The Pupil Design Awards has been a positive way for pupils to connect with their own stories and communities.

*Teacher, Pupil Design Awards*
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Introduction

This Teacher Resource Pack has been designed to support you in delivering the RSA Pupil Design Awards. In the pack you will find a suggested seven-week scheme of work, supported by activities and resources from our partners, design education specialists, Fixperts.

The RSA Pupil Design Awards

At the RSA, we believe in a world where everyone is able to participate in creating a better future. Through our ideas and research, a 30,000 strong Fellowship, and our collaborators and partners, we are a global community of proactive problem solvers uniting people and ideas to solve the challenges of our time.

The RSA has always championed the power of design for public good. Today we call this design for social innovation; a discipline that brings together the needs of society and the possibilities of technology, the dynamics of our economy and the conditions of the environment to create or amplify interventions that tackle complex and systemic social challenges.

The Pupil Design Awards aims to encourage young people to do exactly this. The Pupil Design Awards’ vision is one in which young people develop creative self-efficacy through engaging with real-world problems and leave school with capabilities which enable them to flourish in their personal lives and contribute to the flourishing of their communities. We do this by:

- Broadening teachers’ and pupils’ understanding of how design can be applied and understood (design for social innovation) through challenging briefs and comprehensive judging criteria.

• Introducing design thinking to teachers and pupils through interactive workshops delivered in collaboration with design education experts.

• Connecting schools to their local communities and enabling pupils to design solutions to local and global contemporary challenges.

The Pupil Design Awards is modelled on the RSA’s prestigious Student Design Awards for university students. It is a national design competition for secondary school and sixth-form pupils aged 11-17. We provide a range of briefs related to important social issues and ask entrants to develop innovative proposals to problems they identify themselves. The design process requires pupils to identify different design opportunities and refine ideas through research and development. Proposals are submitted at the end of the academic year and winners are selected by our expert judging panel.
PART 1
TEACHER OVERVIEW
**Competition timeline**

**September**

**Awards launch**
New briefs and resources are uploaded on to our website, and registration for teacher workshops opens.

**March – April**

**Mentor visits**
Support on your proposals from professional designers and former winners of the Student Design Awards.

**19 April**

**Submissions open**
Online submission platform Skipso opens for teachers to upload their pupils’ work.

**20 May**

**Submissions close**
Your teachers have until 4.00pm on 20 May 2022 to submit your work.

**November**

**Teacher workshops**
Free training workshops co-delivered with design education specialists, Fixperts, supporting teachers to deliver the Awards.

**June**

**Judging sessions & awards ceremony**
Two-stage judging process, with judges selected from professionals working across design, academia and education.
Design thinking

We believe that design is about more than making beautiful things. Design can be used to solve problems and improve people’s lives. This is what we call social design. This pack aims to support you in encouraging your pupils to develop the mindsets that are integral to arriving at innovative, impactful ideas. The RSA Pupil Design Awards is about pupils going on a journey through the design thinking process, that builds their ability to creatively solve problems with insights from their peers and the world around them.

The non-linear design thinking process

Through the Pupil Design Awards we describe design thinking as a process and a mindset used to tackle complex problems. It can help pupils explore new alternatives and to imagine and bring to life ideas that didn’t exist before. It offers an opportunity to design with communities, to deeply understand the people they’re looking to support, to be creative, and to come up with new answers that respond to people’s needs and motivations. It is a flexible and non-linear process, where pupils can go back and forth as many times as they need to reach an idea that addresses the problem they have identified.
Judging criteria

Pupils' proposals will be evaluated based on the following criteria:

1. **Social and environmental impact:**
   - How does the proposal make a positive difference for people and/or the natural world?
   - How does the final proposal consider diverse needs and equitable ways to meet those needs?
   - How does the proposal engage with the local community in its chosen context?
   - How does the proposal consider using materials, processes, and resources in a sustainable way?

2. **Rigorous research and compelling insights:**
   - Has the pupil/team undertaken first-hand research by identifying the needs and motivations of people affected by the problem in your brief?
   - Has the pupil/team conducted research into the wider context of the problem on the internet or through reading material?
   - How does the proposal build on key insights grounded in people’s needs and motivations, and gained through wider research?
   - How does the proposal incorporate feedback and testing through prototyping and iteration?

3. **Viability:**
   - Has the pupil/team considered how the proposal will work in practice?
   - Has the pupil/team considered the cost of the proposal and how it might be funded and sustained?
   - Has the pupil/team identified any potential barriers that might prevent the proposal working in practice? How might these be overcome?
   - Has the pupil/team considered how they would measure the success of their proposal if it became a reality?

4. **Creativity and innovation:**
   - How is the proposal different from existing solutions? How might it be better or more useful?
   - What unexpected or surprising elements are included in the proposal? What value do these add to the idea?
How to submit pupils’ work

You may enter pupils as a team or individually. To enter their work into the RSA Pupil Design Awards you will need to present proposals on six A3 boards. These six boards need to tell the story of your pupils’ design thinking process from research to final idea. The judges will be looking for the story of how pupils’ designs developed over time. When the judges first look at the work, nobody will be there to explain it, so the six boards need to do all the explaining!

The six boards:

1. Research
   - What design brief are you tackling?
   - What research have you done to investigate the challenge and understand how the people/environment are affected?
   - How did you conduct some primary research to understand the issue better?

2. Findings
   - What is the specific problem you are focusing on?
   - What were your key findings from your research?
   - What were your insights from your research?

3. Ideation
   - How have you explored potential ideas?
   - What ideas did you decide to explore further?
   - What was successful/unsuccessful about them?

4. Testing & Development
   - How did you test your idea?
   - Who did you ask for feedback?
   - How did you incorporate feedback into your proposal?

5. Impact
   - How could your proposal work in the real world?
   - What could be the challenges you might face when putting your proposal into the real world?
   - What positive impact will your proposal have?

6. Final Idea
   - Tell us about your final idea in one statement.
   - Who is your proposal aimed at and why?
   - What makes it different to existing solutions?
The Pupil Design Awards will be judged in three categories: Year 7&8, 9&10 and Year 12. All entries must be made via our website www.thersa.org/pda by your teacher or a guardian over 18. The final deadline for submissions is the 20 May - check our website for updates.

As you can see below, the judging process is divided into six stages. The panellists in the past have included Student Design Award alumni, Royal Designers for Industry, practising designers and RSA staff.

1: Final submission

- The final deadline for entries is the 20 May 2022.
- Submissions are evaluated per age group by a curated panel of judges.

2: Individual evaluation

- The judges mark all submissions for their age category individually using an online evaluation tool based on the judging criteria.

3: Judges shortlist deliberation

- The panel come together to deliberate, using the evaluation tool and the judging criteria, to shortlist a handful of projects per category to be shortlisted.
- The RSA team contacts all competition entrants to let them know whether or not they have been shortlisted.

4: Interviews with panel

- The shortlist are invited to an interview with the judges where they will have the opportunity to present their project to the judges in and answer a few questions from the judges based on the judging criteria.

5: Judges awards deliberation

- The judges mark all interviews using an evaluation tool and the judging criteria and then deliberate to select their winners.

6: Awards announcement

- The interviews are followed by an awards announcement and celebration!
### Week 1

**Objective**
To (i) introduce design thinking, (ii) explore social design, and (iii) introduce the competition briefs.

<table>
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<tr>
<th>Outcome</th>
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<tbody>
<tr>
<td>1 Pupils have formed their groups or decided to work individually.</td>
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<tr>
<td>2 Pupils have read the brief pack and chosen a brief.</td>
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<tr>
<td>3 Pupils begin to have an idea of the challenges they will research further.</td>
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<table>
<thead>
<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>— The three competition briefs</td>
</tr>
<tr>
<td>— Fixperts 'Brief Hunting' activity</td>
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### Week 2

**Objective**
To (i) research information for the chosen brief, (ii) identify a target audience, and (iii) delegate research responsibilities amongst the team.

<table>
<thead>
<tr>
<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>1 Pupils should understand how to select research relevant to their context.</td>
</tr>
<tr>
<td>2 Pupils should be able to identify areas where further investigation is needed before developing design ideas.</td>
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<tr>
<td>3 Pupils should be able to identify, explain the characteristics of, and justify their choice of target audience in relation to their chosen brief.</td>
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<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>— Pupil Response Sheet</td>
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<td>— Fixperts 'Customisation' activity</td>
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### Week 3

**Objective**
To (i) plan the research pupils will carry out with real people / organisations, (ii) devise research questions.

