

## Midlothian's next generation of engineers

Midlothian's primary pupils have designed and created rescue machinery which went on display at the National Mining Museum Scotland.

The initiative was organised by the authority's RAiSE Primary STEM Development Officer Donna Hanley with a cluster which included 200 P7 pupils from seven schools. The project was funded through a grant from IET (Institution of Engineering and Technology) Engineering Education Grant Scheme which allowed for the purchase of VexGo kits and motorised vehicle kits.



Through the Midlothian Schools Engineering Design Competition, the 'Rescuers' were tasked to design and build a machine or vehicle which could help or rescue something or someone.

The children worked in teams and learned about the engineering design process and engineering habits of mind while considering the materials and mechanisms needed to make their design a success.

Donna Hanley, Primary STEM Development Officer at Midlothian Council, said:

"The Rescuers' challenge raised confidence, engagement, and aspirations in STEM, showing great enthusiasm, quality, and innovation throughout the process. This is not only important for their learning as primary pupils, but for raising their STEM capital to inspire them throughout their education and beyond.

This was a great event for teachers and pupils. The partnership involvement brought this competition to life."

Donna created a series of resources and lesson plans to align to the project. These can be accessed [here](#).

The entries were judged by a panel of engineers, educators, and museum staff with the first prize being awarded to a group of girls from Mayfield Primary School for their design of a jungle safety vehicle.



One pupil said:

“I really enjoyed doing this project and I’m looking forward to going to high school now because I can’t wait to do more science and woodwork there.”

Teacher feedback included:

“My pupils have absolutely loved taking part in it. It was well organised and well resourced.”

“Amazing work from all the P7s. I can’t wait to see what they produce with us next year in S1.”

There is ambition to host this event annually and expand to other clusters regionally.



RAiSE is a programme of **The Wood Foundation**, **Scottish Government**, **Education Scotland**, and participating local authorities which empowers primary practitioners with the skills, confidence, and networks to develop and deliver motivating and exciting STEM experiences.