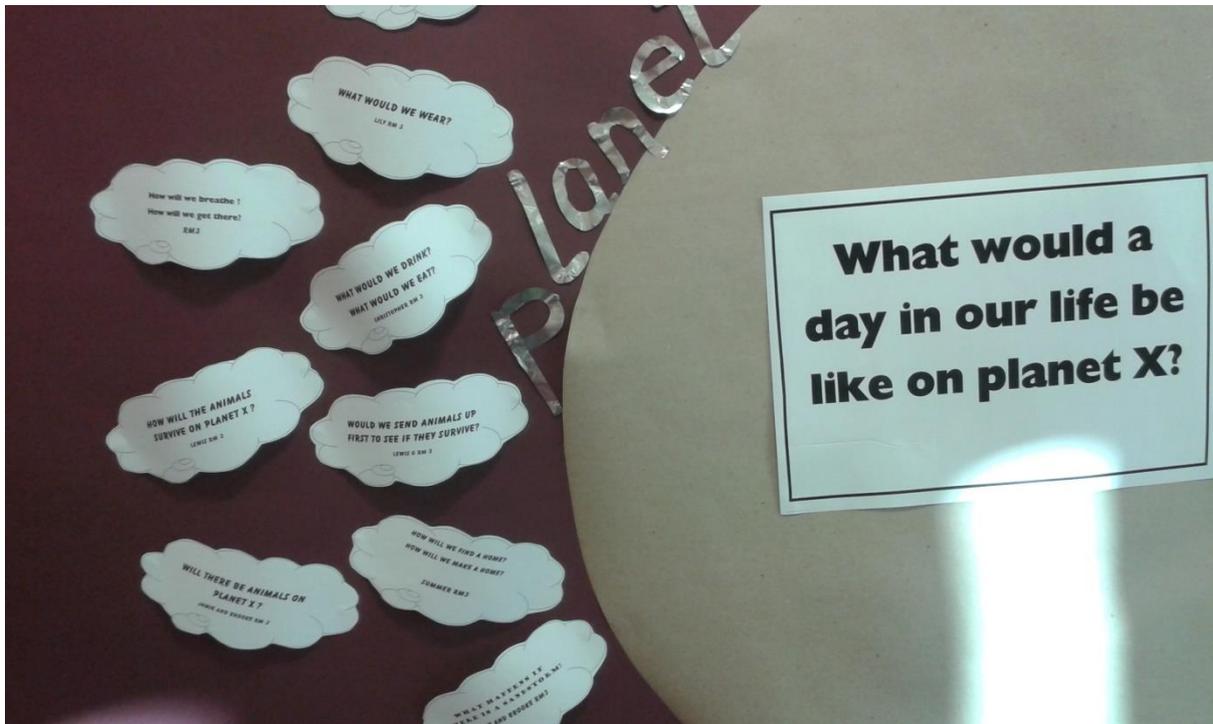


Our Fragile Earth

A case study of a whole school interdisciplinary project



“It’s not just topic – it’s all the other stuff: science, maths, story writing, PE – everything really” Pupil

What we set out to do . . .

Hidden Giants was invited to work with St Vincents Primary, a Catholic school in East Kilbride, a new town on the outskirts of south Glasgow. We were asked by the Creative Learning team in South Lanarkshire Council to devise and deliver a creative learning project with the staff and pupils of the school. The parameters were broad which allowed huge scope for exploration and new discoveries.

After an initial meeting with the SMT it was decided the project should focus on some key questions:

- What does a whole school approach look like?
- How do we support teachers to plan for creative learning?
- Where can pupils lead their learning by structuring their own curriculum?
- How can asking questions help nurture an interdisciplinary/creative mind-set?

What we delivered . . .

Hidden Giants started its collaboration with St Vincents Primary school with a CPD session with the entire staff team to explore creative learning and curriculum design. The session was an invitation to the staff to collaborate on an unknown project that would be designed and delivered in partnership between January and March 2016.

Hidden Giants philosophy is to begin a new project by agreeing a middle point and then work outwards. To repeat an experience or come with an ‘off-the-peg’ project would limit the experience

and deny staff the opportunity to engage in an entire project from initial concept to conclusion. This approach increases legacy by focusing on continual professional development.