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<thead>
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<th>Outcome</th>
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<tbody>
<tr>
<td>1 Pupils should understand how to plan primary research activities, and should have a plan for carrying out user research independently after this lesson.</td>
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<tr>
<td>2 Pupils should be able to analyse successes and weaknesses in interview technique and apply this knowledge to carrying out their own interviews.</td>
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<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>— Researching with people worksheets</td>
</tr>
<tr>
<td>— Fixperts 'Levels of Listening' activity</td>
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<td>— Tell Stories activity</td>
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**Tip:** Encourage pupils to start their boards as early as possible, they should be an evolving document that they revisit throughout the design process!
**Week 4**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>To (i) identify initial ideas for the project based on research findings and (ii) describe or visualise ideas.</td>
<td>3 Pupils should be able to use their research to develop their ideas, demonstrating that the idea is clearly linked to information gathered during research activities.</td>
<td>— Fixperts ‘Idea Generation’ activity — Examples of mind maps and product design sketches</td>
</tr>
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<td>4 Pupils should be able use a variety of methods to help generate a wide range of ideas.</td>
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<td>5 Pupils should be able to communicate their ideas to someone else in different ways.</td>
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**Week 5**

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<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>To (i) test ideas against target audience feedback, (ii) develop initial ideas towards a single, final idea.</td>
<td>6 Pupils should demonstrate a critical approach to testing and evaluating their ideas.</td>
<td>— Fixperts ‘Designing the Detail’ activity — Fixperts ‘Sticky Storyboard’ activity — Fixperts ‘Brief Specific’ activities</td>
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<td></td>
<td>7 Pupils should use the feedback of others in addition to their own opinions to test and evaluate their ideas.</td>
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<td></td>
<td>8 Pupils should apply the result of their testing and evaluation to identify clear ways to develop their ideas further.</td>
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**Week 6**

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<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>To build, refine and complete final idea.</td>
<td>9 Pupils should take action based on feedback from their target audience and peers.</td>
<td>— Examples of previous submissions</td>
</tr>
<tr>
<td></td>
<td>10 Pupils’ proposals should clearly reflect the needs of their target audience.</td>
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</table>

**Week 7**

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<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create final portfolio by completing submission boards. Refining presentation until students are confident in their submission.</td>
<td>11 Pupils should be able to use advice and success criteria to make decisions about the communication of their project.</td>
<td>— Judging Criteria</td>
</tr>
<tr>
<td></td>
<td>12 Pupils should be able to communicate effectively by telling a story visually through their boards.</td>
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</tbody>
</table>
Teacher insights

As well as inspiring young people to engage in social change through design thinking, we also hope to create a community of teachers who can learn, collaborate and connect with each other. Many of you will be new to the Awards, but we are also fortunate enough to have many schools that return each year. We’ve collected some key insights from some of these teachers to support you with planning and delivering the Awards in your own classroom.

Structuring the Awards:

I have run the PDAs as both a formal classroom-based activity and as an extracurricular club. I found the issue with classroom activities was the time constraints which prevented the students from really investigating the brief for a longer period of time.

We make links with employability skills such as strong communication and working to deadlines and we have always linked the competition heavily to teamwork. We try to take a step back with decisions like which team member is responsible for certain elements of the work and encourage them to prepare presentations themselves.

I have always run the PDAs in either the Art lesson or PSHE lesson. Historically, I have always had Years 7 and 8 taking part in the brief. When I have completed the planned lesson time and marked/evaluated the work I have then used lunchtimes to complete/tweak the work before submitting it.

Using the PDAs resources and support:

For mentor visits we tend to book a room at school for the afternoon and take pupils involved off timetable for the session. During this time the pupils all present their progress so far and each group feeds back including the mentor. The mentor visits are not only a good opportunity to hear from each of the groups but also a rare chance for pupils to hear from older students who are used to going through a design process.

I have used the support material as a loose guide. However, having exemplar work was really useful. The student mentor visits were an amazing experience which really helped progress the pupils' work.
Top tips:

It’s not all about the fancy presentation, it’s the ideas that matter. I was worried that because we do not have great IT facilities, we wouldn’t do as well as others. But that was not the case.

Encourage research as much as possible and try to give the groups time to reflect on the research before designing. Students should not be jumping into designs too early.

Managing the project timeline:

So that pupils do not get preconceived ideas for the brief, I start with a mini project which they then can use within their research. That mini project starts in January. From the information from the brief you give us, I would look at the background and ‘what needs to change’ part and basic a lesson that covers the main points mentioned. If they are in their Art or DT lesson I would do a design task around it or if in PSHE I would do a discussion task.

Then after 4-6 weeks I would introduce the design brief and start the project. I would have it completed by the Easter holidays. That then gives me time to work with pupils wishing to submit before the deadline of submission in May.

We try to launch the briefs ASAP to give them the opportunity to spend time on research without the pressures of other deadlines/homework that they may have.

We also offer all of the briefs to our students so each year we have groups who are working on lots of varied and unusual project ideas. We have pretty much run the competition from November to April with drop-in sessions for support.

Tip: Don’t forget you can always contact the RSA team for further support and guidance on how to run the Awards in your school by contacting aidan.daly@RSA.org.uk.
PART 2
LESSON PLANS
Lesson Plan:
Week 1

Forming a group & choosing a brief

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>To introduce design thinking and social design.</td>
<td>Pupils have formed their groups or decided to work individually.</td>
<td>Pupil Design Awards animation</td>
</tr>
<tr>
<td>To understand that design can be used to solve problems.</td>
<td>Pupils have read the brief pack and chosen a brief.</td>
<td>'The Power of Design' video</td>
</tr>
<tr>
<td>Introduce the competition briefs.</td>
<td>Pupils begin to have an idea of the challenges they will research further.</td>
<td>'How to Approach a Brief' video</td>
</tr>
</tbody>
</table>

Ideas for Starter Activities

Pupils to brainstorm: how has design improved the way we live in today’s world? Examples might include: clothing, internet, telephones, fridges, water bottles, etc. When taking feedback from class, explore ideas such as: what problems did the creator respond to, what role design might have played in the process, what mindset might have been needed.

Introduce the Pupil Design Awards competition: defining what a brief is, how pupils will be working using design thinking, and the competition final in July.

Show two videos:

1. Watch the Pupil Design Awards animation, created by SDA alumni Leanne Dooley, to kickstart your pupils projects and introduce the design thinking process.

2. The 'Power of Design' video from Student Design Awards alumni Emma Southgate, who reflects on the way design thinking can be harnessed to tackle problems ranging from household needs to big, social challenges.

Follow this with a Q & A session on the key mindsets and attributes of designers.
Ideas for Plenary Activities

If working in a group, pupils to record who is in their team members, which brief they will be responding to, and what their discussion has been during the lesson – including what they already know about the issue, initial ideas around who they might want to speak to for further research, and possible ideas they might have started to think about.

Encourage pupils to question their assumptions about the challenges they have identified. This will allow them to start thinking about what they want to explore further.

Note: it would be useful to keep a record of which groups pupils are in (or whether they are working individually) and which brief they have chosen.

Ideas for Main Activities

Many pupils will want to jump straight into creating design ideas. It’s okay to reward some of these ideas. However, don’t jump straight into final proposals. At this stage we want to get them thinking about identifying challenges to solve - not jumping straight into ideas for an unidentified problem:

You could: show ‘How to Approach a Brief’ - a short video about tackling new briefs by Andrew Grant RDI.

You could: run the Fixperts ‘Brief Hunting’ activity with the class to get them comfortable with identifying problems before generating ideas.

Introduce the three briefs to the class; these can be read aloud from the Competition Pack.

Pupils can work in groups or pairs to mind map a summary of each brief, and the potential issues or problems that could be relevant to each brief.

Appoint one person as the scribe and at the end of the session ask another group member to present back to the room the challenges that they identified.
By now, pupils will have chosen which brief they will be working on and completed mind maps that explore the various challenges they could focus on for their project. This week is about researching appropriate information to learn more about the issues.

### Ideas for Starter Activities

Pupils to brainstorm, individually: (i) what brief are they focusing on, (ii) what issues will they need to research or learn more about, (iii) what are the different sources of information available to them?

Teacher to take feedback, defining 'secondary research' and the range of sources it might include - e.g. textbooks, newspapers, specific internet sites, published data.
Ideas for Main Activities

Based on insights gained in the starter activity, pupils should decide which secondary research activity they will each carry out.

Pupils should spend time researching more about the brief they are responding to and what possible solutions already exist.

After carrying out secondary research, pause to discuss how this can be used as a basis for primary research, and introduce the concept of a target audience.

Pupils should discuss who their target audience is and what characteristics they have.

Conduct secondary research: findings can be recorded on the Pupil Response worksheet, which requires notes on:

- General research on the issue: where the information has come from, what has been discovered.
- Identifying opportunities: who might the target audience be for this brief? Who could pupils talk to find out more? E.g. from their local community, relevant organisations, or within school.
- Possible proposals: generating different ideas that could be developed further.

Discuss with the class how desk-based research can be used as the basis for effective primary research (or user-focused research). Pupils should be able to identify their target audience and what opportunities might exist to learn more about them.

Use Fixperts ‘Customisation’ activity to explore designing for different users and understanding different users’ needs. Note: this activity is designed to take 1.5 hours.

Ideas for Plenary Activities

Pin these worksheets (and any other ways ideas have been recorded) to an ‘ideas board’ that has been set up in the classroom to capture your pupils’ thinking.
Lesson Plan:

Week 3

Planning Primary Research

<table>
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<th>Objective</th>
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<tbody>
<tr>
<td>To plan the research pupils will carry out with real people / organisations.</td>
<td>1. Pupils should understand how to plan primary research activities, and should have a plan for carrying out user research independently after this lesson.</td>
<td>— Researching with People worksheets</td>
</tr>
<tr>
<td>To devise research questions.</td>
<td>2. Pupils should be able to analyse successes and weaknesses in interview technique, and apply this knowledge to carrying out their own interviews.</td>
<td>— Fixperts 'Level of Listening' activity</td>
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<td></td>
<td>— Tell Stories Template</td>
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</table>

This next phase of research will build upon the previous session, where pupils will now identify people they can arrange to interview or places where they can undertake visits in order to observe, question and experience. Consideration should be given to practicalities of interviewing, especially when interviewing off school premises.

