Fixperts for D&T

Fixperts use an iterative approach to design products that solve real-world problems, understanding how Design & Technology impacts individuals.
How can Fixperts be used to address the D&T Curriculum?

Purpose

- Design and make products that solve real and relevant problems
- Work within different contexts
- Consider others' needs, wants and values
- Draw on learning in maths, science, engineering, computing and art
- Learn how to take risks with their ideas
- Become resourceful, innovative, enterprising and capable citizens

Aims

- Develop creative, technical and practical expertise
- Participate confidently and successfully in an increasingly technological world
- Apply knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products

Designing and making skills

- Identify and solve their own design problems
- Use an iterative approach to designing
- Communicate design ideas using sketches, modelling, oral and digital presentations
- Test, evaluate and refine their ideas, taking into account the views of intended users
- Develop practical making skills

Knowledge and understanding

- Apply knowledge of material properties to achieve functioning solutions
- Design for a range of users, including inclusive design
- Understand D&T's impact on individuals, and the impact of good and bad design
- Learn about prosocial design and the responsibilities of designers
- Use digital technologies for real and relatable applications
- Calculate anthropometric data, dimensions, angles, mass and volume, or costings
- Learn how scientific knowledge is used in designing and making

Delivery
- Flexible age range
- In or out of the classroom
- Adaptable to suit facilities available

Opportunities
- Free online resources
- Teacher training opportunities
- Competitions

Fixperts for STEM

Fixperts use an engineering mindset to design products that solve real-world problems, understanding how new technologies, science and maths are essential components of the process. How can Fixperts be used to progress the STEM Vision?

STEM Learning objective: Aspirations

- For learners from all background with all abilities
- Learners have the opportunity to become real-life designers
- Fix Films provide diverse role models
- Prepares learners for STEM futures

STEM Learning objective: Careers

- Fixperts work with 'live clients' (Fix Partners)
- Accountable to someone beyond the teacher
- Develop communication skills
- Develop organisation and project management skills
- Develop independence and confidence
- Gives insight into professional expectations

STEM Learning objective: Skills

- Practice all areas of STEM
- Learn how scientific knowledge is used for real-world applications
- Use an iterative approach to designing
- Develop practical making skills
- Use digital technologies for real and relatable applications
- Apply an engineering mindset to problem-solving
- Calculate anthropometric data, dimensions, angles, mass and volume, or costings

STEM Learning objective: Community

- Community enterprise
- Learners interact positively with members of the wider community
- Demonstrates the benefits of STEM education to your community
- Showcases how STEM impacts everyday lives in non-industrial applications

Delivery

- Flexible age range
- In or out of the classroom
- Adaptable to suit facilities available

Opportunities

- Free online resources
- Teacher training opportunities
- Competitions

Fixperts for Life Skills

Fixperts learn to work with members of the community to solve problems, developing a wide range of transferable skills with life-long benefit. How can Fixperts be used to develop learning, thinking and life skills?

- For learners from all background with all abilities
- Fix Films provide diverse role models
- Accountable to someone beyond the teacher
- Gives insight into professional expectations
- Learners interact positively with members of the wider community

Skills development

- Communication and interpersonal skills
- Teamwork and collaboration
- Organisation and project management skills
- Independence, confidence and self direction
- Creativity and innovative thinking
- Apply critical thinking skills and become a reflective learner
- Learn how to take risks with their ideas and develop resilience
- Participate confidently and successfully in an increasingly technological world
- Develop a social conscious through participating in a community enterprise

Assessment links

- Citizenship
- PSHE
- D&T
- Computing
- Science
- STEM

Delivery

- Flexible age range
- In or out of the classroom
- Adaptable to suit facilities available

Opportunities

- Free online resources
- Teacher training opportunities
- Competitions

Fixperts for Maker Mindset

Fixperts demonstrates that anyone can be a maker by adopting the Maker Mindset, providing the opportunity to develop essential skills for the future and benefitting society. How can Fixperts be used to promote the Maker Mindset?

Anyone can be a maker

- Broader access to digital fabrication tools at home, school or in 'makerspaces' means anyone can become a maker
- Broader access to digital communication tools means people can work together easily
- Fixperts is suitable for learners from all background with all abilities
- Fix Films provide diverse role models, including designers, engineers, students, craftspeople and DIYers

Essential skills

- Combines creative problem-solving with hands-on experience
- Develops fundamental skills for the future of education, workplace and society
- Critical for tackling both big issues and small problems

Characteristics of a Maker Mindset

- Collaborative working skills
- Sharing ideas
- Puts ideas into practice
- Question use and purpose, creating design with meaning and impact
- Learn from mistakes
- Consider social and environmental impact of designing and making

Delivery

- Flexible age range
- In or out of the classroom
- Adaptable to suit facilities available

Opportunities

- Free online resources
- Teacher training opportunities
- Competitions

Fixperts for Science & STEM

Fixperts learn how scientific knowledge is applied and use an engineering mindset to design products that solve real-world problems. They understand that new and traditional technologies cannot be utilised effectively without reference to maths and the sciences.

- Learn about the social and economic implications of science
- Understand the uses and implications of science, today and for the future
- Use the scientific method of enquiry to solve problems
- Apply knowledge of motion and forces
- Apply knowledge of the properties and potential of different materials
- Understand the biology of human needs and limitations

STEM learning objectives

Aspirations:
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- Learners have the opportunity to become real-life designers
- Fix Films provide diverse role models
- Prepares learners for STEM futures

Careers:
- Fixperts work with 'live clients' (Fix Partners)
- Accountable to someone beyond the teacher
- Develop communication skills
- Develop organisation and project management skills
- Develop independence and confidence
- Gives insight into professional expectations

Skills:
- Practice all areas of STEM
- Learn how scientific knowledge is used for real-world applications
- Use an iterative approach to designing
- Develop practical making skills
- Use digital technologies for real and relatable applications
- Apply an engineering mindset to problem-solving
- Calculate anthropometric data, angles, mass and volume, or costings

Community:
- Community enterprise
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Delivery
- Flexible age range
- In or out of the classroom
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Opportunities
- Free online resources
- Teacher training opportunities
- Competitions