

Design Thinking in Practice

Ready for Work Playground Development Project

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Thank you for joining us today

Please have your microphone on mute and your camera off.

Please use the chat function or raise the hand if you would like to ask questions or share any comments.

This session will be recorded



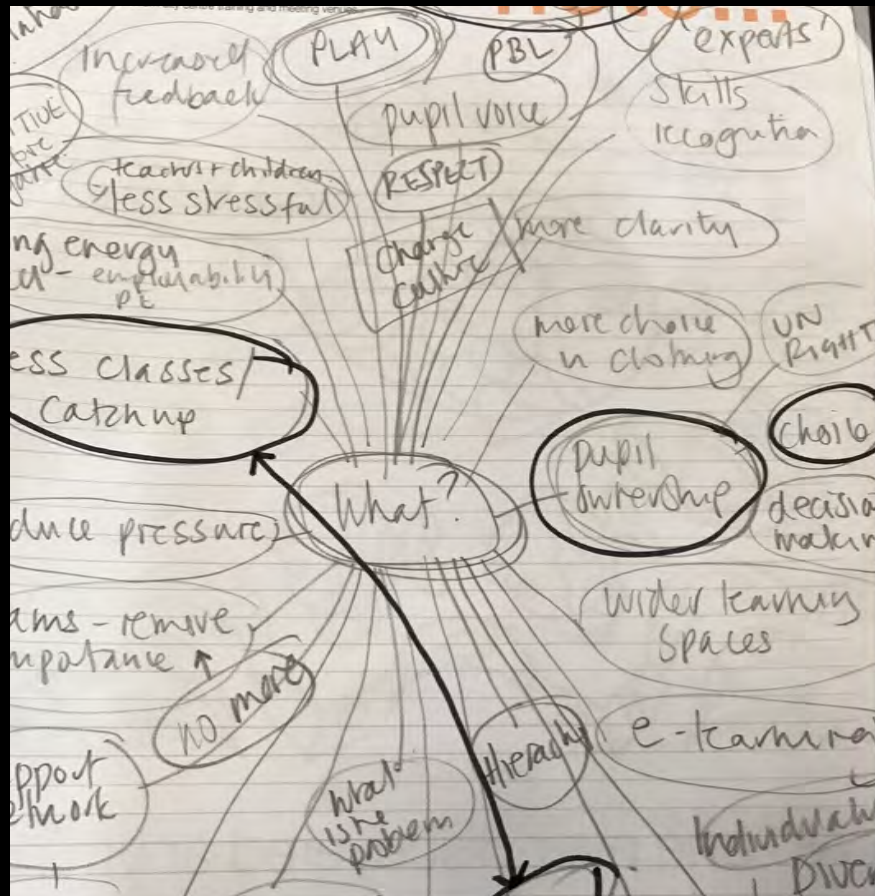
- Intro
 - Creative Learning Programme in Stirling
 - Briefly explore creativity and design thinking are why we feel they are important within education
 - Ready for Work programme and the Design Thinking Project
-

Creative Learning Programme

Stirling



Stirling
Alive with
Scotland



Creativity Approaches

Creative Thinking

Why?

Creative Process

Creative Learning

About the Creative Learning Programme

Influenced by:

- Research and practice exploring innovative and creative learning pedagogies
- National and international research and inquiry (Education Scotland, Creative Scotland, OECD, PISA, NESTA, CCE, HundrED etc)
- What we see happening in schools and nurseries
- Consultation and learning through our Creative Space - educators, practitioners and partners such as Hidden Giants, University of Stirling etc
- Stirling's wider priorities - future learning / future industries / future work
- Learning Opportunities and Festivals ...Creative Bravery Festival, Imagine If, Firestarter, Daydream Believers etc
- ...and continues to support development in arts and creative industries
- ...work with freelance practitioners and organisations to deliver opportunities

National Creative Learning Networks - Aims

To develop a shared language and understanding of creativity and its role across every aspect of learning, teaching and continuous improvement

To raise awareness of creativity and its practical application as a higher order thinking skill and as a cross-cutting theme across Curriculum for Excellence

To raise levels and standards of creativity in learning and teaching in both formal and community learning contexts

To provide leadership on national priorities in creativity in learning for local and national partners

To sustain strategic partnerships between the education, community and cultural sectors locally and nationally

To stimulate creativity in our leaders, practitioners and learners.

