

Community Resilience and CfE @EducationScot #CommunityRes

Case studies providing a snapshot of engagement between resilience professionals and schools, using community resilience as a context.

There are different ways and approaches to partnership working. Look at the case studies of partnership working. Use them as a discussion point. Which ones are most relevant to your context?

Use data to enhance teaching and learning

1. **Who?** Flood officers and various schools in East Ayrshire

What and how? Images of innovative design were shared with schools, these included a car park that has been designed to flood and a supermarket that has been built on stilts to avoid being flooded. Flood engineers also shared information with classes about gritters fitted with trackers that can be followed using on-line mapping and weather stations that have cameras that enable them to check actual weather conditions remotely. This helps the council make decisions about where and how to grit. They also shared information from weather stations which give data constantly, helping to make the learning real and relevant in the classroom.

Right image is a car park designed to flood. Top right image is supermarket built on stilts.



“This is real-life, useful and powerful information.” Kevan Aitken Ayrshire Roads Alliance

Bring the world of work into school and take the learning outdoors

2. **Who?** Flood Risk Management Officers from Glasgow City Council and Croftfoot Primary School

What and how? The area of Croftfoot experiences flooding regularly. Engineers are working on a Sustainable Urban Drainage (SuD) Basin opposite Croftfoot Primary, which forms part of an overarching Surface Water Management Plan, which may have potential interventions on the school grounds of Croftfoot Primary. This is a fantastic opportunity for the flood officers to work in partnership with the school to share with pupils the reasons why flooding occurs, why it floods where it does and what can be done to reduce the risk of flooding in the area. Some of the pupils may have been directly affected by flooding so this provides them with the opportunity to shape the measures to reduce flooding and make a difference. Engaging with the school provides opportunities for the children to design what this will look like and engage with engineering work happening very close to them.

3. **Who?** Fernielea Primary School and flood officers from Aberdeen City Council

What and how? Fernielea School floods in heavy rain, so to help manage this, a new water course is to be opened up beside the school. A rainwater garden and a sustainable urban drainage system (SuDS) pond is to go in the school grounds. Children at the school have been asked to work alongside the engineers to help with the design of the rain gardens and to create leaflets raising awareness of

safety issues around the open water courses. This also ties in with work on natural disasters. Below right earthquake zone in room 12 and right volcanic eruptions.

“What’s in it for us? Lots! As Head Teacher I am always looking for excellent opportunities/contexts for learning. This is a relevant context for children to apply skills and understanding whilst building on them further. It also allows us to plan for partnership working so the children can work within teams while providing support to others – younger/older, parents, community – all exploring flooding because it’s a relevant local issue. It brings the community into the project and lets

us share information with them through our blog, videos, leaflets, community

conferences/forums and turns a negative into a positive.” Acting Head Teacher Fernielea Primary



4. **Who?** Drummond Community High School Learning for Sustainability/Geography teacher and Edinburgh city council emergency planning officer

What and how? The emergency planning officer and class teacher met at an Education Scotland networking event and discussed how they could support each other. They met after the event, the emergency planning officer shared with the teacher maps of the local area and identified areas the class could visit, ensuring key resilience messages were delivered in the classroom. The class teacher was able to enhance teaching and learning through partnership working and delivered resilience as part of a 6 week block around geography/learning for sustainability.

“As workers within the resilience sector we are used to making plans and preparing our organisations for the worst but to have a truly resilient Scotland, now, and in the future to come, we need to inspire the next generation to tackle those issues through all walks of society.” David Munroe, Resilience Specialist, Edinburgh City Council

5. **Who?** Hawick and Selkirk flood protection schemes and local schools

What and how? Major engineering project taking place in Hawick and Selkirk which is an exciting context for teaching and learning. Class teacher from Selkirk Primary School was looking at *land use* as part of social studies work. They visited the flood protection scheme. Highlighted park has dual purpose, enjoyed by the public but designed to flood to protect the nearby houses.