Ideas for Starter Activities

Pupils to brainstorm: thinking back to their secondary research, create a list of potential people they could speak to learn more about the issues in their brief. It might help to think about (i) within school, (ii) in the local community, (iii) regional or national organisations who might focus on the issue.
Ideas for Main Activities

Use the *Researching with People* worksheet so pupils can start to translate some of their insights from research into questions they want to explore further when they are conducting human-centred research. They also need to consider the best form of communication to reach their interviewees; e.g. face-to-face interview, telephone call, Skype, WhatsApp, Facetime, letter, text, email etc.

Run the *Fixperts ‘Levels of Listening’ activity* to help pupils develop their primary research skills and learn how to get the most useful information out of a conversation with someone in their target audience.

Pupils complete the *Tell Stories* worksheet. They will need to complete this sheet after each interview to help them summarise their research findings. Capturing what they have learnt and what they would like to explore further will be key in developing their designs and communicating their design journey on their submission boards.

Ideas for Plenary Activities

Pupils to create a list of questions to ask their target audience, which will help them to understand these people’s experience of the challenge students are seeking to address.

Pupils to write down who will conduct interviews (if in a group), when they will be conducted, and how they will record responses.
Lesson Plan: Week 4

Developing Initial Research

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<tbody>
<tr>
<td>Identify and form initial ideas for the project based on research findings.</td>
<td>1 Pupils should be able to use their research to develop their ideas, demonstrating that the idea is clearly linked to information gathered during research activities.</td>
<td>— Fixperts 'Idea Generation' activity</td>
</tr>
<tr>
<td>Describe or visualise ideas.</td>
<td>2 Pupils should be able use a variety of methods to help them generate a wide range of ideas.</td>
<td>— Examples of mind maps and product design sketches</td>
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<tr>
<td></td>
<td>3 Pupils should be able to communicate their ideas to someone else in different ways.</td>
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Depending on time available: teachers may choose to use the Fixperts 'Idea Generation' techniques to get pupils developing and exchanging ideas in a design context. This can be particularly helpful to get pupils to develop ideas to issues they have identified. The activity is designed to take one hour.

Ideas for Starter Activities

Pupils to summarise the key themes, ideas, or issues they have found from their primary research on one large sheet of paper.

Ideas for Main Activities

Design sprint! Can the pupils come up with five ideas in ten minutes for one or more of the challenges they have identified from their research so far?

To help to define initial ideas, visualise them in an appropriate manner i.e. storyboard the idea if it is a campaign or service, use drawings or sketches if it is a product.

Pupils can present back to the class, and the class can suggest ideas back.

Ideas for Plenary Activities

Pupils prepare and deliver a one minute mock presentation that discusses the idea and the research that led to the idea being created. Each team or individual records the feedback they receive from teacher and peers.
After this lesson, it is important that pupils go back to their target audience and get feedback on their idea. This will enable them to iterate their design further in the next sessions. As a result, it’s important that pupils leave this lesson with a clear plan for how and when to get feedback.

### Testing & Development

<table>
<thead>
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<tbody>
<tr>
<td>To test ideas against target audience feedback, developing initial ideas towards a final one.</td>
<td>1 Pupils should demonstrate a critical approach to testing and evaluating their ideas.</td>
<td>— Fixperts ‘Designing the Details’ activity</td>
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<td></td>
<td>2 Pupils should use the feedback of others in addition to their own opinions to test and evaluate their ideas.</td>
<td>— Fixperts ‘Sticky Storyboard’ activity</td>
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<td></td>
<td>3 Pupils should apply the result of their testing and evaluation to identify clear ways to develop their ideas further.</td>
<td>— Fixperts ‘Brief Specific’ activities</td>
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**Ideas for Starter Activities**

Ask pupils to summarise three things they can remember from the Brief Pack about testing and developing ideas. Explain that incorporating the lessons they have learned from research into revised designs is central to creating better proposals.

**Ideas for Main Activities**

Class discussion: building on the starter activity, ask pupils to revisit their initial ideas and think about how they meet the needs their primary research identified, test these assumptions with the teacher and peers in other groups. Give pupils 10 minutes to revisit and discuss their ideas (focusing on how their ideas are addressing the specific issues they have identified) and then ask each group or individual to share with the class for feedback.

*Note: at this stage you could use the Fixperts activity called ’Designing the Detail’. This is a one hour activity and the focus is design thinking. Pupils are encouraged to prototype ideas and work iteratively on their projects.*

Pupils to create a rough draft of the stories they want to tell on their submission boards.

*Note: use Fixperts activity ’Sticky Storyboards’ to support this if you have time.*

**Ideas for Plenary Activities**

Discuss and review findings in groups from the testing that has happened so far.

Create a plan for gathering feedback: if working in groups, who will be responsible for getting feedback, when will it be done, and how will it be recorded?
Lesson Plan:

Week 6

Final Idea

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<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build, refine and finalise design.</td>
<td>1 Pupils should take action based on feedback from their target audience and peers.</td>
<td>— Examples of previous submissions</td>
</tr>
<tr>
<td></td>
<td>2 Pupils’ ideas should clearly reflect the needs of their target audience.</td>
<td></td>
</tr>
</tbody>
</table>

Ideas for Starter Activities
Each group or pupil summarises the main bits of feedback they have received from their target audience (everyone should have at least three pieces of information).

Looking at the feedback - identify any changes/refinements needed in final design development based on feedback from research.

Ideas for Main Activities
Pupils to work in groups and carry out the refinements to their ideas, based on the feedback collected since the last lesson.

Work on the final submission boards.

Each team or individual completes a one minute mock presentation that presents the final idea and the research that led to the idea being created. The teacher can then provide four minutes of feedback.

Note: if you did not have time last week, you could use the Fixperts "Sticky Storyboards" activity here. The focus of this activity is to support pupils with presenting their work.

Ideas for Plenary Activities
Peer review final idea and record feedback.
Lesson Plan:  
**Week 7**

### Presenting Your Work

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
</table>
| Create final portfolio by completing submission boards. Refining presentation until pupils are confident in their submission. | 1. Pupils should be able to use advice and success criteria to make decisions about the communication of their project.  
2. Pupils should be able to communicate effectively by telling a story visually through their submission boards. | — Judging Criteria |

### Ideas for Starter Activities

Discuss and review the judging and assessment criteria in groups. How can this be applied to their own projects? What were the comments from their mentor - have these been incorporated into the design and the presentation of their idea?

### Ideas for Main Activities

Compile final submission boards ensuring the design process is clear, well annotated and presented in line with the judging criteria.  

Check for the narrative of each submission - do the six boards tell a story of how the design was created and why it will be an effective proposal?

Give pupils copies of the judging criteria and each group or individual can peer assess other entries before giving feedback.  

Make sure work is clean and neat. Do not add the name of the school on the submission boards. You will provide this information using the online submission form.

### Ideas for Plenary Activities

Presentation to peers of final submission sheets. Use this experience to practise for the presentation to judges if selected.
PART 3
LESSON RESOURCES
WEEK 1
Fixperts – Brief hunting

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
Fixperts activity
Brief hunting

Context

This short activity asks learners to use their critical skills to evaluate potential design briefs and responses. It is devised to support learning at the Getting Started stage of a Fixperts project, or can be used as a stand-alone activity.

Learning objectives

- Finding a brief: Students will learn how to use observation to identify real and relevant problems to solve.

- Human-centred design: This activity teaches a human-centred approach to designing, starting with people rather than products.

Preparation

Duration
30 minutes

Materials
‘What’s your problem?’ template
Plain paper
Pens and pencils
Category labels

Location
Any classroom
- no specialist equipment needed
Activities

Introduction
Time: 10 minutes

As a class, discuss the idea that designing can be a form of problem solving, and useful and successful products are often designed as a response to problems people have. Designers are often presented with a problem from their client, and must use this starting point to develop their design brief.

Activity 1:
Time: 5 minutes

Using the ‘What’s your problem?’ template, students should list all the problems, annoyances and irritations they have experienced during the day so far.

Activity 2:
Time: 5 minutes

Swapping problem sheets with a partner, students should create a design solution to one of the problems identified. These ideas should be annotated to explain design decisions.

Activity 3:
Time: 10 minutes

Students should present their solutions to the class, so that everyone can see the variety of approaches people use to solve problems.

Plenary
Time: 5 minutes

Using the category labels, as students to place their ideas into one of 3 piles:
- Lifestyle changes
- Products - could make in school
- Products - need further expertise/facilities to make

Explain that all are valid design responses. When teaching as part of a full Fixperts project, explain that Fixperts should aim for design briefs that fit into category 2. This will allow them to learn the most and achieve the most during their project.

