



Stirling Natural Creativity Pilot Project

**Allan's Primary School
Riverside Primary School**

January – March 2022

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Credits:

Photography: Brian Hartley and children and staff at Allans PS Primary 2 class and Riverside P7 class

Graphic design: Brian Hartley

Introduction by Clare Hoare

Project Natural Creativity

Project Natural Creativity enabled the exploration of creativity in the natural environment and its place in the context of learning, engaging in the dialogue of what creativity is, what creativity skills are, how they can be used in learning every day, how they might be nurtured outdoors.

Project Natural Creativity was a project borne out of curiosity and questions.

- How do we nurture and value opportunities for children and teachers to be curious and play together?
- What can we discover by watching, listening, sharing and asking questions?
- What do children, educators and creative practitioners share through curiosity and play?
- How does being outdoors influence this?
- What are the benefits?

We were inspired by a piece written by George Monbiot in 2013 [Rewild the Child](#). He noted that:

Research into outdoor education by King's College London found that children who spend time learning in natural environments "perform better in reading, mathematics, science and social studies." Exploring the natural world "makes other school subjects rich and relevant and gets apathetic students excited about learning".

Alongside an article in [Positive Psychology News Creativity and the Natural Outdoors](#).

"Time in nature can give us more attention available for persistently sticking to our problem solving and seeing our ideas through. The outdoors has been shown to help boost positive emotions like awe, wonder, contentment, connection, and just sheer fun. Not only are these enjoyable and inspirational but they also have cognitive benefits that are directly associated with creativity."

Why?

Philosopher and Educationist John Dewey said *“education is not preparation for life but life itself”* back in the 1930’s. He felt that what was being taught to pupils in the classroom should be connected to the challenges and experiences that they go through in their daily lives. He felt that schools should be a transformative space for creative and collaborative enquiry and that teachers and text books should not be the only source of knowledge.

Life in the 21st century is complex and fast changing, with a need for people to be adaptable and constantly learning. There are many complex problems that need solving on local, national and international levels, climate change being an example, and many opportunities, and we need people that are: curious and want to find out more; that can think critically and can collaborate (rather than compete) to come up with new ideas, new solutions and solve problems. Society needs people to be compassionate and empathic, to understand life in someone else’s shoes, to value nature and its importance, and want to make things better.

To achieve this, these skills need to be taught and nurtured within education settings as early as possible to help create a society of people that have agency and can be active within their communities and wider society, whether at work or in life in general.

In school we generally teach to the known, the answer is known, and we help students reach that answer. However we need people that feel comfortable working within the unknown and are willing to ask questions, to be curious, and potentially able to solve many of the problems and to create many new opportunities that do not yet exist.

A question we need to ask is *“do we have an education system that enables the development of these skills”* and if we don’t, how do we achieve this so that young people leaving our schools are ready for 21st century life and work? Can creative, project based learning be the key?



What is Creative Learning?

Creative Learning is project based learning, often based on authentic questions or problems. It is not learning about the arts, but is learning across the curriculum, which sometimes includes an arts or design output. Creative learning is a delivery method that considers individual learning styles and figures out innovative ways to increase engagement and retention of knowledge alongside development of skills. Much creative learning focuses on developing skills needed in the 21st century, for example, collaboration, creativity, curiosity, critical thinking and compassion alongside the knowledge required to answer a question or problem. The creative thinking process is central to creative learning, and is described further on.

One of our favourite descriptions, and a potential framework, for creative learning is by Professor Bill Lucas from the Centre of Real World Learning. He describes what creative learning might look like, and this reflects the experience facilitated by David Trouton, Brian Hartley, and other creative practitioners and educators nurturing creative learning:

- **Creative processes are visible and valued.**
- **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 and experimentation.**
- **There is an opportunity for generative thought where ideas are welcomed openly.**
- **There is the opportunity for critical reflection in a supportive environment.**
- **There is a respect for difference and the creativity of others.**
- **Students are actively engaged as co-designers of the learning.**
- **A range of assessment practices within teaching are incorporated.**
- **Space is left for the unexpected.**

We also add:

