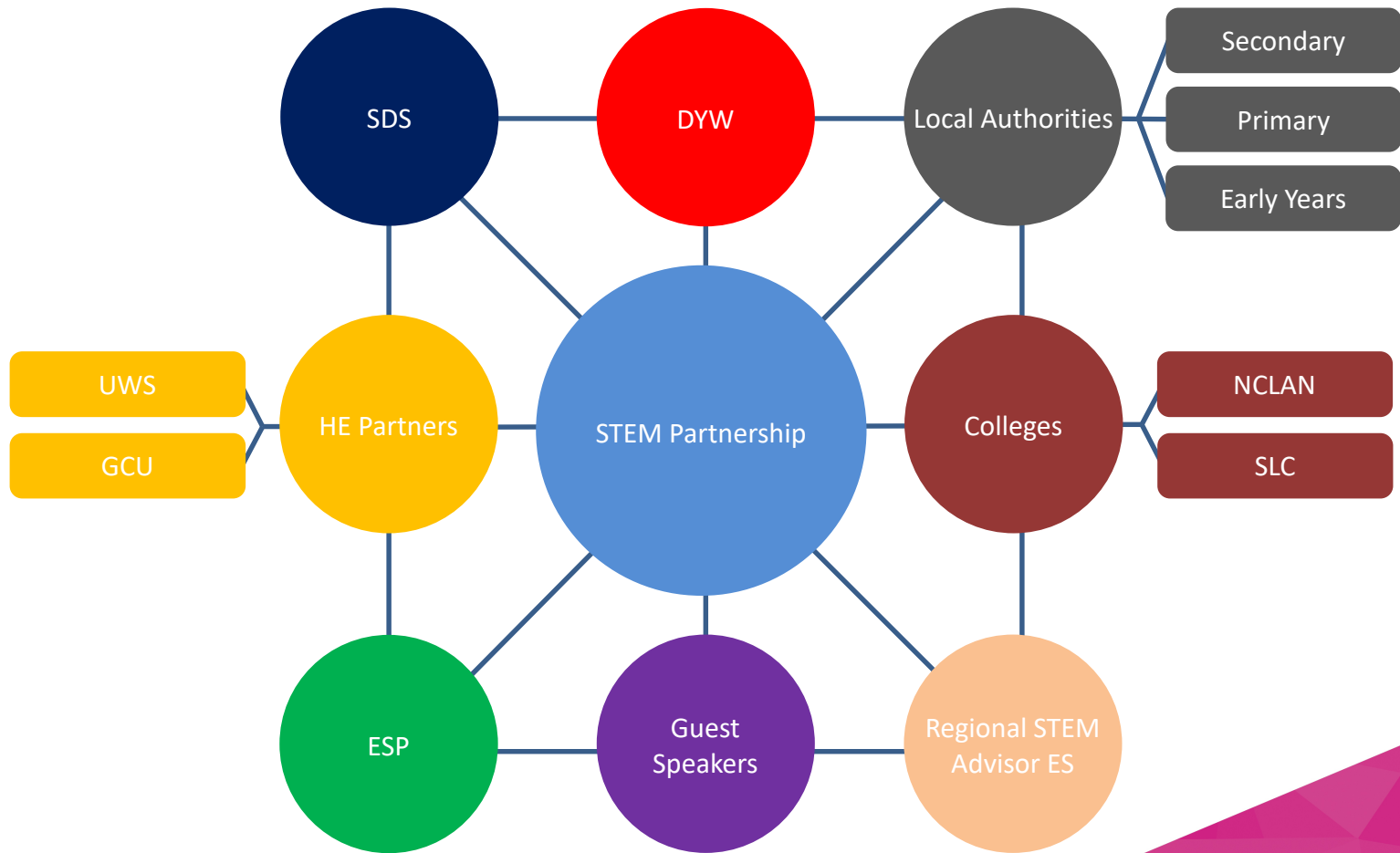




# STEM in Early Learning & Childcare

Clare Flynn, Feb 2020

# Regional STEM Partnership



Institute of Physics, SMART Stems and Science Connects

# Purpose

- Address the STEM Poverty and Skills Gap
- Create a progressive pipeline of STEM learning from ELC to HE
- A Network of shared aims, goals, meaning & message
- Learning for Sustainability ‘sustain & extend’

