross Sector CLPL Event launching STEM Lanarkshire as the platform for STEM CLPL throughout the education pipeline. 	<p>HoFs</p>

<p>Objective 2.2 Address gender imbalance across the Faculties via the STEM Strategy/Action Plan.</p>	<p>Target marketing to focus on minority groups and hold specific events, eg, Women into Construction, Men into Care, Men into Hair & Beauty Industry. This may include 'Peer/Buddy networks within the Region and other FE Institutions.</p>	<ul style="list-style-type: none"> Targeted marketing evident throughout AY 18/19 including participation in national and regional initiatives. 		<p>HoFs</p>
<p>Priority 3. Raising awareness and aspiration</p>	<p>2018/19 Action</p>	<p>Progress to Date (April 2019)</p>		<p>Person(s) Responsible</p>
<p>Objective 3.1 Raise STEM profile and establish staff and learner buy-in supported by Stem Ambassador Team.</p> <p>Establish learner STEM Ambassadors across faculties (as appropriate) with a cross-college focus.</p>	<p>Effective recruitment of stem Ambassador with clear defined role & responsibility working closely with student body (eg, student association).</p> <p>Raise the visibility of STEM across the college and all subject areas through targeted marketing.</p> <p>FMT's to develop or grow STEM Ambassador scheme.</p>	<ul style="list-style-type: none"> Decision to offer all appropriate staff the opportunity to be STEM Ambassadors and to be part of the scheme. Science Connects visited college and delivered STEM Ambassador scheme to staff, uptake is on-going. Profile raised by various events throughout AY 18/19; Secondary Big Bang Event (Oct 18), launch of National Strategy Review (Feb 19), Launch of STEM Lanarkshire and Early Years event (March 19), Primary Step into STEM event (May 19). 		<p>HoFs</p>

<p>Objective 3.2 Raise STEM profile within the curriculum to support staff/learner understanding.</p>	<p>Review course publisher to support raising the STEM profile.</p> <p>Map lesson planning to highlight STEM activities, with effective sign-posting to STEM roles and functions.</p>	<ul style="list-style-type: none"> • Course publisher now includes reference to all STEM related subjects. • Principal provided update from SFC on STEM definitions for each faculty. 	<p>Principal/ HoFs</p>
<p>Objective 3.3 Highlight success through competitions, eg Worldskills, Association of Hairdressers and Therapists, VEX Robotics.</p>	<p>Create case studies to showcase learner journey and success in the context of STEM.</p>	<ul style="list-style-type: none"> • All events within AY 18/19 received press coverage and showcased the very successful STEM activities throughout the year. 	<p>HoFs</p>
<p>Priority 4. Encouraging applications</p>	<p>2018/19 Action</p>	<p>Progress to Date (April 2019)</p>	<p>Person(s) Responsible</p>
<p>Objective 4.1 Engage in relevant partnership working with local authorities and key stakeholders (DYW, DWP, etc) highlighting clear pathways & employment.</p>	<p>Schedule a range of recruitment events and activities which promote the STEM curriculum, with clear pathways sign-posting progression and employment opportunities.</p>	<ul style="list-style-type: none"> • STEM recruitment embedded into mainstream recruitment plan for each faculty. • Current learners actively involved in sharing their experiences (including successful regional SWAP programmes) to support articulation and recruitment. 	<p>HoFs</p>

<p>Objective 4.2 Focus on long-term engagement (primary to S4) to showcase STEM courses, careers and opportunities.</p>	<p>STEM Strategy group and STEM Ambassador Team to co-ordinate college wide schedule, input to STEM Calendar, of events showcasing STEM courses, careers and opportunities.</p>	<ul style="list-style-type: none"> • Strategy lead by Regional Hub with all sub-groups taking forward initiatives and reporting into this group. • Main objective of the Regional hub to create a sustainable model throughout the education pipeline to support STEM. 	
<p>Objective 4.3 Highlight success through competitions, eg Worldskills, Association of Hairdressers and Therapists, VEX Robotics.</p>	<p>Create case studies to showcase learner journey and success in the context of STEM.</p>	<ul style="list-style-type: none"> • Profile raised by various events throughout AY 18/19; Secondary Big Bang Event (Oct 18), launch of National Strategy Review (Feb 19), Launch of STEM Lanarkshire and Early Years event (March 19), Primary Step into STEM event (May 19). • Current learners actively involved in sharing their experiences (including successful regional SWAP programmes) to support articulation and recruitment. 	
<p>Priority 5. Supporting success</p>	<p>2018/19 Action</p>	<p>Progress to Date (April 2019)</p>	<p>Person(s) Responsible</p>
<p>Objective 5.1 Secure adequate funding to support STEM strategy, STEM infrastructure and roles.</p>	<p>Establish a STEM budget including forecasting/projections aligned to STEM Strategy to ensure STEM is resourced appropriately.</p>	<ul style="list-style-type: none"> • Budget set by Regional Hub. • Successful bid secured via Education Scotland STEM initiative approx. £90K. This supports STEM Lanarkshire, CLPL throughout the Region and development of STEM in Early Years curriculum. 	<p>HoFs</p>

<p>Objective 5.2 Support success through competitions, eg Worldskills, Association of Hairdressers and Therapists, VEX Robotics.</p>	<p>Newsletter to local schools, focused marketing campaign</p> <p>Local community involvement via DYW.</p>	<ul style="list-style-type: none"> • Profile raised by various events throughout AY 18/19; Secondary Big Bang Event (Oct 18), launch of National Strategy Review (Feb 19), Launch of STEM Lanarkshire and Early Years event (March 19), Primary Step into STEM event (May 19). 	<p>HoFs</p>
<p>Objective 5.3 Establish Industry sponsorship for STEM success.</p>	<p>Contact employers for relevant sponsorship.</p>	<ul style="list-style-type: none"> • DWY support employer related events and inform and advise Regional Hub of progress. • Faculties seek out sponsorship for faculty lead events. 	<p>HoFs</p>