- **Creative learning is about the process as much, if not more, than the final product.**
- **Learning is linked to life in the 21st century.**
- **Skills developed through creative learning are recognised, understood and valued.**
- **The outdoor environment is utilised as much as possible.**
- **Digital skills development is incorporated where possible (this might include web search, photography, audio recording, coding, web design, CAD etc).**

Project Report

by David Trouton & Brian Hartley

Background

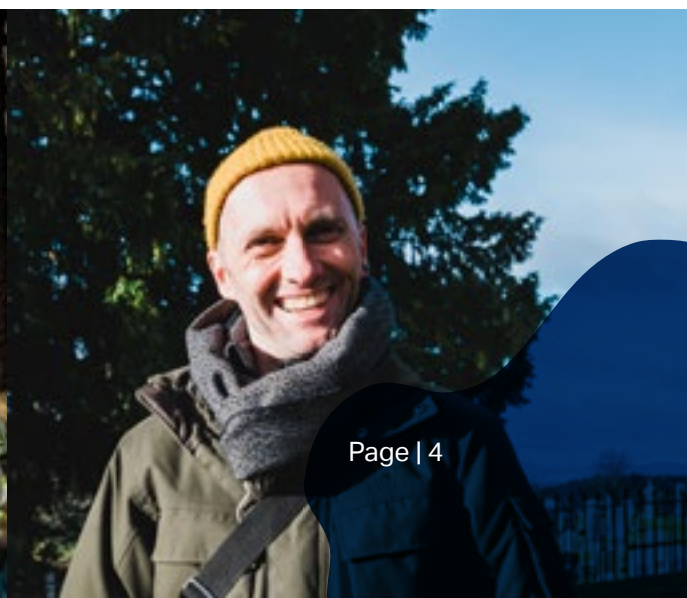
The project was developed, as part of Stirling's Creative Learning Programme, in the first school year after the Covid pandemic lockdown. Schools were just beginning to relax access restrictions and were aware of the disruption that had been caused to children's learning as well as their social and emotional development over this time. Many schools had discovered that the necessity to be outdoors for group work and visitor access had also unintentionally brought something positive – the opportunity to explore the natural environment with all its inherent creative possibilities and place this in the context of the curriculum.

In our initial conversations about the project we were excited at the many naturally occurring opportunities for heuristic learning that would arise from simply exploring the outdoor environment near each school.

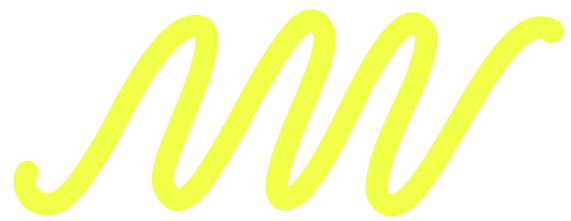
Visiting artists

The idea of an outdoors-based project also afforded an opportunity to involve visiting artists in the conception and delivery. It is well documented how visiting specialist artists can introduce a new dynamic to mainstream education, bringing their own unique skill-sets to bear on many aspects of the children's learning.

Musician and Sound Recordist, David Trouton, and Photographer and multi-disciplinary Artist, Brian Hartley, were recruited to lead the project. Both artists have a long history of creative interventions in a wide range of settings, and share the sensibilities required for meaningful collaboration.



The schools



Project Natural Creativity took place over 10 weeks at two Stirling City Centre schools – Allan’s Primary School (located in the old town area, right at the bottom of the Castle Hill) and Riverside Primary School (located across town on the banks of the River Forth). Allan’s PS chose a Primary 2 class to work on the project and at Riverside PS, Primary 7 pupils were involved. The project began at the end of January and our final session was in the last week of March. This time frame was ideal – from winter into early spring – the change of seasons symbolic of “Natural Creativity” itself.

An initial meeting took place with the Head Teachers and Class Teachers of each school at which we discussed the project at length: the different directions it may take, the possibilities for learning; the range of curricular areas that could be explored; and of course the health and safety considerations of taking children out of school. We emphasised the intention of meaningful collaboration with the children’s own ideas and perceptions and the importance of the process of discovery over expectations of an end product or event, as well as the logistics and practicalities of our 10 visits.

