



Introduction to Fixperts for teachers:

FIXPERTS

SOLVE PROBLEMS FOR OTHERS

Fixperts is an education programme which challenges students to create ingenious solutions to everyday problems. Rooted in a creative, human-centred design process, it integrates design & technology, engineering thinking and practical making skills.

Fixing is a great way to make problem solving and design approaches and methods relevant and accessible. Fixperts develops creative problem solving skills and also demonstrates the power of design, engineering and making to have a positive social impact on the world around us.

Fixperts has been run in over 25 universities around the world, which has built an online archive of over 300 Fix Films. You can see a selection at fixperts.org/films.

This 'classic' Fixperts project offers students the opportunity to collaborate with a real person and identify a real need in someone's life. They work in teams to research and develop solutions, sketch out ideas, model prototypes and make a final product as a gift to the Fix Partner. The story is captured in a short video and shared with others in the form of a Fix Film, like this story of [Edna and her Sockhorn](#).

The Fixperts schools programmes have adapted the Fixperts method and philosophy to fit a school setting, with all the constraints that brings. They successfully deliver learning outcomes relevant to curriculum and build skills in teamwork, creative problem solving, iterative design and prototyping. Most importantly for us and for our common future they build understanding, insight, care and ultimately empathy.

How does Fixperts work in schools?

We offer free, tried and tested guidelines and resources for schools in a number of formats. You can run Fixperts as a one-hour, half day, whole day or half termly project. You can run Fixperts as part of your DT or STEM scheme of work, as an off-timetable day for an entire year group, an after school club or a one-off workshop.

We are aware of the technical and logistical constraints unique to schools, and these resources offer alternative approaches where relevant. For example options to work with real, live Fix Partners or not, and options to make films or not. All options retain the core values and components that are essential to any Fixperts project.

Our [FAQs for secondary schools](#) should provide all the detail you need.

Why Fixperts?

Fixperts is a proven model which students, educators, schools and parents consistently respond to with enthusiasm and energy.

On our part we do this because we think the world desperately needs creative problem solvers, who combine ingenuity with empathy and resilience. We started in universities and have moved to working with schools because this is where we can make the most difference to the innovators of tomorrow. You can read more on our website about our mission to work with young people to:

- Encourage creative problem solving
- Develop empathy
- Build resilience
- Work with real people, with real needs
- Promote sharing and Open Access

FIXPERTS COMPONENT	OUTCOME	DT CURRICULUM LINKS
CREATIVE PROBLEM-SOLVING	Agency, resourcefulness, resilience	“Identify & solve their own design problems & understand how to reformulate problems given to them”
FIXING FOR SOMEONE	Generosity, empathy, social orientation	“Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture”
TEAM-WORK	Collaboration, understanding, negotiation	
COMMUNICATION	Insight, perspective, critical skills	“Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools”
REAL, RESULTS ORIENTATION	Making & technical skills, completion	“Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups”
OPEN ACCESS & SHARING	Promoting an innovation culture	



Characteristics of a genuine D&T experience within the school curriculum (DATA*)

USER

Pupils should have a clear idea of who they are designing & making for, considering their needs, wants, values, interests & preferences

PURPOSE

Pupils should be able to clearly communicate the purpose of the products they are designing & making. (These) should be designed to perform one or more defined tasks, (and) evaluated through use.

FUNCTIONALITY

Pupils should design & make products that work/ function effectively in order to fulfil users’ needs, wants & purposes.

INNOVATION

When designing & making, pupils need some scope to be original with their thinking. Projects that encourage innovation (have) engaging openended starting points for learning.

AUTHENTICITY

Pupils should design & make products that are believable, real & meaningful to themselves & others.

*Design & Technology Association National Curriculum Expert Group for D&T, 2014