

A Resources special: SEN/gifted and talented

If you want to be creative, join our club

From tomato transporters to self-stirring pans, a Young Engineers Club gives children a chance to innovate, finds Joanne Dwyer

IT IS past 3.30pm and time to go home. Pupils file out of the classroom and down the corridor to their parents waiting in the playground outside. All except 12 children who have decided to stay at school.

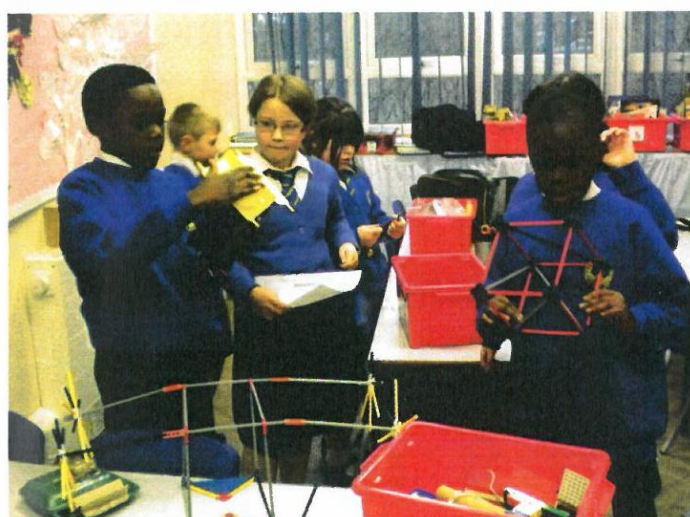
They could be rushing home to their Xboxes and televisions, playing football or simply taking a break before homework, tea time and bed. But if sport isn't their thing and the computer games can wait, St Philomena's Catholic Primary School in Orpington, Kent, has an alternative after-school activity: a Young Engineers Club.

Set up by Year 3 teacher Benita Tooke to help children fulfil their creative potential and tap into their talents, the club is home, for an hour each week, to bright young things buzzing with ideas. They might design a new toothbrush or an object that will stir food in a pan all by itself. And increasingly, Tooke has been pleased to note, the children like to find design solutions by working together.

Any pupil at St Philomena's can be a young engineer but the club is so popular that Tooke now has a waiting list. Numbers are limited to 12 so that she can give the children enough of her time and maintain the club's informal approach.

The club has proven popular across the board but it has an unexpected appeal – and has provided educational bonuses – for gifted and talented pupils, children with special educational needs, and those who in other circumstances might find it hard to join in. When they come to the club they have a chance to find their niche, accept themselves and each other, and watch their ideas come alive.

Some of the children have autism and dyslexia, which can affect coordination as well as reading and writing. The projects they work on in the Young Engineers Club help to break down some of the barriers they face. "Children who are, for example, on the autistic spectrum can become quite absorbed in what they are doing and it can take up a lot of their thoughts," Tooke says. "This [club] has

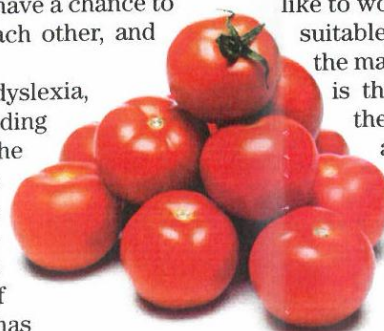


been a chance for them to channel that into something else that they can really get involved in.

"Some children who are quiet have also become very proactive and their personalities are coming out more than I might ever see in class."

Amid busy chatter, excitement and an intense focus rarely found elsewhere, the children choose which project they would like to work on – based on ideas provided by Tooke – and a suitable space in the classroom that will accommodate the materials they need. What is different about this club is that it involves more than simply being creative: the children are thinking critically, working together and connecting what takes place here to the wider world.

Many pupils have opted for the Squashed Tomato Challenge from the charity Practical Action, which helps schoolchildren to explore real-life ethical problems. The pupils are considering how farmers in Nepal can transport their



crops to market from the mountainside where they are grown. The farmers have to carry the crops to the bottom of the mountain in a heavy basket strapped across their heads. But it is a long, hazardous journey over tricky terrain and there is a river to cross. Tomatoes, of course, are easily squashed and need to be transported with care.

The challenge for these young engineers is to design and build a model that helps the farmers to move their tomatoes around without squashing them and allows them to carry as many as possible in one go to avoid repeatedly having to trek down the mountain.

The emphasis is on exploration and taking the time to experiment. There is no pressure to work collaboratively, yet this is what the pupils like to do.

"We are great at teamwork. We love this club," 10-year-old Michael says.

Tooke set up the club last September, inspired by what she calls "rays of talent" in pupils she felt were not always catered for within the curriculum. She spends part of every weekend

and much of the school holidays sourcing the materials needed for the projects. Some activities last for several weeks, whereas others are for one session only.

Tooke has seen the positive effects of the pupils' participation in the club. "It has improved working relationships as well as their communication skills," she says. "They have had to learn to listen to and consider other people's ideas and points of view. The children can see that sometimes their idea plus someone else's is a better solution."

Not all the pupils' designs go according to plan but this, too, is part of the process. They are learning through trial and error.

Tooke now aims to set up links with a local secondary school, to aid pupils' transition from primary to secondary. She also hopes to advise the children on how they can set up their own clubs.

In the meantime, every Wednesday she works with the pupils she has inspired to stay on after school, nurturing an enthusiasm for learning that she hopes each of them will carry through to later life.