Both schools were very welcoming and excited at the possibilities. We decided that for our first few visits we would ask the pupils to be our hosts, taking us, as visitors, for a local walk to investigate anything of interest in their area.

We were confident that the natural environment would present more than enough varied stimuli to provide content for the project, and we were confident that 10 weeks was enough time to create effective relationships with the classes. We did not yet know what the project would be “about”.

It was important that other than imposing an agenda on the classes, the content and focus of the work would evolve over time in response to the environments we discovered and the responses, interests and needs of the children.



The sessions

Allan's Primary School Primary 2 Class

Our first session at Allan's PS was on a cold winter morning in late January. The Primary 2 children had discussed a walking route with their teacher and after meeting in the playground, suitably wrapped up for the weather, we all embarked on our first walk ...

The excitement, enthusiasm, curiosity, focus and positive energy of the whole class were both palpable and visceral.

These children were excited to be outdoors, open to the experiences, sights and sounds around them and proud to be sharing the familiar surroundings of their neighbourhood with their guests. They responded well to questions and asked many questions of their own. This was obviously a way of learning with which they were comfortable and in which they were experienced. It was a genuinely shared learning experience where teachers, artists and children were learning together.

The children were encouraged to ask questions, research and follow up the answers in detail and to share their ideas and observations. They were able to take turns using a variety of different cameras taking photographs of the things they found interesting. Having to wait two weeks to develop prints from the analogue cameras just seemed to add to the excitement of the process. They also recorded the sounds they noticed using the digital recorder with headphones – intensifying the sounds and really helping the children to focus on what they were hearing.



This first session became a model for future sessions with the Allan's Primary 2 group. Each week we would walk a route decided by the children with their class teacher – all within a kilometre of the school. We found the sculptures on the "Back Walk"; we explored the "Mars Walk and Holy Rude"; we visited the "King's Knot" ancient garden; we walked around the Old Town Cemetery with its many interesting follies and architectural features; we toured the Castle itself. The outdoor environment proved to be a richer resource for learning experiences than even we had ever imagined.

Each session would end in a discussion or recap of the day's discoveries in the circle area of the playground... a forum for questions and ideas that would feed into the next week's walk. The children made sculptures in the playground from found natural objects. We experimented with the different images created by different types of cameras. We used Macro lenses to photograph plants and small insects up close, revealing their amazing details. We grew mushrooms. We took apart a piano to create sounds by hitting and plucking the strings. The children created a dance piece. We rolled in muddy lawns. We collected leaves and branches from different trees. We made music with drums and tuned instruments. We sang songs.



Brian and David would also send ideas and provocations each week via email links to develop any interesting ideas or themes that arose during the walks...video clips, short pieces of music or recorded soundscapes, links, songs, pictures and photographs.

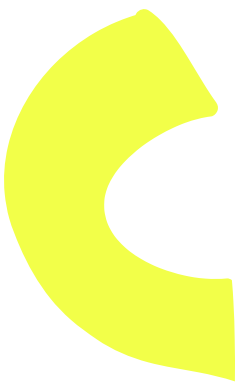
Every week our time spent together outdoors would stimulate the pupils' curiosity and encourage their imagination. Every session would reveal interesting things to follow up back in the classroom. This would, in turn, inform the choices we made on where to go and what to look at the following week.

In this way, "Outdoors" became the theme of our project over the ten weeks, since no other parameter or stimulus was required to focus the children's attention. The children explored their own creativity in many ways – they made pictures, sound recordings, videos, sculptures, designs; made rubbings, took photographs and created music. The learning areas they covered spanned the breadth of curriculum. The enthusiasm of the Primary 2 class was the engine that drove the learning.





Puddles frozen over Fallen branches Careful Snow drops
The sound of the wind in the trees Birdsong Smells like winter
Poke the ice with a stick What's that sound? Footsteps
A secret garden A pumpkin on a roof Is that a Chaffinch?
Mountains Near or far away? Take a picture...
Lots of snail-shells... What colours? Deep blue sky...
Insects... What are they? Plants beginning to grow
Look! How many? What did she just say?
Where do they come from? A steep hillside
Look at that! Stories Lots of steps Out of breath
A landslide... What's that? More steps Why?
Lots of chat laughter What is he doing?
Look at that tree! What does it feel like? Can I have a go?
Singing Smile for a photograph! Can I take one?
Tired feet Home.



