

Fixperts for schools: Basic guide



Fixperts

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

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Fixperts for schools: basic guide

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

This free basic guide is for teachers to use as a basis for their own lesson planning. For full teaching resources, training or support, sign up for a schools subscription: <http://www.fixing.education/fixperts>

For further background information about Fixperts see our Fixperts for schools FAQs.

Who is involved in running a Fixperts project?

Fixperts Facilitator

A teacher, technician or other facilitator such as an older student, the Fixperts Facilitator guides students in their analysis, design, and decision making as they work toward solving a problem.

Fix Partner

Someone who is open to having a conversation about challenges they face in their everyday life. They work to help the Fixperts Team to improve their proposals through testing and feedback.

Fixperts Team

A team of 2-5 learners who can problem-solve, make and improve things for other people. They can designate leads for the roles below, or work more loosely to complete the project.

Designer

Someone who is a great problem-solver, willing to explore lots of different ideas, learn by trial and error, and take risks in their search for a solution.

Maker

Someone with a good knowledge of materials and processes, who can lead the team to realise their design ideas using the materials, tools and equipment available.

Communicator

Someone who is great at documenting and telling a compelling story. The presentation should capture the people, problem and process involved in creating a solution.

Fixperts project framework

A Fixperts project is structured in 6 simple stages. You can decide how much time to allocate to each stage - we've run Fixperts in half a day but running it over a half term or even a full term offers opportunities for rich engagement and stretch.

This free guideline offers prompts for each stage rather than detailed activities. Schools subscribers can access full resources and rich content, from risk assessments to films. Find out more at www.fixing.education/fixperts.

1. Contextual understanding

Activities:

- Introduction to Fixperts and fixing (Powerpoint presentation included)
- Designing for a variety of different users - quick exercises based on user scenarios

Aims:

- Understand what Fixperts is and the thinking behind it
- Experience designing for different users and their needs
- Develop quick problem solving and prototyping skills

By the end of this stage, students should:

- Be ready to embark on their own Fixperts project

2. Getting started

Activities:

- Considering how to find a problem
- Identifying a Fix Partner or Brief Challenge film viewing [using Fixperts film archive]
- Writing a design brief
- Documenting the process

Aims:

- Develop observation skills to identify problems around them
- Understand the importance of writing a design brief and experience writing a brief for their Fixperts project

By the end of this stage, students should:

- Have a Fix Partner to work with, or have identified a problem through watching Fix Films
- Have a written brief statement for their Fixperts project

3. Designing

Activities:

- Fix Partner observation / simulating a problem scenario
- Generating initial ideas & first quick prototyping
- Evaluating prototypes & improving designs
- Documenting the process

Aims:

- Experience an iterative design process
- Develop modelling and prototyping skills

By the end of this stage, students should...

- Have a prototype of a solution ready for testing, either through simulation or with a Fix Partner

4. Development

Activities:

- Fix Partner testing / simulation testing
- Feedback and suggestions for improvements
- Planning modified design & building prototypes
- Documenting the process

Aims:

- Evaluate their solution using user testing, Fix Partner feedback and their design brief to assess its effectiveness

By the end of this stage, students should...

- Have a prototype that answers their design brief and has been tested, modified and improved to meet their user's needs

5. Production

Activities:

- Final prototype production
- Documenting the process

Aims:

- Make a final working prototype that solves the problem described in their Brief Statement

By the end of this stage, students should...

- Have a **working prototype** produced to the highest level (considering students ability, time and facilities available.)

6. Presentation

Activities:

- Presentation to group / Fix Partner
- Creation of Fix Story presentation
- Celebration!

Aims:

- Tell the story of their Fixperts project in a clear and engaging way, using documentation they have made throughout the process
- Practice presentation skills

By the end of this stage, students should...

- Have a **documented story** of their Fixperts project in the form of a film, a presentation, a folder, a blog or any other medium they choose to use.

Questions and answers

How can Fixperts be delivered in schools?

The Fixperts model can be adapted to suit different schools and individual set-ups. You can run Fixperts as a one-hour, half day, whole day or half-termly project. It can be subject-specific, a club or a workshop. It doesn't matter if you're using lolly sticks and sticky tape or a 3D printer – successful Fixperts projects don't rely on sophisticated tools! See our full FAQ for further details.

Who can take part in Fixperts?

Fixperts is open to everyone! Any and all creative individuals or groups from any subject, who are looking to promote social values and to solve problems through design, can carry out a Fix project. It is great for learners aged 11-18, where younger learners will need more support and older pupils can enjoy a greater level of autonomy. Fixperts is well-suited to Design & Technology, Art, Engineering, and PSHE programmes of study, as well as extra-curricular activities such as the Duke of Edinburgh award.

How to find a Fix Partner?

Be creative! It is easier than you think. Fix Partners are everywhere. They could be school staff, in the wider school community, or the local community (i.e. local businesses, community centres, care homes). You don't need to work with someone with a disability – the Fix project might stem from someone's job, hobbies, or home environment. The facilitator might wish to 'advertise' for Fix Partners within the school or community, such as emailing staff and parents or writing a notice for the school or community newsletter. Alternatively, this task can be carried out by the students, giving them the opportunity to have a personal link to the project. Ideally you will work with a real-life Fix Partner as this creates the most valuable learning experience. If this isn't possible we have successfully tested a range of workarounds for schools and this guidance is included in the full Fixperts materials. See our FAQ for further details.

How to identify a problem?

Have a conversation, get to know your Fix Partner. Ideally this will be a face-to-face conversation (either in school or set as homework), but this could also be achieved through a video call, phone call or email exchange. You could call it a kind of "Design Scene Investigation". Start by observing daily routines and situations that are not working or cause frustration. Look for things the Fix Partner has learnt to ignore. Identify several potential problems to discuss with your facilitator, who can advise you on which have the most potential for a good Fix project.

How much money should we spend?

As little as possible. Fixperts is about making intelligent fast, low-cost and effective impact. The best design solutions are simple, resourceful, and often small-scale.