Stretch and challenge

Students may be aware of the concept of ‘life hacks’. Discuss this as a form of human-centred design. Can students identify any life hacks that have become commercially manufactured products?
What's your problem?
Lifestyle changes
Products - could make in school
Products - need further expertise/facilities to make
1. Research on brief subject

Where did my research

What I have discovered

2. Identify opportunities

Other people we can talk to to find out more

3. Research Possible Solution: Could it be a product, service or campaign?

My findings
Fixperts – Customisation activity

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
## Fixperts activity guideline: Customisation

### Aims of workshop
- Highlight the importance of designing for different users
- Develop skills in understanding and designing for users’ needs
- Introduce the idea of ‘fixing’ as adaptation to a range of contexts

### Objectives
- Customise an existing product to meet the needs of a specific user
- Work together to create fast prototypes of design ideas
- Articulate thought processes and reflect on design decisions through short presentations

### Materials
All locally available at low cost; see shopping list

### Duration
Minimum 1.5 hours

### Location
Workshop with access to tools (power tools if possible, but hand tools are sufficient)

### Accompanying resources
- Introduction to Fixing [ppt]
- Customisation inspiration and user profiles [ppt]
- Customisation activity summary [pdf]
# Workshop outline

## Introduction

**Time: 10 minutes**

Watch the *Introduction to Fixing* presentation together. With each slide direct questions to the class – What’s the image? What’s the fix? Lead into introducing Fixperts, explaining briefly what Fixperts is. Show one film.

**Context**

Understanding types of fixing e.g. repairing something broken, solving a problem, improving a product, customising something to work better for a specific use or changing users behaviour.

## Activity 1: Product analysis

**Time: 5 minutes**

Divide the class into teams of 3-4 learners. Each team is given a simple wooden broom. The basic design of the broom hasn’t changed in years. Ask the teams to spend 5 minutes creating a quick analysis of the broom – how it’s put together, how it works, why they think the design remains unchanged. Would they change or improve anything? What would that be?

## Activity 2: Introducing the user

**Time: 15+ minutes**

Offer a target user description to each team. Ask the teams to read the description carefully and discuss how the broom could be customised, modified and hacked to meet their user’s needs. Each team should develop a proposal for their unique broom design, and an idea how they would like to execute it.

At this stage encourage learners to use drawing and annotation to communicate and develop their ideas. Use large sheets of sugar paper so all team members can contribute simultaneously.

Use the *Broom inspiration* presentation as needed, showing relevant images when a team seems stuck on one idea or is too cautious to depart from the original broom. The slides can also play in a loop in the background for students to engage with as they choose.

## Activity 3: Workshop

**Time: 40+ minutes**

**Prototyping**

Emphasise to learners they only have one broom to work with so should make sure they know what they would like to do before they make any irreversible changes to it.

Learners work independently on prototyping their broom design. Encourage teamwork, role allocating and sharing of tasks so everyone is involved. Make sure learners are using equipment correctly and safely.

## Activity 4: Summing up

**Time: 5+ minutes**

Learners can use the *project summary* worksheet provided to sum up their broom design and describe the process. This can be done by one or two learners while others finish up the prototyping. Based on this, teams should plan a quick presentation, no longer than 3 minutes, of their design to the rest of the class.

---

Fixperts
Customisation activity
S1-1-01
www.fixing.education/fixperts

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Activity 5: Presentation

Time: as required according to number of students

Each team presents their design to the rest of the class, introducing their user, and explaining their approach to customising the broom to fit their needs. Restrict this to maximum 3 minutes (use a timer!).

Sum up, highlighting the importance of understanding the user’s needs when designing.
Target user descriptions

Your user: Teenager
Has to sweep once a week or she doesn’t get pocket money. Hates it because she thinks it’s a waste of time, can’t be bothered to bend down, can’t use her phone to listen to music or message her mates while sweeping. She doesn’t see the point as the floor gets dirty again anyway.

Your user: Nursery school carer
He wants to encourage the children to play a role in keeping their space clean. Young children love to play but get easily distracted if a task is boring or repetitive. Children are more likely to engage if the activity is fun, rewarding and playful, perhaps challenging but not too difficult.

Your user: School cleaner
She has to clean a very large space daily. In addition to a broom, she often carries a dustpan, rubbish bags, keys and dust cloths. The building has no lift; so she has to climb up and down stairs lugging her equipment around with her.

Your user: Older person
He is living alone and is independent; he wants to remain as independent as possible. He can’t bend down comfortably as bending both his back and knees are painful. He tires easily when physically active and can’t stand for long periods.

Your user: Fitness fanatic
She’s very health-conscious and uses every opportunity to exercise. She’s a total technology geek who likes to measure activity levels, heart rate and calorie burn. With a busy lifestyle, she doesn’t have a lot of free time.
Customisation: shopping list

Here are some suggested materials for customising a broom. These can easily be substituted with your preferred alternatives.

Simple wooden brooms (1 per team) [These are a good example.]

Materials for customising brooms:
- Knives, cutting mats & safety rulers
- Scissors
- Glue guns & refills
- Adhesive vinyl
- Elastic bands
- Cable ties
- Webbing
- String
- Hinges & fixings [screws/bolts]
- Cup hooks
- Dowel [square & round section]
- Tubing
- Wheels
- Corrugated card
- Foam
- Drawing pins
- Plasticine
- Masking tape [or duct tape]
- Sellotape
- String
- Wire
- Access to workshop hand tools and machines
- Acrylic paint & brushes

Materials for sketching
- Paper [A4 / A3, sugar paper for team idea development]
- Pencils, markers
Customisation activity: Project summary

Use this worksheet to record your design process

Our team:

Our challenge was...
Describe your design brief

We are designing for...
Describe who your user is and what their unique needs are

We explored different ideas...
Show some of your sketches and models

Things that didn’t work so well...
Show examples of things that didn’t work and explain why

We think this is our best design...
Show/sketch your final model and explain your idea
1. Research on brief subject

Where I did my research

What I have discovered

2. Identify opportunities

Other people we can talk to to find out more

3. Research Possible Solution: Could it be a product, service or campaign?

My findings
Fixperts
– Ideas
generation
workshop

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Fixperts workshop
Ideas generation

Aims of workshop
- Develop and loosen creative thinking skills
- Demonstrate the value of using tools and techniques to generate varied creative ideas
- Encourage a constructive relationship with feedback and criticism

Objectives
- Experience a range of idea generation techniques including brainstorming, collaboration and analogy
- Articulate, share and exchange ideas in a designing context

Materials

Duration
Minimum 1 hour for full workshop including 3 of the 5 possible activities. Individual activities can be run in isolation.

Location
Any classroom

Accompanying resources
Scamper [ppt]
# Workshop outline

## Introduction

Time: 5 minutes

Ideas don’t just appear. Coming up with ideas can be challenging and sometimes frustrating too. Discuss with learners different methods they may have used in the past to help generate ideas. Question what is most difficult about coming up with ideas – where do they usually get stuck?

## Activity 1: Crazy 8

Time: 15 minutes

This is a quick exercise designed to free inhibitions when coming up with ideas, loosening up thinking and forcing students to be less precious about their ideas. The focus here is on quantity not quality!

**Method:**
- Everyone gets a blank A4 sheet of paper, and folds it in half three times. When opened, the paper is divided into 8 equal panels.
- Set a simple design problem or question to the entire class. For example: carrying a baby, housing a pet, crossing a road safely, improving visibility of a cyclist in traffic.
- Set a timer for 5 minutes – everyone needs to generate 8 different ideas in this timeframe – that’s about 40 seconds per idea! Sketches will naturally be very rough, which is good. If stuck, encourage learners to draw the same idea with one variation.
- Share a few ideas from each table.

## Activity 2: 4x4

Time: 15 minutes

Hand out images of products paired with images of restricted movement. For example: products: a cup, a pen, a paper clip, a thick paperback book, toothpaste tube, football. Restrictions: broken arm, arthritic fingers, people with limb loss.

**Method:**
- Play in individuals or teams – each gets a blank sheet of A3 paper and folds into 4 quarters.
- Set timer to 2 minutes. For each pairing, ask individuals / teams to suggest quick solutions through sketches on one large sheet of paper per table. E.g. A spade and a broken arm = a spade that can be used with one arm (handle for hand, pressure rest for elbow).
- Once the time is up, each sheet of paper and scenario moves to next group, and the timer is set again. They may alter one thing in the product, e.g. ergonomics, how it solves the problem – could it change entirely? This aims to bring the groups together, to let people feel free with ideas and to show how far an idea can progress.
- Repeat for 4 individuals / teams, then return sheet of paper to first team for discussion. Compare the 4 solutions and question which is more appropriate – encourage analysis and criticism of each idea.
Activity 3: Everyday scenarios
Brushing your teeth, tying your hair up, putting on clothes, making tea, changing the bedding...

Method:
- Everyone is given a scenario and 2 minutes to explore it through words and sketches, perhaps a comic strip or diagram.
- Next, groups are given 5 minutes to consider the scenario using only one hand. What would the problems be?
- Groups suggest an idea to fix one of the problems they’ve highlighted and present back to the class.