Allan's P2 snail talk:

<https://on.soundcloud.com/Ug1mR>

Allan's P2 drumming and clapping:

<https://on.soundcloud.com/uGZor>



Riverside Primary School

Primary 7L class

We were very aware that the project would take a different form working with an older group. Primary 7 is of course a stage of major transition for the pupils and occurs at a time when their sense of identity, individuality, inter-personal relationships and relationship to the environment is changing and evolving most rapidly.

Again we decided to begin by asking the pupils to share a local walk, and at our first meeting the class took us along the banks of the River Forth and across the footbridge to Cambuskenneth Abbey. The class obviously enjoyed being outdoors and were proud to share the walk with us – Introducing us to the Woodland Garden, a Community Orchard and the Old Footbridge as we chatted, exchanged ideas and started to get to know each other.

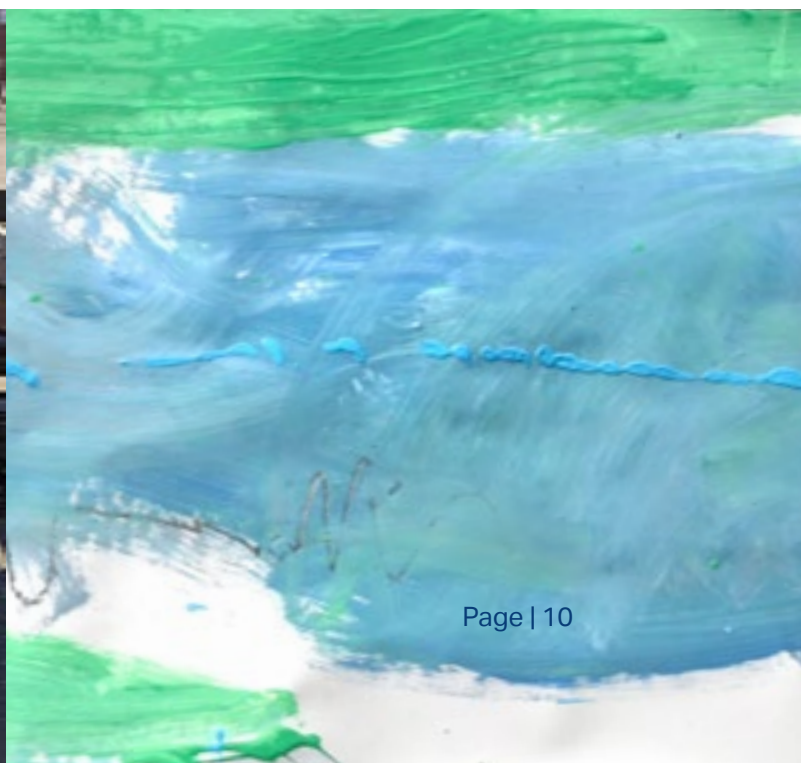
We discussed where to visit next and decided that in future weeks we would explore the other bridges in the neighbourhood...Old Stirling Bridge, the New Road Bridge and the crossing used by the railway track.

When were the bridges made? What are they made of? How do you make a bridge?

We had fun experimenting in making human bridges with our bodies. What did that feel like? What forces are in play?

We looked at some maps of the area. We noticed the shape of the river from above as it meandered and turned dramatically through the city. We realised that the school itself was effectively surrounded by the river.

Eventually the school may even become an island cut off in the middle!




The class then noted that if they were coming to school from most locations in the city they would have to cross a bridge.

We counted 3 large bridges in our area alone. How many did there used to be?

Could the river be crossed without a bridge? Are there older maps that would show how the river was crossed before the modern bridges were built?

In this way we began to realise that the river was a common presence in all our outdoor ventures, and perhaps although we took it for granted, was itself the most important feature that shapes our lives in this part of the city.

For the rest of our time together we decided to "Bring the River into the School" and let the river itself inform our learning and creativity...