“[Visiting the flood protection scheme] provided the opportunity for meaningful in-depth discussion. Raised awareness of different jobs. Lots



of maths, links with geography and community – how people work live and play and Victorians, the demise of the mills. Easily pull in language and maths.” Class teacher

Engage with your local environment

6. **Who?** Dallas Primary in Moray Council and emergency planning officer

What and how? Dallas village experienced extreme flooding in 2014. This highlighted a need for learning about community resilience and emergency planning. Learners created a scaled 3D map of their local area in papier-mâché, which helped them understand why the flooding had happened. Pupils became effective contributors, when links were made with the local emergency planning officer and SEPA who helped them create a community resilience plan. The project was successfully used as a learning context in literacy, science, social studies and health and wellbeing. It also supported Eco-Schools activity. Photo



of scaled 3D map of the local area in papier-mâché.

Is your local area affected by flooding, severe weather, utility failure, pandemics?
Have you made contact with your local flood officer, emergency planning officer or SEPA?

7. **Who?** East Dunbartonshire Council drainage and emergency planning officer

What and how? Keen to engage with schools as it supports the councils general preparing for winter work. Drainage officer can offer schools support with work focused on *the local area, land use and natural disasters* for example. They can help make these topics real and relevant by sharing information about site visits to The River Kelvin Flood Prevention Scheme, images, maps, information about what can happen in a flood, the after effects and what can be done to prevent it. Contact your local authority if you teach in a school in this area and would like to find out more.

“Focusing on their own area helps make the learning real and relevant to the pupils and working with schools helps us raise awareness of how people can prepare for bad weather and what the council has in place to keep people safe.” Evelyn Maclaren, Drainage Officer, East Dunbartonshire Council

8. **Who?** Kirkstyle Primary and East Ayrshire Council

What and how? Class teacher used community resilience as a context for an interdisciplinary topic around natural disasters. She met with the flood officer who was able to share information with her about places close to the school that her class could visit and areas that would be appropriate to build seepage dams in. He also arranged to talk to her class about flood risk and how they could keep themselves safe as well as raised awareness of his job and how his colleagues keep people safe in East Ayrshire. The class teacher created a river board for the class to experiment with.



“Working with Kevin provided a real life context, it let the pupils look closely at their local environment. The pupils had a multi-sensory experience that suited

all learning styles but importantly they could see STEM in action, inspiring them for the future.” Aileen Macmillan Principal Teacher

9. **Who?** Dumfries Academy and flood officers

What and how? The regular flooding of the River Nith was used as a context for teaching and learning in geography. This included a class visit to the proposed site of the local flood protection scheme as well as a trip to the high street to speak with shop keepers that had been affected by the flooding. Flood officers were invited into the school to talk about the issues in more detail. This was as an opportunity to embed meaningful employer involvement which supports Developing the Young Workforce agenda (DYW).



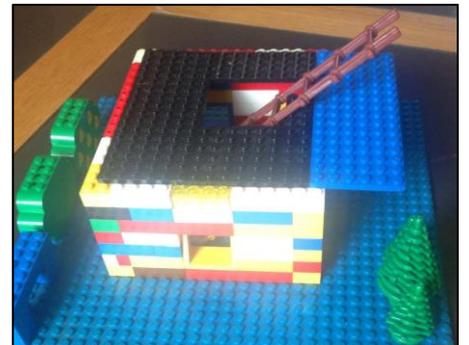
Is your local area affected by flooding, severe weather, utility failure, pandemics? What are the opportunities for resilience professionals to work in your school?

Use resilience as an exciting context for teaching and learning in your classroom

10. **Who?** Highland council

What and how? S5 and S6 STEM ambassadors support class teachers and primary pupils on Skye by raising awareness of resilience through science. Their ideas included:

- Using lego, build a flood resistant house after planning and drawing it
- Flood it in a tray
- Try various methods of flood prevention – sand bags and so on
- Give a class a series of scenarios they have to respond to
- When working in partnership with local authority ask for flood maps
- Raise awareness of grab-bags – provide pupils with items and they have to choose what to pack
- Measure rainfall with plastic bottles
- Create mini flood defences using a basin, plasticine, cardboard, wood and sand
- Using the school projects associated with resilience as the basis of CREST (CReativity in Engineering, Science and Technology) awards for pupils.



“[Community resilience] links in beautifully with the Rapid Response activity and the Royal Academy of Engineering Programme of activities which include Rescue Rail and provides schools with sets of resources.” Dr Margaret Ritchie Pedagogical Lead, Science, Highland Council

11. **Who?** Bellfield Primary in East Ayrshire
What and how? This is a piece of work by P7 pupils from Bellfield Primary School in Kilmarnock. This school is very close to an Asda store which had a severe flooding issue recently. They looked at flooding in their natural area through work around natural disasters.