Time: 15 minutes

Activity 4: Analogies
Problems are often solved by using inspiration from seemingly unrelated situations, such as sonar navigation (inspired by communication between marine animals), the take-off ramp on aircraft carriers (inspired by ski jumps), or Velcro (inspired by plant burrs transported on animal fur). This approach is called ‘Design by Analogy’ – the transfer of an idea from one context to another.

Method:
- Set a simple design problem (as before). Hand out images of familiar objects, for example: escalator, telescope, parachute, porcupine, dolphin, sycamore seeds.
- Give students 10 minutes to sketch or model an idea to solve the problem, inspired by one of the objects given.
- Present solutions in small groups.

Time: 15 minutes

Activity 5: SCAMPER
Introduce the SCAMPER exercise using the powerpoint presentation. Taking the favourite idea generated during the workshop see what happens when SCAMPER is used.

Time: 15 minutes

Plenary
In pairs, discuss if there was a favourite method of generating ideas experienced during the lesson. Ask learners to explain how these methods might help with the issues they identified at the start of the lesson, and how they can be used in their Fixperts project.

Time: 5 minutes
Fixperts – Levels of listening activity

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Find further teaching resources and information at www.fixing.education
Fixperts activity
Levels of listening

Context
- This activity is designed to support the learning in the Getting Started stage of the project. It can be taught as part of a longer Fixperts project, or used as a stand-alone activity.

Learning objectives
- User research: Students will learn how to use primary research skills to identify the needs of a user, encouraging them to start with people rather than products when designing.
- Working with a Fix Partner: This activity teaches students to get the most useful information out of a conversation with a user or client (their Fix Partner), developing their understanding, insight and empathy.

Preparation
Duration
30 minutes

Location
Any classroom
- no specialist equipment needed

Materials
Levels of listening presentation
Paper and pens for note-taking
Activities

Introduction
Time: 5 minutes
Introduce the idea of a conversation as a form of research. What forms does this come in? (i.e. interview, survey, focus group). This activity teaches researchers to listen to more than just the content of what is said during an interview.

Activity 1:
Time: 10 minutes
Put students into groups of 4. Each one has a different role:
1. Interviewer
2. Observe the language used
3. Observe body language
4. Listen to the meaning
Use the presentation to explain what should be done for each role. Using the script, roles 2, 3 & 4 should take it in turns to ask questions from their chosen script, making notes during the interview.

Activity 2:
Time: 15 minutes
After the interview, the interviewee has 5 minutes to make notes and write advice/feedback for the interviewers.
The interviewers should compare notes and ascertain the most truthful interpretation of the interview.

Activity 3:
Time: 5 minutes
All group members should feed back to the group, justifying their points using evidence from their notes.

Plenary
Time: 5 minutes
As a class, discuss how much information was gained from each of the forms of listening. Share good techniques for interviewing, with reference to the type of information Fixperts would need to gain from initial conversations with a Fix Partner.

Stretch and challenge
Pupils often stick to the questions they’ve planned in an interview, even if they can see the interviewee is struggling. Discuss how the interview could be adapted to gain better results from the interviewee. Problems to address might include the interviewee giving stereotypical rather than truthful answers, not having an answer so making something up, or saying what they think you want to hear.

Set the same interviewing challenge to have a conversation with someone the student doesn’t know, such as a member of the school staff or community. This pushes them outside of their comfort zone, practising their professionalism, as well as making it harder to interpret the conversation.
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Find further teaching resources and information at www.fixing.education
Fixperts workshop
Ideas generation

Aims of workshop
- Develop and loosen creative thinking skills
- Demonstrate the value of using tools and techniques to generate varied creative ideas
- Encourage a constructive relationship with feedback and criticism

Objectives
- Experience a range of idea generation techniques including brainstorming, collaboration and analogy
- Articulate, share and exchange ideas in a designing context

Materials

Duration
Minimum 1 hour for full workshop including 3 of the 5 possible activities. Individual activities can be run in isolation.

Location
Any classroom

Accompanying resources
Scamper [ppt]
Workshop outline

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Time: 5 minutes

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- Share a few ideas from each table.

Activity 2: 4x4

Time: 15 minutes

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Activity 3: Everyday scenarios

Time: 15 minutes

Brushing your teeth, tying your hair up, putting on clothes, making tea, changing the bedding...

Method:
- Everyone is given a scenario and 2 minutes to explore it through words and sketches, perhaps a comic strip or diagram.
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Activity 4: Analogies

Time: 15 minutes

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Method:
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- Give students 10 minutes to sketch or model an idea to solve the problem, inspired by one of the objects given.
- Present solutions in small groups.

Activity 5: SCAMPER

Time: 15 minutes

Introduce the SCAMPER exercise using the powerpoint presentation. Taking the favourite idea generated during the workshop see what happens when SCAMPER is used.

Plenary

Time: 5 minutes

In pairs, discuss if there was a favourite method of generating ideas experienced during the lesson. Ask learners to explain how these methods might help with the issues they identified at the start of the lesson, and how they can be used in their Fixperts project.
Fixperts – Designing the detail

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Find further teaching resources and information at www.fixing.education
Fixperts activity
Designing the detail

Context

- This activity is designed to enhance the learning of the Getting Started and the Development stages of the project. It can be taught as part of a longer Fixperts project, or used as a stand-alone activity.

Learning objectives

- Human centred design: This activity introduces inclusive design, considering how to design for people with additional needs.
- Iterative designing: This activity necessitates fast modelling and testing of ideas, repeated multiple times to refine the final product.
- Prototyping: Students will learn how to use a prototype effectively both for testing a concept and for gaining user feedback.
- Resilience: By developing and testing ideas, students build their resilience against failure and learn to use failure to positively improve their work.
- Innovation: Students will see how creating many iterations of an idea leads to innovation in their work.
- Decision Making and Critical Thinking
This activity encourages students to use critical thinking skills to make design decisions to improve their work.

Preparation

Duration
1 hour

Materials
- Paper cups
- Scissors
- Glue
- Pens and pencils
- Masking tape
- Card
- Modelling clay

Location
Any classroom
- no specialist equipment needed
Activities

Introduction

Time: 10 minutes

Students should work in pairs. One student should simulate a hand restriction by taping several fingers together and try to carry out everyday activities (such as writing, drinking and eating, or tying shoes). The other student should make observation of the challenges and annoyances the restriction brings. As a class, discuss emotion related to an inability to do something.

Activity 1:

Time: 10 minutes

Students are tasked to redesign a paper cup to make it easier to use with their hand restriction. Set a timer for 5 minutes.

After the time is up, students should test and evaluate the function of their cup.

Activity 2:

Time: 15 minutes

Students should now improve their cup design based on the results of their evaluation. Again, they should have 5 minutes to complete the task.

After 5 minutes, discuss with the class the emotions related to the usual aesthetics of inclusive designs. Students may identify that inclusively designed products can often look like baby products, with extra handles, rubberised parts and bright colours.

Give students time to evaluate the aesthetics of their cup in light of this discussion.

Activity 3:

Time: 5 minutes

Students now have a final opportunity to improve and refine their cup design.

Activity 4:

Time: 15 minutes

Each pair should present their final cup to other students, explaining the various iterations of their design and justifying the design decisions they made.

As a class, discuss how it felt when their ideas failed. Ask them to recall their original ideas in comparison to their final design, facilitating a discussion about failure, resilience and innovation.

Plenary

Time: 5 minutes

Discuss with students the difference between ‘inclusive’ and ‘exclusive’ design. Inclusive design accommodates all users. Exclusive design is only suitable for a specific user [customised or bespoke products are often exclusive]. Debate whether one approach to better than the other, and where and if both approaches are needed.
Fixperts
– Sticky
Storyboard

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Find further teaching resources and information at www.fixing.education
Fixperts activity
Sticky storyboard

Context

This activity is designed to support the learning in the Presentation stage of the project. It can be taught as part of a longer Fixperts project, or used as a stand-alone activity. It can also be used as a quick method of planning a Fix film.

Learning objectives

Reflection: Students will learn to be reflective about the work to identify successes and where they could improve. The reflective mindset developed in this activity is used throughout the Fixperts project.

Editing: This activity teaches students to refine their ideas by editing down to the key elements needed to communicate successfully. This transferable skill is also used in design development, such as simplifying a design idea to achieve maximum function with minimum materials.

Sharing: The Stretch and Challenge part of this activity introduces the idea of ‘open source’ within the design community. Students will see the similarity between sharing their own Fixperts project on a small scale through making a Fix Film and open source design.

Preperation

Duration
30 minutes

Materials
Rolls of stickers
Pens and pencils

Location
Any classroom
- no specialist equipment needed

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Explain the advent of ‘open source’ approaches to software used for physical design, also called open design. As well as sharing design processes openly and sharing digital design files to make products using CNC machines and 3D printers. Why might this approach appeal to the design community? What are the implications? How do Fix Films fit into this culture?

It allows for adapting and customising a design to fit a specific situation or person. It also means direct access between designers and users. It allows for open innovation where development happens between versions and the knowledge is shared. This kind of sharing is sometimes called and done through Creative Commons which is an alternative to IP intellectual property. Open source is also associated with creating and allowing access to people that would otherwise not be able to afford the information or the product which might improve their life quality.
After reading the context information pages, I realised that I really like the “Roots to Empowerment” context, because of current movements and issues in society, and I feel that I would design something that would have a positive and beneficial impact on society in terms of the context.