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- We looked at the old maps to find that the Stirling Old Bridge was for many centuries the only point at which the river could be forded – the only gateway from Southern to Northern Scotland
 - We read that the river was a border between the very different cultures that existed to the North and to the South.
 - We researched the Pictish culture that existed north of the river – its music, art and intricate sculpture. How different was it from the Romans and then the Saxons to the South?
 - We used musical instruments to re-create the sounds of the river, improvising with tuned percussion, shakers, pouring water and blowing bubbles...strumming and plucking the strings inside the school piano.
 - We found out more about the river itself - its flora and fauna; where it begins and ends. Why does it meander?



- Brian brought in a real fisherman's net, which we used to make bridges. In a corner of the playground we made a huge fishing net "cats cradle" and began creating a swing using teamwork; managing risk; exploring possibilities of new materials; working physically together...could we use fishing net to represent the river itself?
- We decided to make a large scale visual representation of the river on large sheets of card in the playground splashed with blue, green and white paint to convey the turbulence of the Forth in flood.
- We created a musical soundscape to depict the powerful sounds of the river and used it in a podcast-style documentary to share the information we had discovered.

Music and Art sessions dominated the final few visits as we worked together to find a way to document our discoveries.

When we finally left the project at the end of March, the Primary 7 pupils were planning to continue the work we created to display in an open day celebrating their new outdoor learning area in the school playground.





Follow the river to the Stirling Old Bridge

New Stirling Bridge Woodland Garden

Community Orchard Look at the structure of the bridges

When were they made?

How must they have been constructed?

How do we make a bridge ourselves? – Yes with our bodies!

How does it feel, a human bridge?

The forces at play when trying to balance

To span the distance across the water

Record the birdsong The sounds of the river

Chat with each other about our lives

our interests, our community

Molehills around the grassy banks How deep?

How muddy! Use the mud and clay to make something;

Marks on paper Like others before us

Like artists in a book Other artists with families like ours

Keep a notebook every week Write and draw

Open spaces Take a risk: can I trust you?

Finding out about this place – gradually.

Finding out about each other - slowly.



Riverside Primary 7s Forth Soundtrack:

<https://on.soundcloud.com/G63aS>

Observations

The most striking observation with both groups was the sheer amount of cross – curricular learning that took place across the 10 weeks of the project.

As well as the obvious health benefits of working outside, being outdoors afforded a wide variety of ever changing stimuli that gave us so many naturally-occurring opportunities for casual discussions, questions and answers.

The pedagogical roles of “teacher” and “pupil” were fluid and interchangeable as the children shared their knowledge and ideas with us. This allowed us to establish a mutually respectful relationship relatively quickly which enabled us find out what things were engaging and interesting to the pupils. We were able to decide what to investigate by mutual consent, allowing the pupils to have “ownership” of the subjects, ideas and the presentation of ideas, which in turn made them even more self-motivated to learn.

Additionally, a simple question such as “Why are there so many snail shells on this side of the steps?” can be investigated in so many ways to consider the biological, geographical, meteorological, evolutionary...and common sense aspects, connecting the children’s lived experience to the whole curriculum.

Of course, as well as through verbal communication, the children are learning about the environment and their place in it through physical experience– from poking a stick at the fresh earth on the surface of a mole hill; finding a safe climbing route up a tree or discovering the best angle to roll down a grassy bank at the King’s Knot – being active in nature is helping to develop their dexterity, fine motor skills and self-confidence.

Bringing learning outdoors offered a more nuanced and intense experience of the environment around us.

Another striking observation was the difference in approach from the two age groups.

The 5 and 6 year olds were more immediate in their embracing of the project – keen to share their excitement of being outdoors and uninhibited in their responses.

By the age of 10 or 11, most children have perhaps experienced more autonomous play outdoors and have started to develop their own relationship with the environment around them. Interpersonal relationships are also developing at this stage and of course the self-consciousness of pending adolescence results in more guarded responses.

From the first few weeks it was clear that the Primary 7s enjoyed playing freely when we were outdoors and so we observed their play and learned from it...perhaps what inspired the children to play would also inspire them to learn!

