

# STEM NATION AWARD for Froebelian settings

"I wanted to educate people to be free, to think, to take action for themselves". (Froebel, 1967)

Education Scotland's **STEM Nation Award** supports similar aims. We aim to celebrate, promote and build on effective practice in STEM education. The five award elements align beautifully with Froebel's principles. This guide shows how ELC settings implementing a Froebelian approach may wish to align their work with the elements.



- Leadership in STEM
- STEM family learning
- Equity and equality in STEM
- Employability and STEM partnership working
- STEM curriculum and learner pathways



## THE CENTRAL IMPORTANCE OF PLAY

**Realising the Ambition** recognises the essential role of play in child development. STEM provides rich contexts to support children's play and learning. An overview of how your learning environment promotes play through STEM is suitable evidence for the **STEM curriculum element**.



## FROEBEL'S GIFTS & OCCUPATIONS

The Froebelian principle of unity and connectedness supports interdisciplinary learning. Sharing evidence of how staff and learners are making connections across the curriculum is encouraged. In addition, evidence showing how children use and engage with Froebel's gifts could also be shared as part of the **STEM curriculum element**.



Block play provides opportunities for children to explore mathematical and scientific concepts such as shape, spatial awareness, measure, forces and the properties of materials.

The occupations such as sewing, cooking and woodwork clearly link with technologies, science and maths outcomes. Connections with STEM partners can also support the further development of Froebelian occupations and provide evidence for the **employability and STEM partnership working element**.

## EQUITY & EQUALITY

A Froebelian approach values the uniqueness of every child and can help practitioners to deepen their understanding of and commitment to equity, equality, diversity and inclusion. By exploring how this can be applied to address issues within STEM, settings will be able to gather a wealth of evidence to support the **equity and equality in STEM element**.

## AUTONOMOUS LEARNERS AND KNOWLEDGEABLE & NURTURING EDUCATORS

STEM professional learning undertaken by practitioners which relates to the Froebelian approach can be included in the **leadership in STEM element**. This also applies to children having choice and autonomy in their learning - a key Froebelian principle.



## CREATIVITY & THE POWER OF SYMBOLS

Creativity is an important aspect of STEM and a Froebelian approach - supporting children to develop and represent their ideas and solve problems in their own way is key. Froebel also placed great importance on music and action songs. Many nursery rhymes and finger songs explore numeracy or cause and effect and make connections to STEM learning. Experiences and interactions in this area could be included as evidence for the **STEM curriculum element**.

## ENGAGING WITH NATURE

Examples of outdoor learning experiences which allow children to explore the natural environment can be included as evidence for the **STEM curriculum element**.

Want to learn more? Contact us at: [STEM@educationscotland.gov.scot](mailto:STEM@educationscotland.gov.scot)

## RELATIONSHIPS

The STEM Nation Award recognises the key role parents and families play in building children's STEM knowledge. Froebelian approaches also recognise the central importance of these relationships in a child's learning and life. Any work you are doing to engage families with STEM learning can be submitted as part of the **STEM family learning element**.