We find the middle by paying attention to the most important resource, i.e. the minds and experiences of the specific community of learners. To find the middle point at St Vincents we undertook a period of consultation with the staff and senior management team. As a result of an ongoing project into space and astronomy it was decided the teachers would adopt a whole school approach exploring the moral, ethical and scientific issues connected to space travel and the potential of inhabiting another planet:

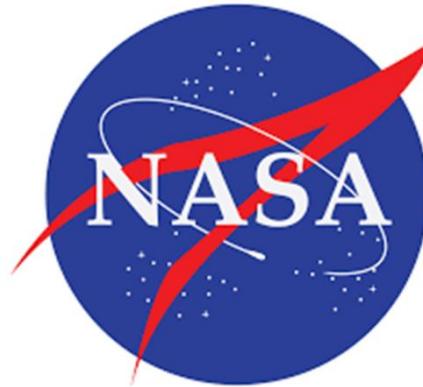
Humans have overcome all odds to survive in all of the world's most hostile and uninhabitable environments. Since we walked out of Africa we have overcome the harshest of terrains, the driest deserts and the densest forests.

We have understood our own capabilities by understanding the world around us. We have learned to adapt and be adaptable. We have listened to our earth and responded. Now our earth is telling us to prepare to leave; to venture beyond this world, and to find new terrains to inhabit.

NASA has recently discovered three new planets. Initial probes suggest they are habitable but the environments present immense challenges: ice, desert and forest.

With this detection comes the potential of colonization. NASA has suggested the first inhabitants will not reach the planet until the year 2040. When they do, they will be met with challenges much like our early human ancestors encountered as they slowly populated the earth. Scientists at NASA are determined to equip the future space pioneers with the knowledge, skills and technology to ensure their mission is successful.

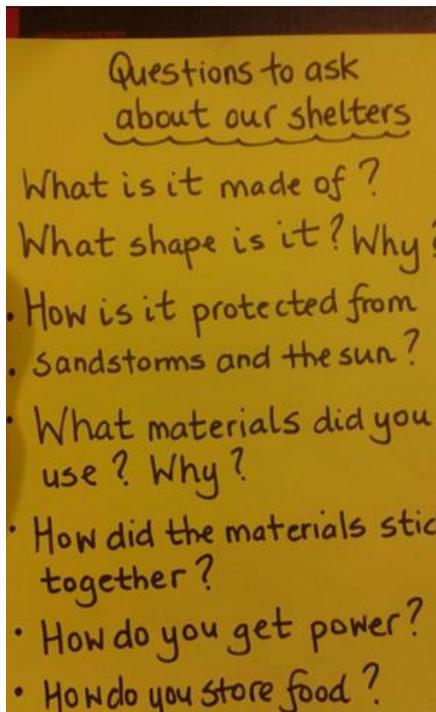
School pupils from around the world will support these scientists to help learn from our past to prepare for our unknown future. Our world has taught us much but have we learned enough to help us survive our next big adventure?



Hidden Giants created an initial lure in the form of three separate presentations for 3 sets (p1-3, p4 &5, and P6 &7). During the presentation the pupils met Dr Gorman from NASA who informed them of the situation and gave each set a different planet: ice, desert and forest. The pupils were told an International conference was to be held at the school in late March. The conference would allow each class to present their findings to a group of invited specialists who would take the information back to NASA.

After the initial presentation it would be the responsibility of the classroom teacher to 'unpack' the challenge with their class and then structure the response (design the curriculum). The pupils had three months to become 'Pioneers of the Future' trainees to help humankind.

Over the course of the project Dr Gorman payed regular visits to the school to ensure the pupils had an opportunity to update him on their progress and for him to pose new creative challenges or philosophical questions.



What emerged over the next three months was a truly authentic and meaningful learning project that was creative, interdisciplinary, and pupil led. The staff embraced the challenge to create classrooms that thrived on curiosity, questioning and imagination: *I love doing lots of experiments' – camel poo, water cycle, growing plants in the sand, space buggies etc* Teacher

Through a process of asking big questions, that formed smaller questions, the pupils very quickly took ownership and actively participated in the design of their curriculum: *Right at the beginning when I saw how enthused the children were. I learned how important it is to hook children in their learning from the start.* Teacher

All staff followed the same process of encouraging the children to be curious about the stimulus and formulate their own enquiry. What emerged was a truly child-led approach to learning. The teachers became facilitators to the ideas emerging within a constantly changing curriculum: *The project was working well in mid- topic when children were researching and feeding back every day, through class and homework tasks.* Teacher