Stirling - Future Learning / Future City

Skills - 5 C's

- Creativity
- Collaboration
- Critical Thinking
- Communication
- Curiosity

Values, aptitudes etc



Why?



Design Thinking

Creativity

Why?

A conversation with

**Sir Ken
Robinson**

*Why is creativity
important in education?*



Why?

Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity







Source: Future of Jobs Report, World Economic Forum

Top 10 skills of 2025



-  Analytical thinking and innovation
-  Active learning and learning strategies
-  Complex problem-solving
-  Critical thinking and analysis
-  Creativity, originality and initiative
-  Leadership and social influence
-  Technology use, monitoring and control
-  Technology design and programming
-  Resilience, stress tolerance and flexibility
-  Reasoning, problem-solving and ideation

Type of skill

-  Problem-solving
-  Self-management
-  Working with people
-  Technology use and development

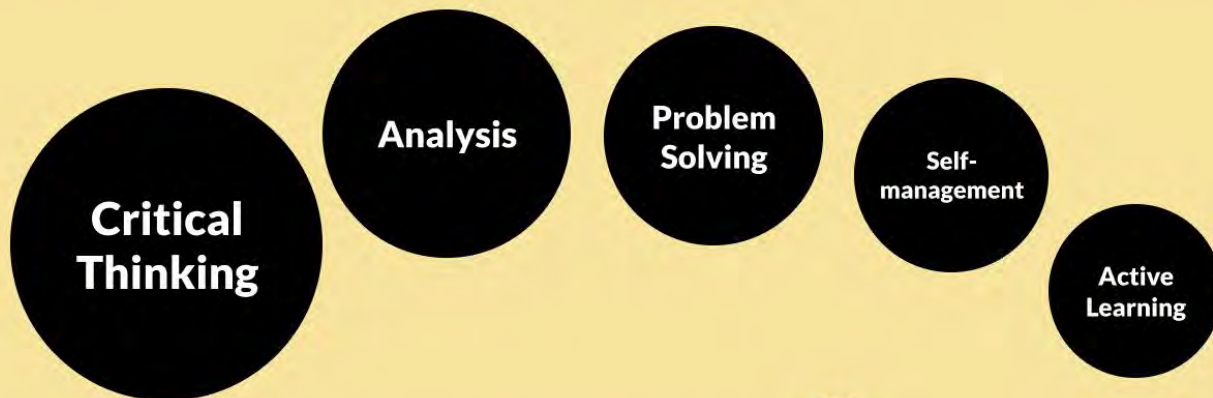
Source: Future of Jobs Report 2020, World Economic Forum.

50% of all employees will need reskilling by 2025, as adoption of technology increases

Critical thinking and problem-solving top the list of skills employers believe will grow in prominence in the next five years

Increase in need of skills in self-management such as active learning, resilience, stress tolerance and flexibility

How do we nurture these skills in students?



Top skills and skills groups rising into prominence by 2025

Source: World Economic Forum: Future of Jobs Report 2020



OECD: Skills for 2030

- Social and emotional skills can be equally, and in some cases even more, as important as cognitive skills in becoming a responsible citizen
- Cognitive and meta-cognitive skills, which include critical thinking, creative thinking, learning-to-learn and self-regulation
- Social and emotional skills, which include empathy, self-efficacy, responsibility and collaboration
- Practical and physical skills, which include using new information and communication technology devices



Andreas Schleicher, Director of Education and Learning (OECD)



Children entering school need to learn to value common prosperity, sustainability and well-being. They will need to be responsible and empowered, placing collaboration above division and competition, and sustainability above short-term gain.

Is this something the Scottish education system encourages and nurtures and how do we achieve this?