In the Mindmap, I used bubbles for different questions words: Who, What, When, Where and Why, because I felt that this method would allow me to explore the context fully.

By doing this I was able to identify ways my design could make an impact as well as primary users and key stakeholders depending on the area where the designed product be used.

I conducted a survey, in order to get an overview of the context. From the survey I was able to identify further areas where my design could make an impact. The main theme I learnt though was about increasing cultural awareness as much as possible.

In response to my survey results I decided to conduct an online card sort to further understand possible areas for design.

What do you think are the best ways to increase awareness about different cultures? (Please rank them from best to worst)

1. Learning about different cultures at school.
2. Travelling to different countries.
3. Hearing stories about different cultures
4. Exposure to different festivals
5. Visiting Exhibitions
6. Visiting Monuments
7. Games that relate to learning about different countries

Possible Design Problems:

From my research I have concluded that most people don’t learn about different cultures at school and this is the most practical area to design my product for.

Design a product, service or system that can be used in schools to educate staff and students about different cultures and heritages. It can’t change the school curriculum and must educate outside of lessons.

Not everyone has the facilities to travel to different countries, design a product that enable users to experience different cultures in an authentic way.

I decided to have a look into the second most effective method from my card sort, by doing some secondary research.

I chose the design area relating to school, because I felt this was the most plausible idea, and would allow my design to have the biggest impact.

Design statement: A product that will educate viewers about different cultures and heritages. It will be used in secondary schools and will act as a display that will educate and build awareness outside of lessons. It will encompass a variety of cultures and won’t offend viewers. It will be designed in a way that can be used in different types of schools and shouldn’t be too expensive.

Broad Context Research:

I approached the design brief from and “experience and build awareness about cultures” perspective. This wasn’t intentional but became apparent when I was making my survey and card sort.

Can be looked at in waiting areas – interactive, similar to the interactive periodic table some schools have.
Focus on the Design Problem

What is the Problem I am trying to solve?
- Students aren’t being taught about different cultures in schools and as a result the awareness of different heritages is very low.

Frame it as a design question.
- How might I educate students about different cultures in schools?

What impact am I trying to have?
- Build awareness about different cultures so that people are able to understand each other better
- Expose students to different cultures from a younger age so that when they are older they form a more inclusive and less racist society

I conducted an interview with the Deputy Head and Head of Sixth Form of my school, because I thought it was really important to see their perspective on the subject because they are one of the key potential stakeholders for the product.

The key themes that popped up in the interviews were not having enough time to cover content outside and teachers being worried that they would offend students if they teach the wrong information.

I also conducted another survey/questionnaire and asked similar questions and I posted it onto the Student Forum, I was able to get the perspectives of people of different ages and from different types of schools.

What were my key findings from my research?
- Teachers aren’t willing to teach for fear of offending cultures and religions.
- Assemblies are a part of teaching about different cultures to the whole of the school.
- Lack of cultures in the national syllabus
- Teacher’s lack of knowledge about diverse cultures and heritages.
- Time has an impact that can stop teachers teaching about different cultures.
- Celebrations are a great way to increase awareness and encourage people to learn about the culture or religion they are celebrating.

I also conducted some interviews with some of my friends, asking each of them the same questions in order to gain different opinions on the same issues.

What were my insights from my research?
- There were two main issues within the school system that I can address.
- The first one being the lack of information.
- The second one was time.

The national curriculum was the main issue with teachers not being able to teach about different cultures; however, it isn’t something I can change quickly, and really only by campaigns.

I realised that people in different schools would have different opinions, so I asked some of my friends who go to different schools including independent and state schools.

I realised from my research that there were a lot of overlapping themes in the answers to my questions.

Expectation that we should learn about our country’s history just because we live in it. The fact that the curriculum would have to change may be an excuse. People don’t see it’s priority. It may be a bit controversial.

Host extracurricular clubs which aim to educate and inform the members and the rest of the school via assemblies. Host special research competitions that could focus on a specific culture.

Maybe when teaching about British history some perspectives of other countries could be included. A few times in the term, teachers could take a break from the curriculum and dedicated a whole lesson to learning about a culture.

1. Maybe a lack of understanding from teachers, also maybe because the syllabus for A-level and GCSE’s don’t incorporate different cultures for the most part so schools who aren’t able to.
2. Designed speakers and assemblies to educate pupils and teachers and maybe also clubs or societies that focus on it.
3. Reading lists, recognition of festivals or important dates in other countries like there is for Christian and British holidays, younger years could have more opportunities in the more flexible lessons to learn about it, like in study projects some schools run.

Conformability, peoples experiences good or bad or unknown to other, could hit a nerve? Teacher’s limited knowledge, pupils willingness to learn past that they already know.

1. Clubs and societies, movies, trips, museums and talks.
2. Including people from different cultures into the lessons, movies/videos, I’m not sure.

I realised that people in different schools would have different opinions, so I asked some of my friends who go to different schools including independent and state schools.
Brainstorming ideas to improve people’s understanding of different cultures.

After my ‘Broad Context Research’ and my ‘Focused Research’, I realised the two main issues my design could help to solve were lack of time and reliable information. The theme I was going for was educating outside of lessons and providing reliable, universal information so that everyone in the country has access to the same information, thus reducing misconceptions on society with different heritages.

I was originally able to think of 3 ideas, however, two of them were very similar in that they were both websites that provided information. Since, I was finding it a bit hard to think of more ideas that were different, I decided to do some collaboration with one of my friends in my class. We swapped design briefs and brainstormed ideas for each other.

Collaboration:

These are some of the ideas my friend Stella thought of. Some were quite similar to my first 3 ideas but there were some I hadn’t thought of which I found helpful to improve the ideas I already had.

I decided to expand on the concept a little bit more before moving on to the ‘test and development’ stage. I drew a little flow chart for the concept, exploring the different ways to interact with the device, i.e., swiping, pinching, tapping. I then explored the process of the information and how the user would navigate the various pages.

I felt this would set me up well for the next stage of the project as I would be able to experiment with wireframes. It also gave me more insight into the interaction element of the display and how the information would have to flow.

This is the idea I decided to go with because I thought that it solved the two issues of time and information at the same time.

Because, it would be installed around the school, students and teachers would be able to access the information while they are waiting for lessons to start or during breaktimes.

The interactive box would be installed in all schools across the country, which means that everyone would get the same information, reducing misconceptions about cultures.

I decided to expand on the concept a little bit more before moving on to the ‘test and development’ stage. I drew a little flow chart for the concept, exploring the different ways to interact with the device, i.e., swiping, pinching, tapping. I then explored the process of the information and how the user would navigate the various pages.

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I felt this would set me up well for the next stage of the project as I would be able to experiment with wireframes. It also gave me more insight into the interaction element of the display and how the information would have to flow.
To start the Development stage, I decided to create a wireframe, outlining the process at which the user moves through the information in the device. I also felt this would present the idea clearly so I would be able to get feedback on the idea.

After I made my wireframe I decided to show it to my friends (some of the same people who completed my survey at the start of my project).

After getting feedback on my wireframe, I added a few changes to my wireframe and added some more information on the interactive elements for each section.

One of my pieces of feedback for my original wireframe was 'colour and it needs to be more visually appealing', so I decided to create a mood board for my colour scheme.

To start with my colour scheme I decided to create a mood board since my project is under the title 'Roots to Empowerment' and about the representation of all races/skin colours and cultures, and I really wanted my colour scheme to represent this. I came across this graphic, which I really loved because it did represent all ethnicities and linked in really well with my project aim.

So as an experiment I decided to look up the pantone colours for the skin tone names in the graphic (ie: Pantone Ebony) and put them side by side, just to see what they looked like and I was really starting to like what I see. But for 'olive' the colour I originally chose felt a bit bright so I changed it to a more muted colour, and now I am really happy with the colour palette I created. I think it really resonates with the purpose of my design and represents many ethnicities.

This is the final colour palette.

Next, I decided to work on the graphical elements of the user interface to indicate what the user interface would look like.

I also wanted to create a logo for the whole system, and I decided to use the colour palette I created to do this. I used the hand print image because it looks like children’s hands they have printed using paint. I think this represents education really well and that the aim of the system is to educate about different races and cultures.

I chose to design three screens: the homepage, a country fact-file and a story about a significant indigenous individual. I started brainstorming the possible designs before using Adobe Illustrator.

Homepage, Storytime and Country Fact-file Brainstorming
In order to fully assess the impact of my design, I decided to ask for some feedback from my key stakeholders. I asked the same people, I asked at the start of my “Developing” stage.