We incorporated play into all the research and making tasks throughout the project:

We enjoyed playing in the mud piles at the Community Orchard, so we made mud-based artworks and discovered other artists who did the same.

We enjoyed free improvisation when working with the school instruments, so we employed the same techniques when creating music and sound effects for our podcast.

We did not assume the children's engagement in the geography, history and natural history around them, but earned their engagement by making the subject interesting, tangible and relevant and allowing their own ideas and opinions to inform the process.

Of course, as visiting artists, we are privileged not only to be working with talented teachers and the children themselves, but also to be able to work without a prescribed agenda.

We do know that the process of shared curiosity and discovery will yield interesting and positive results, offering fresh approaches to curriculum subjects.

We don't know what the learning outcomes will be before we start.

Perhaps this is the most significant factor that has made this and many other "Creative Learning" projects a success: the opportunity to creatively explore the environment with a shared curiosity, a mutual respect for each other's perceptions and ideas, and the freedom to choose what is interesting, how we want to learn about it, and how we share the experience.



What have we learned from the project?

- The natural environment as an invaluable, and under utilised, resource.
- The process of self-motivated learning is more productive than outcome based approaches.
- Time and freedom to discover individuals' interests is key to pupil engagement.
- We must find a way to keep the enthusiasm and engagement of the early years alive throughout every child's educational journey.

This project was delivered with a total budget of £7000, it was funded by National Creative Learning Partnership led by Education Scotland and Creative Scotland.

The budget included administration, two professional artist's fees, transport and materials, and involved initial meetings followed by 10 weeks of half-day visits by both artists.

Other project models could be devised to best suit the needs and budgetary considerations of your school.

if you would like further information about this project, or if you are a Stirling school and would be interested in developing creative learning in your school, please contact **Clare Hoare, Creative Learning Officer, Stirling Council**

creativelearning@stirling.gov.uk

<https://sites.google.com/stirlingschools.net/creative-space/menu/creative-learning-what-is-it>

Artist Contact details:

David Trouton: dwtouton@btinternet.com | www.engagewithmusic.com

Brian Hartley: info@stillmotion.co.uk | www.stillmotion.co.uk

Supplementary information by Clare Hoare

Creative Process in Learning

Creative process is fundamental to the development of creative learning. It provides a scaffold to enable learning that reflects all of the elements Bill Lucas described and helps the understanding of creative learning, making it visible for both educators and pupils. The creative process promotes the development of skills necessary for life in the 21st century enabling knowledge to grow alongside developing skills. It stimulates problem solving, develops critical thinking, promotes risk taking, builds a curious and growth mindset, deepens and broadens learning and encourages collaboration and compassion. It is a process many artists and creative practitioners use in their own work and work with students, but it is a process that everyone can use and nurture. It is not a linear process and allows back and forth along the framework depending on need and in time is a process used innately.

In Stirling the creative process we refer to is inspired by **Design Thinking**.

Empathy

The ability to understand the problem or question and to understand it from the perspective of others.

Research

A careful and detailed study into a specific problem, concern or area of interest to enable you to form your own ideas.

Ideation

To form an idea of a particular thing based on the research completed.

Reflection

To think deeply or carefully about something. To think critically about the ideas that you have developed.

Prototype / Draft

A prototype / draft is a simple model, drawing or piece of writing that lets you test out your idea, reflect and think critically about. It might be something completely new that does not already exist. You can also share your prototype with other people so they can do the same. It allows you to make improvements to your idea before creating your final solution. You can create one or many prototypes.

Final

The final piece of work developed through the previous five stages.