What?



Creativity

Design Thinking

WHAT ARE CREATIVITY SKILLS?

Curiosity



Learners are constructively inquisitive and can demonstrate this by

- Being curious
- Registering patterns and anomalies
- Making use of previous knowledge
- Researching productively
- Formulating good questions

Open-Mindedness



Learners are open to new ideas and can demonstrate this by

- Using lateral thinking
- Using divergent thinking
- Hypothesising
- Exploring multiple viewpoints
- Being flexible, adaptable and functioning well with uncertainty

Imagination



Learners are able to harness their imagination and can demonstrate this by

- Exploring, synthesising and refining multiple options
- Generating and refining ideas
- Inventing

Problem Solving



Learners are able to identify and solve problems and can demonstrate this by

- Understanding and defining problems
- Crafting, delivering and presenting solutions
- Demonstrating initiative, discipline, persistence and resilience
- Evaluating impact and success of solutions

Creative Learners will be



- Motivated and ambitious for change for the better, including their own capabilities
- Confident in the validity of their own viewpoint

- Able to apply a creative process to other situations
- Able to lead and work well with others

Curiosity

Open Mindedness

Imagination

Problem Solving

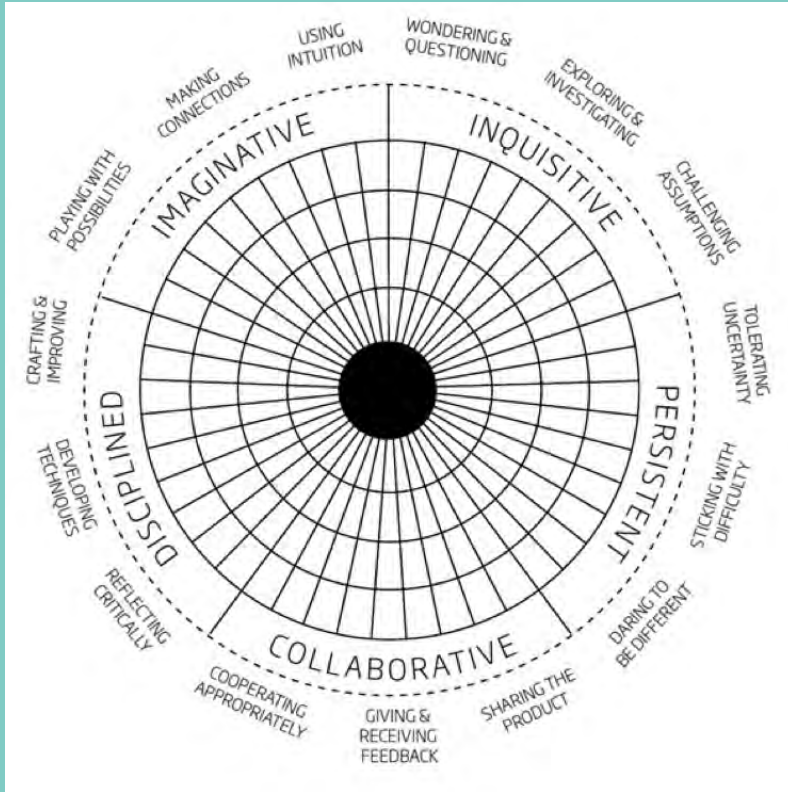
Education Scotland - HGIOS 4

Creativity, entrepreneurship and innovation is increasingly embedded across learning. Children and young people benefit from learning and teaching through partnerships with education, employers, creative industries and cultural sectors.

Learners are confident and ambitious with high levels of self-esteem. They are motivated to explore and challenge assumptions.

Children and young people take ownership of their own learning and thinking. They are imaginative, open minded, confident risk-takers, and appreciate issues from different perspectives.

They can ask questions, make connections across disciplines, envisage what might be possible and not possible, explore ideas, identify problems and seek and justify solutions.



The Centre for Real World Learning's five dimensional model for creativity in schools, was developed with the OECD and is used by CCE, RSA and other organisations promoting creativity. It represents the Creative Habits of the Mind seen in creative practice.