The project concluded with an International conference with a team of invited scientist and researchers. The children had prepared a series of presentations documenting their learning. The gym hall had been transformed into a research lab and crammed full of examples of their work. The pride felt amongst staff and pupils on the final day was plain to see. The school had been inspired and was inspiring. The afternoon saw many parents visit the research lab and contribute to the pupils learning. It was clear the project had made a lasting impact on the whole school community:

We all came together to create the best learning experience for all stages. Teacher

We can learn from the planet – we can make new discoveries – we can survive. P3 pupil

As a result of the project the staff team have begun to prepare for a whole school outdoor learning day in which they will adopt the discoveries made during Our Fragile



World and apply them to a different learning context. They are exploring a pupil-led approach to working outside and how embracing the unknown can be a useful teaching method.

Thoughts and Observations.

Over the duration of the project Hidden Giants made some key observations which are shared below:

- The power of the invitation opposed to top down direction should not be underestimated. The project was never a three line whip and as a result people bought into the idea.
- The power of permission. As the project developed it was clear the teachers were enjoying the space to play within the theme. The permission to think and work differently had allowed them to find new approaches and make discoveries with the class.
- The fear of 'not being creative' enough limited some teachers to begin with. The notion that 'being creative' means working within the expressive arts is something that still limits divergent thinking.
- The realisation that pupils can construct their own learning if the teacher adopts a slightly different role.
- The curriculum opens up when questions are at its heart.
- IDL working supports diversification as it can allow all children to explore one theme but for it to be meaningful to their level and interest.
- Space and time for teachers to work in sets can allow sharing of practise, provision, practise and lead to professional dialogue
- An awareness of creativity comes from experiential, project based and immersive learning. The role of the educator is to establish these experiences and then allow pupils to make discoveries which include creative skills.

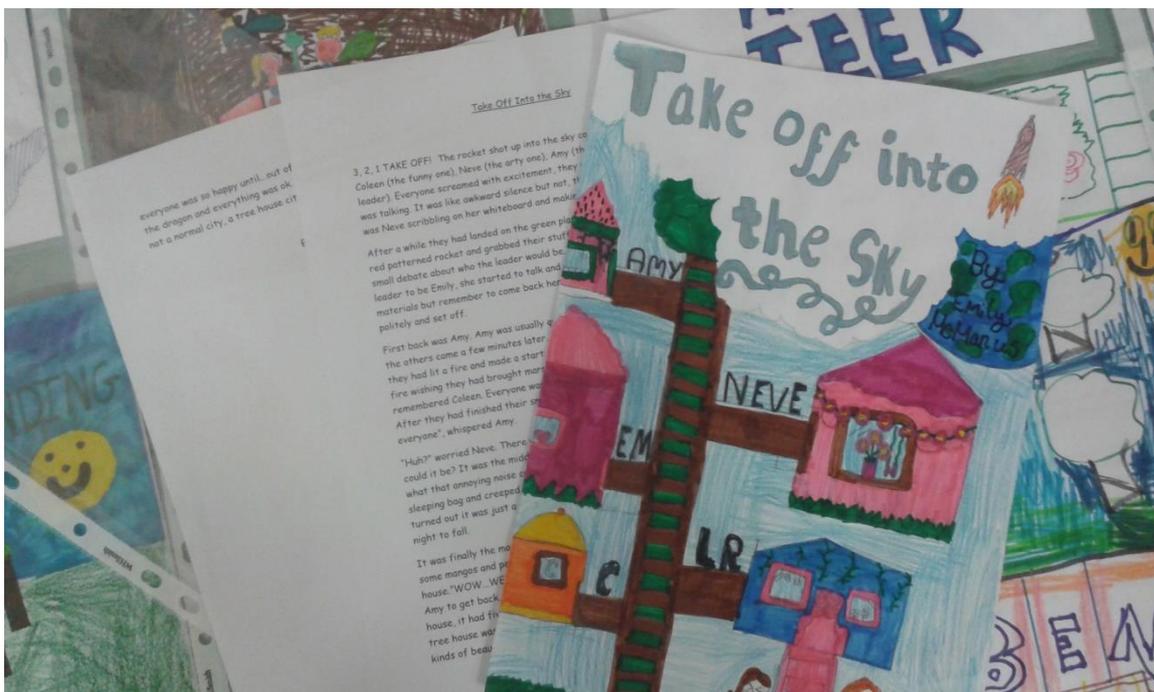


Project links to HGIOS

2.2 Curriculum

All stakeholders contribute to the rationale, design and ongoing development of the curriculum. Everyone understands what the school is trying to achieve through its curriculum.