Supporting the use of the creative process is the development of Creativity Skills. Education Scotland define creativity skills in a way that educators across all sectors can identify, value and discuss with learners:

- **Curiosity**
- **Open-Mindedness**
- **Imagination**
- **Problem solving**

In Stirling we also use the 5C's:

- **Curiosity**
- **Creativity**
- **Collaboration**
- **Critical Thinking**
- **Communication**

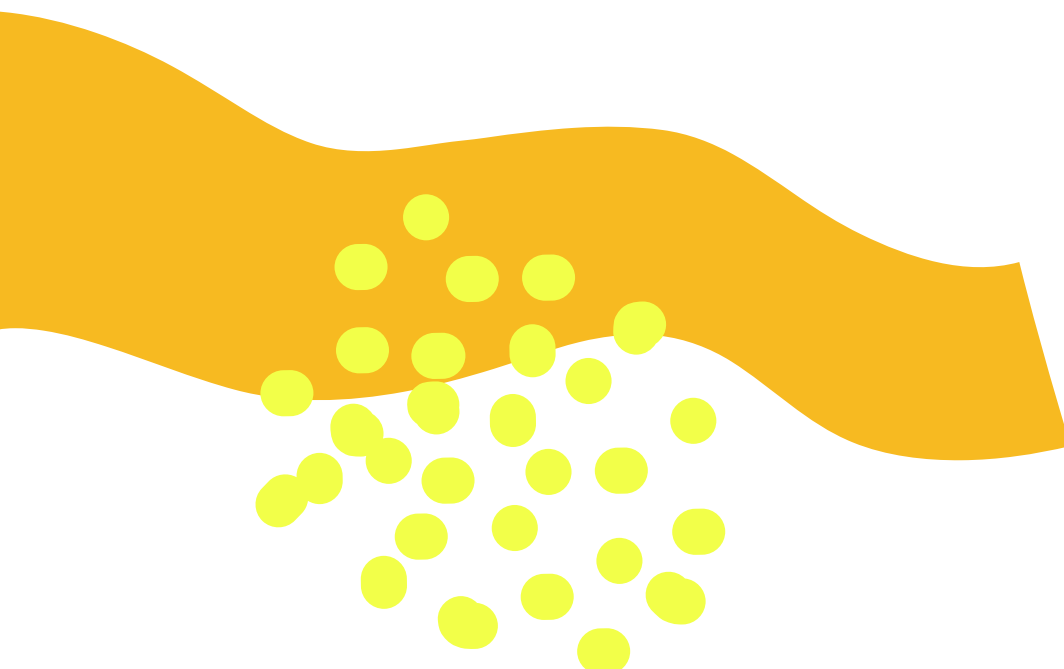


There are other skillsets and frameworks that can be referred to, including Real World Learning's [Habits of the Creative Mind](#).

To understand in more depth why creativity is important in learning you can find out more through [Scotland's Creative Learning Plan](#).

You can also watch Sir Ken Robinson's talks on [YouTube](#).

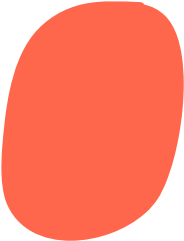
Sir Ken Robinson is a bestselling author and leading expert in creative and cultural education.



Creative Learning Networks Scotland

Creative Learning Networks are led by local authorities across Scotland and are supported by Education Scotland and Creative Scotland. They build capacity for creativity, working closely with leaders, practitioners and learners, promoting the value of creativity skills and making strong links between creativity and employability, and the power of creativity to help narrow the attainment gap. They bring together learning practitioners and creative partners and provide high quality learning experiences, practical support and professional dialogue on creative teaching, creative learning, the development of creativity skills in learners, and the conditions in which they can flourish.

Scotland's Creative Learning Plan vision is that:

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- **Creativity is embedded in curriculum design**
 - **Learners' mental health and wellbeing is improved**
 - **Learners confidently apply creativity skills in all contexts**
 - **Learners directly influence their own creative learning**
 - **Quality cultural experiences are accessible to all learners**

Vision

The Scottish education system enables everyone to recognise, develop and apply their creativity to ensure they thrive in an increasingly complex and fast-changing world.

Mission

To embed creativity at the centre of Scottish education and adopt a collaborative culture where all learners are empowered, creative and confident.

Our values-based goals are to:

Collaborate

We will engage and participate through collaborative, sustainable and impactful networks and relationships, so that conditions are right for creativity to flourish across all places of learning.

Empower

We will co-create the conditions and environments in which all learners lead their learning and apply their creativity.

Embed

We will ensure creativity is embedded, prioritised and actively informs curriculum rationale and that all learners' creativity is explicit throughout their learning journey.



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