It is widely used across the world from Australia to Chile, Norway to Thailand, the Netherlands and England. In Wales, more than 500 schools use the five habits model to explore ways of embedding creativity in schools.

Why?

Why do creative learning opportunities:

- Engage children who might struggle to engage in learning and thrive?
- Enable rich questioning?
- Often lead to deeper learning about a topic / subject?
- Enable children to have a voice and are child led?
- Promote individuality?
- Enable the move from known to unknown outcomes?



Why do arts / creative / problems based projects often:

- Engage children who might struggle to engage in learning and thrive?
- Enable rich questioning?
- Often lead to deeper learning about a topic / subject?
- Enable children to have a voice and are child led?
- Promote individuality?
- Enable the move from known to unknown outcomes?

Creative learning is almost always framed by engaging questions which have no one right answer.

There is space for activities that are curious, authentic, extended in length, sometimes beyond school, collaborative and reflective.

There is opportunity for play & experimentation.

There is opportunity for generative thought, where ideas are greeted openly.

There is opportunity for critical reflection in a supportive environment.

There is respect for difference and the creativity of others.

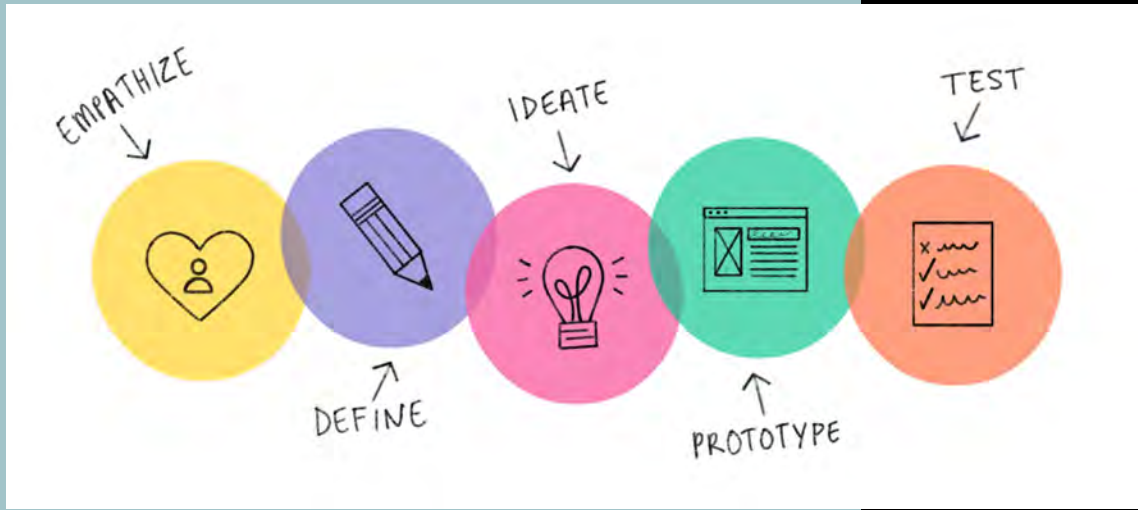
Creative processes are visible and valued.

Students are actively engaged, as co-designers.

A range of assessment practices within teaching are integrated.

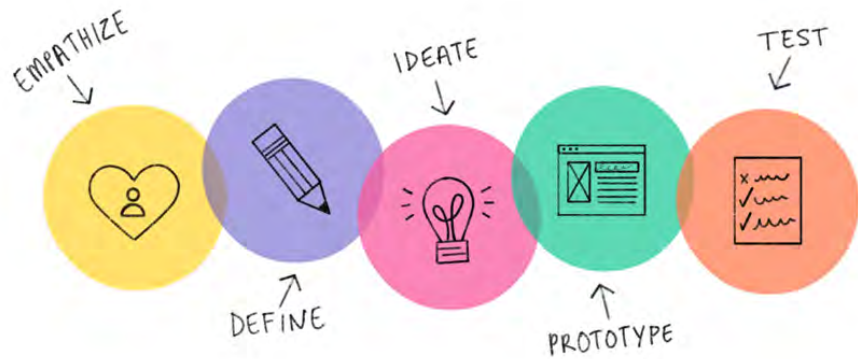
Space is left for the unexpected.