“There was very rich learning taking place – pupils were able to use the local context to do a news report from the scene of flooding, tsunami etc. Using community resilience in the classroom is about making learning real and bringing relevance and depth to the curriculum.” John Wilson Senior Education Manager East Ayrshire

Involve the community and encourage family engagement

12. **Who?** Crookfur Primary School and East Renfrewshire Civil Contingencies Officer
What and how? Principal teacher at this school organised a community resilience week in February 2016. As part of the Community Resilience Week, Civil Contingency Officers came in and spoke at a whole school assembly and also visited the classes to provide further information and feedback for the children. They spoke about the importance of being ready for incidents and preparing a grab-bag, which was set as a whole school homework task. The civil contingency officers are keen to support you with work in this area. Contact ccs@renfrewshire.gcsx.gov.uk for more information.

“Several children throughout the school brought in grab bags this week and they were amazing. So much discussion has taken place at home with the children teaching their parents how to prepare for an emergency. It’s been a really worthwhile experience.” Lynn Nisbet Principal Teacher

13. **Who?** Angus council engineers

What and how? Engineers working on the Brechin flood protection scheme provided opportunities for local schools to visit. The engineers are planning to create an outdoor classroom in one of the new flood embankments to encourage local schools to use the area as a classroom. The community have been involved in designing mosaics for the flood wall.



“[Working in this way enables] pupils to actively learn about environmental/ecological issues as well as understand the purpose of the flood embankment and the wider Flood Prevention Scheme.” Project Engineer Angus Council

Is there a flood protection scheme being built in your area? How could you engage with this kind of project? What are the opportunities for resilience professionals to work in your school?

14. **Who?** Scottish Borders Council

What and how? The resilient communities programme is still growing within the Borders. The Eyemouth group formed in May 2016 and has since been activated on several occasions to deal with flooding. Eyemouth is unique in the Borders as it has over a dozen volunteers of secondary school age. The training provided by the programme, through the British Red Cross, resulted in a 15 year old pupil saving the life of her aunt. In addition, the pupils are in charge of the call out process for the town. All of the volunteers are on Facebook and the pupils are responsible for using their social media skills to call out their peers and adults to respond to emergencies. The community has also conducted its first exercise.



“Within the Scottish Borders young people attending secondary school are encouraged to participate in the activities of their local resilience groups. Eyemouth is an outstanding example of how the community has succeeded in embracing and nurturing the potential of young people. They have done this by giving them roles, such as managing their call out process through social media, that are of interest to them and well within their capabilities.” Kevin Sewell Emergency Planning Officer Scottish Borders Council

15. **Who?** Lamlash Primary in North Ayrshire

What and how? The westerly half of the Isle of Arran and Kintyre were covered in snow affecting transport and power loss in some communities of up to 7 days in March 2013. This highlighted a need for learning about community resilience and emergency planning. Using materials on Education Scotland’s Ready for Emergencies website, P3/4 have been using community resilience as an exciting context for work around science, STEM and health and wellbeing. For example, they’ve talked about the snow and started to look at flooding. Some of the pupils can remember being sent home early as there was a tidal wave warning. They are doing some practical work on flooding based on materials the ICE (Institution of Civil Engineers) have been developing. Next they will create a leaflet and video on being ready for winter and share them with parents at the next assembly.

“It’s only when you reflect back on the snow how vulnerable we were with loss of power, phones, transport links and within hours of losing water. We need to ensure our young people are ready in case this happens again.” Alison Henderson P3/4 teacher Lamlash Primary

16. **Who?** Dalry School in Dumfries and Galloway

What and how? Interdisciplinary learning (IDL) using flooding as a context. School is in a flooded area. Initially deposition by moving water was developed in an optional S3 geography class. This work was developed into an IDL topic The Power of Water by the geography teacher. Through visiting the area pupils were able to:

- observe the water level rising in the field
- identify the filling of earthworm burrows
- observe the sedimentation in eroded banks
- identify historical breach of the site

“Curriculum for Excellence has offered us the opportunity to take advantage of local and current situations and to enhance the learning experiences of young people. Having the confidence to depart from planning and respond creatively to situations, should bring richness, challenge and relevant variety to the BGE.” Head teacher Jenny Smith



Examining deposition in the field at the breach site - water still rising