Introduction to Fixperts for teachers

Fixperts

Fixperts is brought to you by FixEd, the network for people who want to fix the future.

Find further teaching resources and information at www.fixing.education

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Solving problems for others

Fixperts is a learning programme that challenges young people to create ingenious solutions to every day problems for a real person. Rooted in a creative, human centred design process and often making use of digital tools, it applies design, engineering thinking, practical making skills and storytelling for social benefit.

What do students learn from being Fixperts?

- Experience and understand design thinking and methods at human scale
- Make a clear connection between design and problem solving
- Develop skills in observation, ideation, problem-solving and iterative design
- Understand the importance of communication skills through teamwork and storytelling
- See the impact of creative thinking in application through making

Free basic guidelines are available for teachers to use as a basis for their own lesson planning. Full teaching resources, training and support are available under a schools subscription: http://www.fixing.education/fixperts

Why run Fixperts?

Fixing is a valuable way to think about change in the world. By calling on young learners to 'fix' a specific situation for someone, Fixperts makes creative problem-solving relevant, accessible and rewarding.

A 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 their Fix Partner. The story is captured in a short video and shared with others in the form of a Fix Film.

Fixperts was first trialed in 2012 and has now been run in over 30 universities around the world, building an online archive of over 400 films as learners tell the stories of their fixes. You can see a selection at www.fixing.education/films

How does Fixperts work in schools?

We offer tried and tested guidelines and resources for schools in a number of formats. We offer workshops and enrichment days, as well as training and additional support for teachers.

Using either free or paid resources 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, as an after school club or a one-off workshop.

Our basic guidelines are free for all. Comprehensive teaching resources are available to subscribers who receive a range of benefits as part of the FixEd network.

How does Fixperts link to curriculum ?

Fixperts successfully delivers learning outcomes relevant to any creative activity including design, engineering and STEM.

While D&T curriculum links are strong, Fixperts is featured centrally in one of the first STEM qualifications in England (AQA, first teaching 2018) and also has clear value in any engineering curriculum. Skills in teamwork and creative problem solving are of value across the curriculum, and specific methods like iterative design and prototyping are transferable also.

Most importantly for us and for our common future Fixperts builds understanding, insight, care and ultimately empathy.

Fixperts links to Design & Technology

Fixperts component	Outcome	KS3 DT curriculum links
Creative problem solving	Agency, resourcefulness, resilience, risk-taking	"Identify & solve their own design problems & understand how to reformulate problems given to them"
Fixing for someone	Generosity, empathy, social orientation, self-confidence, engagement	"Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture"
Team-work	Collaboration,negotiation understanding	
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, independence, project-management skills	"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 and sharing	Promotion of an innovation culture	

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

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

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 open-ended starting points for learning.

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