Bill Lucas (CRL)



What, Why, Who,
When, Where, How?





Creative Process

Why Design Thinking?

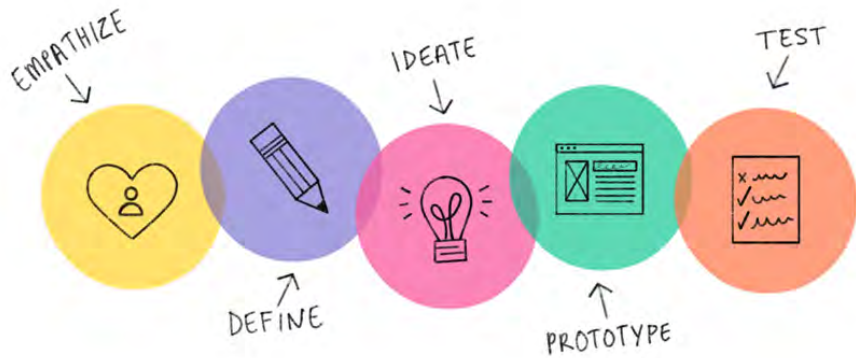
Scaffold Learning
Nurture Creativity

Empathy: Learn and understand
(through provocation)

Understand the problem, asking good questions - what, why, how, when, where, who...(curiosity, inquiry, collaborate)

Research: Look and Ask

Read, talk, speak, ponder, understand, explore - deepen thinking and learning....(curiosity, inquiry, collaborate, communicate)



Creative Process

Why Design Thinking?

Support / Extend / Challenge
Curiosity / Inquiry

Ideate: Imagine

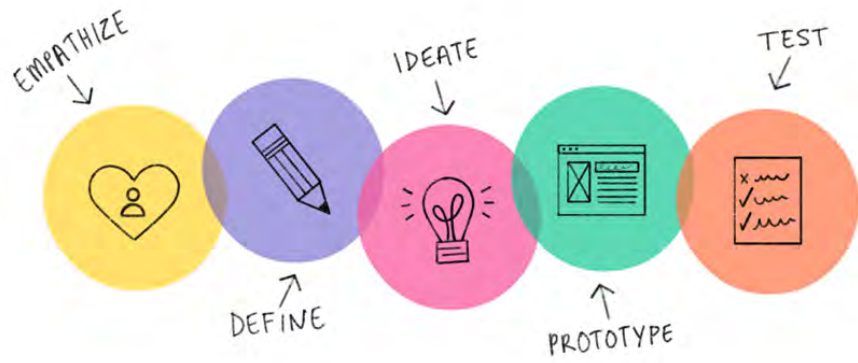
Create new ideas, explore, divergent thinking, applying learning, play...
(curiosity, creativity problem solving, tinkering, divergent thinking)

Reflect: Consider ideas

WWW / EBI...(critical thinking, communicate, convergent thinking)

Prototype and Test

Make, build, draw, mindmap

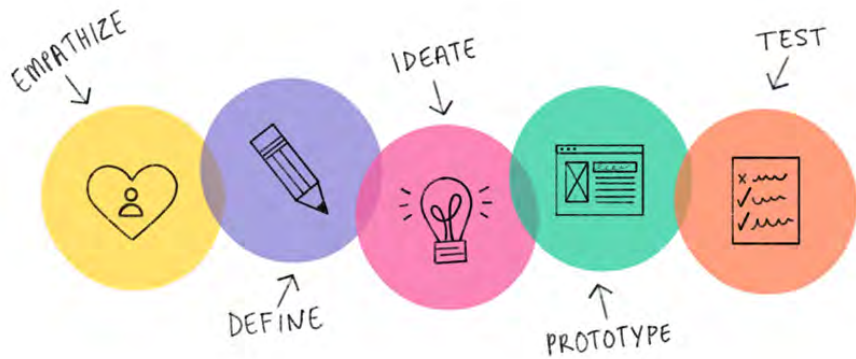


Creative Process

Why Design Thinking
in Learning?