**Initial Research Questions:**

<table>
<thead>
<tr>
<th>What is the problem I am trying to Solve?</th>
<th>Original answers:</th>
<th>Evaluation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students aren’t being taught about different cultures in schools and as a result the awareness of different heritages is very low.</td>
<td>One of the main causes for this was that teachers don’t have time to cover content not included in the curriculum. The design isn’t affected by time as it isn’t dependent on the curriculum, teachers or lesson times. It can be used at any time.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Question</th>
<th>Educated students in an interactive way which can “drive engagement”</th>
</tr>
</thead>
<tbody>
<tr>
<td>How might I educate students about different cultures in schools?</td>
<td>I think the design successfully achieves the main goal of increasing cultural awareness. Since all schools would have the box, everyone would have the same information which means society has a universal understanding of different heritages. Students of all ages will have access to the information and essentially ingrains an inclusive society into them. As they are exposed from a young age they learn to become more accepting and less judgemental. The product being used in schools really helps to meet this goal.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What Impact am I trying to have?</th>
<th>I think this helped me questions whether I met my aims with my design.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build awareness about different cultures so that people are able to understand each other better</td>
<td>To help make a more informed evaluation, I chose to use my initial design questions and answers from my focused research and evaluate my design against them.</td>
</tr>
</tbody>
</table>

**Teacher Feedback**

Mr. Wharton:
- **Good things:**
  - Really important area of education, often under-served, effectively targets a ‘gap in the market’
  - Interactivity definitely adds to the interest and will drive engagement, especially with lower years
  - Great to have them in ‘strategic’ places e.g., outside classrooms before lessons etc. Could this also be in an entrance so that visitors can also interact while they wait?
- **Things to consider:**
  - How easily could you update the info? Linked to a computer program?
  - Touch screen vs Alexa-style voice search? Worth considering for covid etc.
  - Home screen could cycle through facts of the day/include bits of content that don’t need to be searched for

**Student Feedback**

- How would you fact check or update new information if it is no longer true or deemed appropriate?
- How would each school be able to afford it? → cost benefit analysis
- How much would it make sounds as well as visual outputs?
- Fix pictures with margins their shapes can be different but fix the margins

**Good things:**
- Colour scheme
- Good concept
- Useful and beneficial
- Make the screen design for Peru less clunky
- Really good idea because when bored and waiting for lessons you want to see something interesting that takes you around the world.

I decided to explain the idea to them first, before asking them questions like: Will it help to increase cultural awareness?, good things, How successful would the idea be?, Will it actually solve the problem?, improvements for the design.

**How would my proposal work in the real world?**
- The interactive boxes would be used in all schools around the country, to help combat misconceptions resulting from people having access to different information.
- Good way to use time productively when waiting for lessons to start.
- The interactive element makes it more engaging and encourages students to use it and take the initiative to educate themselves.

**What could be the challenges I might face when putting my proposal into the real world?**
- I need to ensure the information provided was reliable, I would use credible sources that have been approved and factchecked. I would also want to run the information by experts to make sure.
- How often would the information be updated, as I want to maintain interest and enthusiasm, by rotating what’s there.
- How expensive it would be to manufacture and maintain, because most schools have a small budget and it needs to be affordable to make it easy for all schools to implement them.

**In order to fully assess the impact of my design, I decided to ask for some feedback from my key stakeholders. I asked the same people, I asked at the start of my “Developing” stage.**

I think this was a very useful thing to do, because I learnt many things I didn’t necessarily think of before. It also helped me see a different perspective of my design which is going to helpful to analyse the impact of my design.

I tried to ask a variety of key stakeholders: students and teachers.

To help make a more informed evaluation, I chose to use my initial design questions and answers from my focused research and evaluate my design against them.

I think there are a few more improvements for my proposal and if I had time to do another iteration I would do some cost analysis, edit the screen designs based on my feedback, add a daily fact to the homepage and explore other forms of interaction (sound); however, at this stage I think the proposal achieves the main goal and solves the problem. The other improvements are add-ons to the main function of the product.
This is a CAD drawing of my idea. I did this to show a 3D representation of the design because I did a lot of graphic work rather than the actual product. It also gave me an opportunity to model the interactive box.

This is a wireframe to demonstrate the user interface of the display.

The box would be placed in different areas around the school where students congregate and wait for lessons to start, as these are the places where there would be the most engagement.

The students would be able to interact with the electronic display to educate themselves about different cultures independently.

I have identified different methods for the users to interact with the information and remember it, ranging from: videos, games or comics.

The student can click on the pictures, and a mini window will pop up with information relating to the picture.

I decided to design some of the screens using illustrator, incorporating some of the feedback I got from my stakeholders during the development stage.

A mini window with information about the individual. More flashcard style windows with their life story. There could be a game element at the end.
There were three main reasons we chose this brief:

- The current demand of the fashion industry, with 80,000 jobs in the UK and the industry accounting to £26 billion in the UK alone.
- Fast fashion has become more popular, with the rise in sales creating a wide range of issues needing to be solved.
- As consumers ourselves, we realised how little we really know about what we are buying and the process it had gone to get to us.
The biggest problem is the amount of clothing bought compared to the sustainability of the clothing is huge.

The process to make a garment is very extensive and involves many hours of labour and each stage of damaging it involves damaging processes.

The biggest problem in materials and clothing ideas we researched:
1. How are clothes transported?
2. The lifecycle of materials
3. Production of clothing
4. Why ethical clothing is important?
5. Where do clothes come from?
6. Ethical vs unethical clothing.
7. Sustainability

We based our research on every stage of an item being made from the material being sourced to the item being bought. So we looked into materials, branding, transportation and the life cycle of garments.

The biggest problem is the end of the life as shopping are extremely damaging, only 15% ends up being reused. However, prices are quite expensive and the brands are not advertised as frequently.

There are many companies such as H&M Conscious and Levi's focus on sustainability.

The biggest problem is that audiences and customers are drawn to non-sustainable clothing due to cheaper prices.
How important is knowing how sustainable a brand is when buying a product?

Do you know how sustainable brands are?

Do you think fashion brands prioritise brand sustainability?

---

The major issues discovered:

- Brands mentioned their efforts to make packaging and producing more sustainable products, but the brands did not mention any plans to improve the transportation process.
- After questioning pupils, it was clear that brand sustainability was not advertised enough.

We decided to base our ideas around these issues.
Some further research we did was asking 20 people about each stage of a garment's life. We found that many people knew a lot about materials and brands and the issues surrounding them. However, people did not know about the issues and the process of transportation so we decided to also incorporate this into our ideas.

Do you think fashion brands prioritise brand sustainability?

- no
- some do
- yes

Do you think brand sustainability is advertised enough?

- no
- maybe
- yes

Is brand sustainability something you would like to explore further into?

- maybe
- yes
- no

Over view

Combining our results from our brand contact and survey, we realised that the lack of awareness and advertisement and knowledge of brands sustainability is hindering so many positive impacts on our planet. We therefore decided to focus on improving this.
some of the responses we got from contacting brands...

Thanks for contacting us today, we're always happy to answer questions on green issues.

There are several issues which come under the umbrella of eco-friendly - so I've chosen a selection covering animal welfare, plastics and recycling.

At ASOS we firmly believe that animals should not suffer in the name of fashion or cosmetics. We're members of the Fur Free Alliance of Retailers and in 2012 won an RSPCA Good Business award for fashion innovation.

As for micro plastics: there is a lot of research being done in the industry on microplastics and microfibres. We are participating in the research and working with experts to understand how we can reduce the environmental impact of natural and synthetic fibres. ASOS is continuously seeking more sustainable alternatives to conventional textile fibres and supporting innovative new materials in our products. For more information on our Sustainable Sourcing Programme, visit our PLC site.

And finally on recycling:
Our boxes and bags are 100% recyclable.

Our boxes are made with 100% recycled material and bags are made with a mix of new and recycled material – we're working on increasing the amount of recycled material that makes up the bags, plus using less plastic to make each bag.

We're working on initiatives that will make it easier for people to recycle their bags – watch this space.

If you've any further queries please get back in touch - we'd be happy to help!

Hi there,

Thank you for your email.

Unfortunately, we are not at liberty to disclose our supplier contact information. Our suppliers have a privacy clause with our company, barring us from releasing contact information.

I appreciate your understanding in this matter and apologise for any inconvenience this may cause.
Dear Aynah,

Thank you for your email.

I understand your query outlined in your email and would like to help you with this.

Reducing, Reusing and Recycling all that we do to the best of our abilities is a far-reaching challenge. Our impact on the environment is an essential part of a sustainable business. As well as complying with all mandatory requirements.

As a retailer, we consume valuable resources and produce waste. It is our responsibility to ensure our consumption and disposal is proportionate and efficient— not only to reduce our environmental footprint, but to lower costs and thereby improve our ability to endure economically.

Debenhams have created five focus areas to ensure we minimise our impact on the environment, namely: energy, emissions, waste, water and sustain.

Please click the link given below for more information:

http://sustainability.debenhamsplc.com/environment/

I hope this is of some help.

Kind regards,

Rohit
Debenhams Customer Services
an app
Users will see a map with brands in different locations. Each will have a different colour rating.
Brands will be rated based on their product packaging, goals in terms of sustainable fashion, and material sources.

hangers
During garment transportation, hangers are used to move clothing. Hangers are also widely used in stores. Over 100 million are thrown away each year.

a workshop
The workshop will include fashion tips and how to use clothes to create household products.

ideas

a tag
A tag that is used in fashion chains and high street stores.
Encourage them to recycle and introduce them to more sustainable ways of garment disposal.

an Instagram account
An Instagram account that helps promote brands that make positive changes to create a better, more sustainable fashion industry.