# Regional STEM Events

STEM  
Career  
Guidance,  
Engaging  
Activities and  
Industry  
Participation

Step

**450 Secondary pupils from North  
and South Lanarkshire**

**210 Primary pupils from North  
Lanarkshire**

**50 Little Learners from local  
nurseries**

Stepping

Toddle

# Regional Deliverables

## Creation of STEM Lanarkshire – STEM Futures

- Collaborate on national STEM Initiatives
  - Recognition of great existing practice across all sectors
  - Sustainable digital platform for collaboration
  - Create a baseline: monitor environment for learning tomorrow
- Collaborative Partnership for Career Long Professional Learning (CLPL)
- STEM Capital vs STEM Poverty and Skills Gap
- **ELC PRACTITIONERS AS STEM LEADERS**

# #STEM Lanarkshire

## STEM Lanarkshire (Video)



- ❖ Invest in STEM Literacy
- ❖ Create a STEM Nation
- ❖ Sustain & Extend

# #STEM Lanarkshire

## Challenges

- Scale & Scope

North Lanarkshire

- 34 Secondary Schools (23 Mainstream & 11 ASN)
- 121 Primary Schools
- 42 Local Authority Nurseries
- Private Nurseries?

- Collective goals across educational sectors

450 Secondary pupils from North and South Lanarkshire  
210 Primary pupils from North Lanarkshire  
50 Little Learners from college nurseries

# #STEM Lanarkshire

## Leading Resource & Greatest Asset

- Support STEM via Student Placement
- Creation of Level 6 STEM Unit in ELC
- 3 x Groups in AY 19/20
  - STEM GROUP
  - Forest Schools Group
  - Control Group
- Survey (Before & After)



# ELC SURVEYS

## Professional Learning in STEM – Findings from Annual STEM Practitioner Survey



Published May 2019 (Education Scotland)

% Practitioners 'feel confident delivering STEM'

Secondary – 73.36%

Primary – 63.35%

ELC – 42.76%

- I feel confident about delivering a STEM topic 
- In the near future we will need more engineers technicians and scientists 

*"they're all creative & passionate about what they do, with one aim to create solutions and help build the future"*

*"well paid jobs mostly targeted at men, though women are trying to be brought into the industries – like men are in childcare and nursing"*

# ELC / STEM

## Student Population Leading STEM in ELC

- Raise STEM awareness to pre-5's
- Organic CLPL for all staff – build confidence
- Supports Scale and Scope
- Early Adopters of STEM
- Reducing STEM Poverty/Skills Gap?

# ELC / STEM UNIT

Aligned to Scot Gov STEM Education & Training Strategy Published 2017

## Unit Title: STEM and Early Learning & Childcare

- **Outcome 1**
- Explain STEM as a Government education and training priority for Scotland and your role in influencing and shaping it as an Early Learning & Childcare curriculum priority. **(Assessment – Poster)**
- **Outcome 2**
- Develop a range of suitable STEM resources for the Pre-Birth to three or Early/First Level Curriculum.
- **Outcome 3**
- Apply a range of suitable STEM resources for the Pre-Birth to three or Early/First Level Curriculum.
- **Outcome 4**
- Evaluate the application of STEM activities within an Early Learning & Childcare Setting.

**(Assessment Outcomes 2 to 4 – Planned Learning Experience & Reflective Account)**

**Overall Assessment Objective - Portfolio**

# STEM LANARKSHIRE JOURNEY SO FAR

- Concept Pilot end June 2020
- Full Pilot End August 2021
- Influencers: STEM as part of National Improvement Frameworks (aligned with Es&Os)
- Regional Partnerships shapes collaborative working across all sectors (part of North Lan Council Pedagogy Team)
- Creation of STEM Digital Learning Hub – access for all sectors with all sectors contributing

Questions?