Allans Primary
Maker Space



Creative Process

Why Design Thinking?

- Offers a framework that everyone can use to support, nurture and define creativity and creative practice.
- Promotes creativity, collaboration, critical thinking, communication, curiosity, empathy, play, turn taking, problem solving, listening, empathy, imagination, innovation.....
- Helps us to move from known to unknown outcomes. Iterative learning.
- Supports project based learning - joining the dots between 'subjects'.
- Deepens learning

Ready for Work Programme

Stirling



Phase 1: Induction (August - September)



The first 6 weeks of the course is our Induction phase.



This part of the course will let you get to know the Ready for Work team and the rest of the group.

You will take part in a variety of activities designed to build your transferrable skills.



Some of them might take you out of your comfort zone!



After the Induction phase, you will be working in a variety of settings. You will follow the same structure each week throughout Phase 2 and Phase 3 of the programme:



Monday

The Ready for Work Hub
(above Stirling Bus Station)



Tuesday

Forth Valley Campus
(Stirling Campus)



Wednesday

The Ready for Work Hub
(above Stirling Bus Station)



Thursday

Volunteering in a variety
of settings



Friday

Work Placement

Forth Valley College (Tuesdays)



ART/
Digital Media



Cooking



Enterprise

Work Placement (Fridays)

Work placement is organised into blocks which allow you to experience a variety of situations and build your skills.

Where you go on placement depends on your interests, commitment and level of skills.

"It was an absolute pleasure to have a polite, hardworking young man who fitted in so well. It was a great and pleasant surprise to find him in the laundry room this morning, ironing his apron in preparation for his shift today"

Teresa Wilson, Catering Manager.



Volunteering (Thursdays)



Phase 2: Project Based Learning (October - Christmas)

During this phase, you will work on English, Literacy, Numeracy and Applications of maths.

This will allow you to attain SQA awards at either National 4 or 5.

Much of our learning is through activities and projects.

Last year, we were approached by Allan's Primary to make more creative space of their playground.

The consultation, research and planning involved in this project allowed students to achieve their SQA awards.

...and continued into phase 3

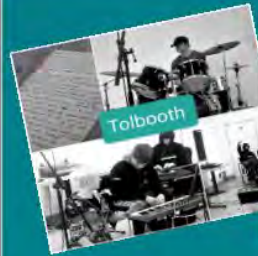
Phase 3: Reflection, Employability & Applications (January - June)

The main focus of this section of the course is an SQA award called Developing Essential Skills.

This allows us to look back on the work we have done throughout the year and reflect on what skills we have developed.

The outcomes for this award help you to write applications and prepare for interviews.

"The course was a great boost to my confidence and improved my thinking in a very positive way. I left with a job and wouldn't have got that job if it wasn't for the great help of the team that supported me."
Ready for Work participant 2019.