- *I was impressed how well the pupils could ask and answer questions on the final event because they were so engaged.* Teacher
- *The project worked well during the showcase – the children had really taken in the learning and could discuss it very well.* Teacher
- *The project was working well in mid- topic when children were researching and feeding back every day, through class and homework tasks.* Teacher
- *Covered a wide range of E&O's – very IDL* Teacher
- *Highlighted that teachers are life-long learners. We don't have answers to everything and we too need to research and read etc.* Teacher
- *Sharing ideas and pointing each other in the right direction.* Teacher
- *It brought the whole staff together since whole school doing the same topic.* Teacher
- *Coming together to create the best learning experience for all stages.* Teacher
- *The planet project allows us to take control of decision making and the future.* Pupil Rm 9



2.3 Learning, Teaching and Assessment

How well do our questioning strategies enhance the learners' experience and enable higher-order thinking skills?

How well do we deploy a wide variety of innovative and creative resources and teaching approaches, including digital technologies?

- *Right at the beginning when I saw how enthused the children were. I learned how important it is to hook children in their learning from the start.* Teacher
- *Planning was child- led, flexible and responsive.* Teacher
- *Forward plan took a different direction – pupil led.* Teacher
- *Children put the flesh and bones on a very loose structure.* Teacher
- *Children leading planning and changing it when required.* Teacher
- *Loved the big and small questions approach – I’m using it this term.* Teacher
- *Teachers usually think about the things that will hurt us rather than the things that we will learn from Pupil Rm 9*
- *Do Humans want to destroy things? How do we become a responsible species? As top of the food chain how do we ensure we aren’t ruining the world? Humans are a dangerous species – we don’t want to be a bad species on the new planet.* Pupil Rm 9



2.5 Family Learning

Creative approaches are used to engage families

- *Links to parents who came and gave talks, i.e. water cycle (Scottish water employee).* Teacher
- *Ice breaker at parents night – foundation for conversation around learning.* Teacher
- *More parental involvement in homework – family learning tasks.* Teacher
- *Parents were genuinely interested and on board with the project – huge turn out on the showcase day* Teacher
- *Most children completed homework – even ones who don’t normally.* Teacher



2.7 Partnerships

The school engages effectively with partners to promote a coherent whole school approach to learning for sustainability.

The school can demonstrate the impact of partnerships through improved outcomes for learners.

- *He (Paul) does nothing but everything HT*
- *When Dr Gorman came in and asking children effective questions. Teacher*
- *How clever my P1/2's are – giving answers during the conference and camel poo does not burn. (Camel poo came from the Highland wildlife park) Teacher*

3.2 Raising Attainment and Achievement

The school empowers children and young people to have a say in the quality of their learning experiences and how to improve.

- *They (pupils) were more confidence – engaging with one another more to talk about their learning – constantly asking questions and wanting to find out more ‘When are we doing topic today’? Teacher*
- *Pupils continually stopped me in corridors to tell me what they had been learning and to inform me about the planets. Teacher*
- *Brought quieter children out and into conversations. Teacher*
- *Disengaged children became involved and focused. Teacher*
- *Children who are not particularly academic or struggle were given the opportunity to ‘shine’ in other areas as their ideas and suggestions were valued. No wrong answers. Teacher*

- *Children were very engaged and fully involved in all aspects of planning. Working very well together. Weren't afraid to give a 'wrong' answer. Teacher*
- *Even reluctant learners were engaged. Teacher*



3.3 Increasing Creativity and employability

Creativity skills are recognised, articulated and valued by practitioners and learners.

Creativity is practically applied as a higher-order thinking skill.

Partnerships are used effectively to deliver highly engaging creative learning.

- *What is creativity: "Not just one thing – different supplies to make different things". Pupil Rm 8*
- *Less prescriptive – pupils were more engaged because it was pupil led Teacher*
- *Problem solving – not looking for the teacher to solve problems – proactive in solving own problems*
- *Creative thinking was everywhere Teacher*
- *this is decision making learning – it's better to make decisions now rather than wait until we are adults. Pupil Rm 9*
- *We can learn from the planet – we can make new discoveries – we can survive. Rm3 pupil*
- *If it looks like it – you feel it more. In reference to the rainforest corridor Rm*
- *Kids need to learn what's good and what's bad. Pupil Rm 9*

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