Wider Achievement



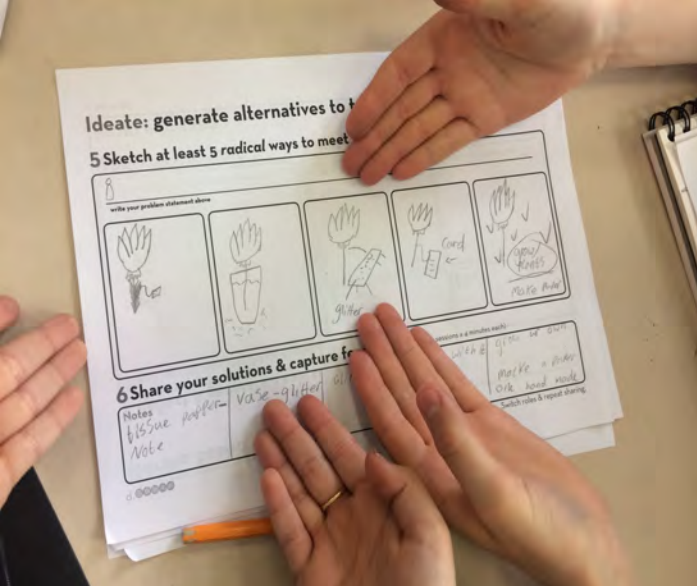
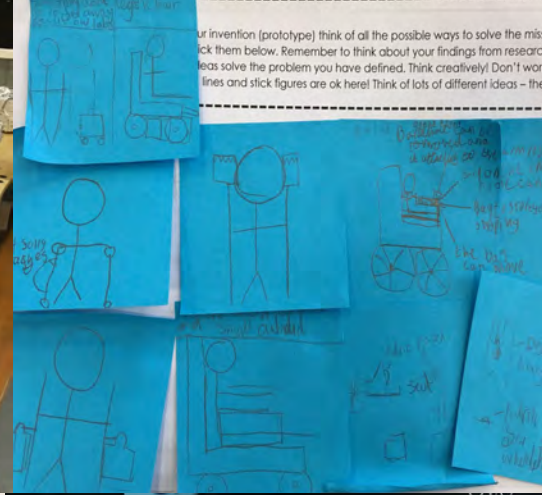


Playground Development Project

Ready for Work Group and Allans Primary School Playground Committee

Stirling Creative Learning Programme

Allans Primary School - Maker Space



30 mins	
<p>Interview</p> <p>You will now have the opportunity to contact an expert related to your mission! Think of questions you would like to ask them in order to help you:</p> <p>How much ^{money} is new creations appreciated how ideas are aimed at disabled Would they use them on a daily basis?</p>	
10 mins	
<p>Findings</p> <p> jot down the key points you have found out from your research and interviews in the space below:</p> <ul style="list-style-type: none"> • some things that were invented for disabled and used by everyone • hard with transport, tables, bars • that creations are appreciated • it can't be too heavy on the legs • it can't be worth to reach at the back • it can't be on the side 	<p>Define The Problem You Are Going to Solve:</p> <p>(user's name) needs a way to transport personal items with out any extra weight or fees diff-culty (user's need)</p> <p>Surprisingly/because/but... (circle one) because they already have to use there hands for transport items self</p>



Brief: Allans Primary School is situated in the historic centre of Stirling and was built in 1889. 170 children attend the school at present from P1-P7. There is limited space outside and the playground at the front and back is concrete. The children and team at Allans Primary School would like to develop the playground. They would like to commission you to meet with the Allans Primary School Playground Committee (P1-P7) to find out about their playground, how it is used and their hopes for its development. After this constitution they would like you to develop some ideas for their playground and present those ideas to them in February 2020.

Use What, Why, Where, When, Who and How and Design Thinking to gain a thorough understanding of the problem and to come up with new solutions.

Aims:

Recognising learning can be different and enjoyable.

Recognising and nurturing the skills, values and aptitudes that they have and those that they would like to develop / need to develop.

Applying learning now to their life experience and their future hopes for work and life.

Supporting numeracy and literacy development as part of project based learning

Developing trust and confidence in themselves and others, feeling safe and supported, developing resilience and self regulation.

Authentic and real life learning.

Ready for Work Programme

Developing Essential Skills
SCQF level 4

Designing

Understanding

Numeracy

Research

Communication

Focus

Analysis

Teams Skills

Creativity

Problem Solving

Perspective

Social

Awareness

Empathy

Integrity

Literacy

Leadership.....

Creative Learning Programme

Key Skills, Values
and Aptitudes

Creativity

Learning to Learn

Collaboration

Empathy

Curiosity

Resilience

Critical Thinking

Integrity

Open Mindedness

Self Regulation

Persistence

Creative Thinking

Agency

Problem Solving...

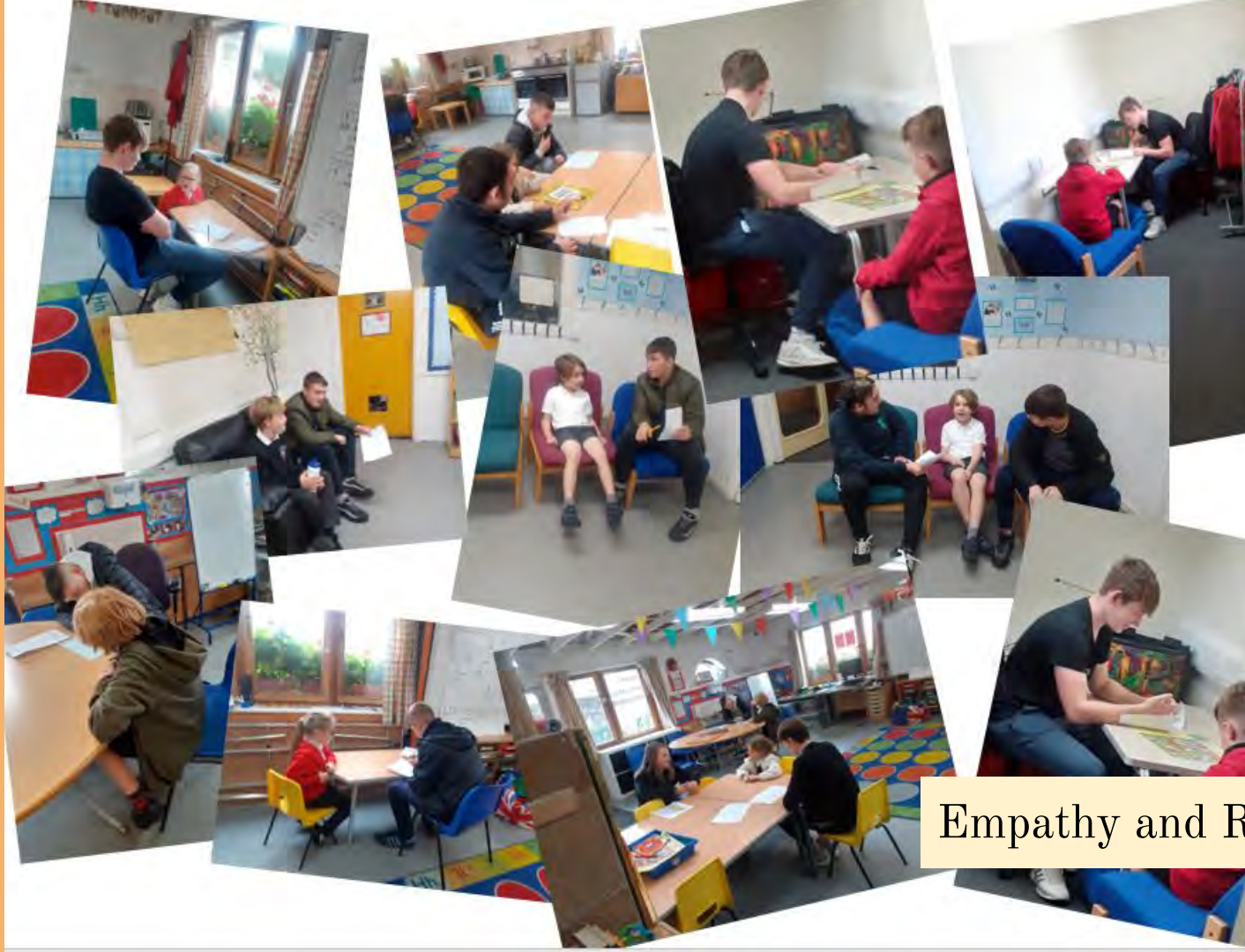
Imagination



Allans Primary School Playground Project



Allans Primary School Playground Project



Empathy and Research

Empathy and Research



Research



Reflect



Share Prototype Ideas



Impact of the project on the young people involved