It will give updates on latest events and petitions relating to fashion.
our first steps of testing and developing...

Employee views: Not typical to the design we would have in store and generally is impractical due to the amount of time wasted unhooking clothing.

Employees views I can see these working for us folding them. These are the typical hangers we would use in our store! They are the easiest for us to store and reuse.

Our views: We agree these are the easiest for us to consider how to fold them and would be the cheapest as they have no excess parts.

Employee views; We only really see these types of hangers when working with clothes that are two pieced. If we were to try and fold these sorts of items and store them they may not be used.

Our views: As well as this it would be more expensive due to excess material for the strip along the bottom.

Feedback from a clothes shop worker:

'We are always throwing out hangers after their first use as we just don't have the space and quality of hangers to be reusing them. However, with this I can see that we could easily store in and it would be durable. My only concerns are with the style of hangers that you will use as each type has its own benefits but also can slow the speed of the work force.'

So we decided to do was propose three ideas to the employee to see what they would feel would work best for them.
testing and developing

Our target audience is high street shops and their manufacturing process.

More about label:
- It will be made using velcro.
- Velcro means it can be removed.

A gap:
- The gap will allow the sticker to slide in and out easily.
- It can also be removed when being folded.

Ideas:
- Using a sheet of plastic.
- The plastic will make sure the sticker doesn’t become damaged.

A & A: Feedback
- What will the company do after using the hanger concept?
- As the hangers are reusable, they can be stored for later use either for transportation or in store.
- Other hangers come in different sizes e.g. adults and children.
- To begin with, we would focus on adult sized hangers but as we develop, we may branch out into smaller sizes.
- How will this be more sustainable?
- These hangers are designed to be reused with attachable sizing guides that can be interchanged. They will also be made of wood which will source from old wood items, meaning they will not be prone to breaking.
- How will you ensure the hangers work?
- They will have a lock made when strengthened allowing them to support the weight of clothing. The hinges will use enamel so it will have a more structural support system.

A prototype:
- We created a prototype to see how it works in practice. The mechanism and hinges work. We also used this as our prototype to collect feedback.

Some positive feedback we received from a consumer perspective...

The thought that hangers are just thrown away is terrible but with reusable hanger, I would feel reassured as I shop knowing that I’m not harming the environment.

“This is an issue I was not aware of and to think that your product has so many different uses is amazing. I have never seen anything like it before.”
**Final Idea**

**Chosen material why?** Wood (look at my reason and make it sound fancier lol)

- **Chosen colour why?** Natural wood colour
  → connotations of sustainable, untampered and natural

**Storage**
- During transport, hangers will be folded to enable the hanger to easily fold in transport and store
- We chose material hinges to enable a higher storage quantity

**Hinges**
- Enables a higher storage quantity
- Easily stored and reused

**Labels**
- Sizing labels will be attached using velcro
- Labels will have a velcro backing
- Labels will be attached

**Velcro**
- Use
- The hanger will function as an ordinary hanger
- However, it will not be prone to breaking or damage
- Used in garment transport + stores

**Materials**
- Wood
  - It is a cost-effective material
  - Study and long-lasting material
  - Relatively light in weight
  - Effective for transport

**Colour**
- Natural wood
  - We kept the original colour to convey qualities of sustainability, nature and simplicity

**Use**
- The hanger will function as an ordinary hanger
- However, it will not be prone to breaking or damage
- Used in garment transport + stores
**The Pitch**

**The Issue:**
The fashion industry uses many steps to make a garment and there is one object that is relied on in almost every stage: the hanger. The big issue with these hangers is that they are thrown away after their first use. In fact, over 100 million are thrown away each year. So we decided to combat this issue and find a more sustainable approach.

**Our Solution:**
We have created a multipurpose reusable hanger designed to be used in stores and for transportation. With features such as the Velcro label for the sizing guide allowing it to be applied and removed when necessary and its foldable hangers meaning it can be stored for later use, it will help decrease the high demand of single-use hangers.

**Hang-on**

100 million+ hangers are thrown away every single year.

**1. Our hang-on hangers**

- The logo represents a steering wheel of a vehicle, to represent its purpose of transporting.
- The hanger resembles a steering wheel of a vehicle that is designed to be used.

**2. Adaptation: foldable hangers**

- Natural toned wood is shown, it has not been manipulated with.

**Funding**
We would approach brands focused on sustainability such as H&M to help fund our product as well as this we could use recycled wood from disregarded items.
In 2014, 62% of adults were overweight. 20 years earlier it was 53%.

\( \frac{2}{3} \) of men were overweight.

6 out of 10 women were overweight.

9.3% of 4 and 5-year-olds were overweight in 2015/2016.

19.1% of 10 and 11-year-olds were overweight in 2017.

On the 6th April 2017, the government implemented the sugar tax. Trying to prevent the amount of sugary drinks bought.

18p or 24p per litre was added depending on the sugar content.

A 330ml can of Coca-Cola (7 teaspoons)
The recommended sugar intake is 30g for 11.

DID YOU KNOW?

- Breathlessness
- Sweating
- Snoring
- Feeling tired
- Joint back pain
- Low confidence self-esteem
- Depression

Obesity-related problems

WHAT WE AIM TO CHANGE.

DARREN MCLINTOCK

- Wine
- Takeaways were refusing to serve him.

- 40 STONE
- Personal trainer Mike Hind handed out posters not to serve him.
- Doctors say his weight problem is so extreme it will kill him.

What happens if we don't do anything?

- People will be more at risk of:
  - Type 2 diabetes
  - Heart diseases
  - Breast/ovarian cancer
  - Stroke
  - High blood pressure
  - Asthma
  - Liver/kidney diseases

CHILD OBESITY

- Child obesity can reduce life expectancy by five or more years.
- 25% of children don't participate in a free-time physical activity.
- 70% of obese children already have at least one risk factor for heart disease.
- The cost of child obesity reaches $14 billion every year.
- Almost half of all children Type 2 diabetes diagnoses are linked to obesity.
Mya's dad works in a restaurant called Asian Grill. On a weekday, Asian Grill roughly receives 50 customers. Only 5% of these customers actually order the salad and finish it.

On average, on the weekend, Asian Grill receives 200 customers. Only 20% of these customers will order the salad. And only 1/4 of these customers will actually finish the salad they ordered.

Not only does this show unhealthy food choices, it also shows that they aren't aware of how much food they are wasting.

We also asked Mya's dad what healthy options they have on the menu at Asian Grill. He said the only healthy option they have is their salad.

We deduced from this that this menu must have been constructed from observing the customer's choices in their orders. This shows consumers' appetites are for foods that aren't healthy. If we can prevent this from a young age, it could save many from the risks of being unhealthy.

Experiment:

What we want to do: see the healthy and unhealthy choices of the school students

What we came up with: we decided to observe our fellow students at break

Result:

Juice: 7 people
Chocolate brownie: 26 people
Fruit: 0 people
Water: 11 people

As you can see, 26 people bought chocolate brownies and 7 people bought fruit. They preferred the sweeter treat rather than one of their five a day.

The neglect could start from a young age so we came up with MATCH-A-SNAX
CHILD OBESITY

What is already helping this?

change4life

100 calorie snacks

YOU ARE WHAT YOU EAT

What do children like?

- fidget spinners
- rubiks cubes
- squishies

What are they going to be made of?

- Match Attax
- football cards
- money
- recycled yoghurt pots

Why do they like them?

- play with friends
- collectable
- fun characters

GET MONEY FROM THE GOVERNMENT

From sugar tax

What we have so far:

- Top Trumps cards
- Ages 5+
- Collectable
- Made of recycled yoghurt pots
- Money from sugar tax

try to get them to eat healthier

around 5+?

not as many things trying to help younger child obesity

# 3

5+
TESTING + DEVELOPMENT

# 4

**Our responses:**

"We'll make sure that we keep it up."

**Group 3**

- Effective research!
- Varied facts!
- Great idea.

"Only focussed on 'fats' and 'sugars', as unhealthy - no 'proteins' or 'healthy fat'. Why not a balanced diet? Could you have an app that could go with it? The card could have an app icon on the basis and a QR code that you scan and there's an online game to play?"

"Accurate research. Good comparison to what you want done and what is happening. Great thought gone to ideas."

"Only focussed on 'fats' and 'sugars', as unhealthy - no 'proteins' or 'healthy fat'. Why not a balanced diet? Could you have an app that could go with it? The card could have an app icon on the basis and a QR code that you scan and there's an online game to play?"

"We decided to focus on fats and sugars as these are what is causing the problem. We also thought that by using these terms we would be helping parents as they struggle to help their kids make healthy choices. We thought an app wouldn't get much attention."

"Thank you. We tried very hard."
FINAL IDEA

# 5

MATCH-A-SNAX

- Healthiness 6
- Tastyness 7
- Cuteness 5
- Rarity Uncommon

- Activity to encourage them
- Activity at the back do it in order to get a treat!
- Character appealing to children
- Abilities in order to use them as Top Trump cards
- Eco-friendly made of yoghurt pots

- There will be many different characters
- We also decided that we would place the product near the fruit and veg to try and persuade the parents to buy more fruits and veg for them and their kids.
- Healthy treat e.g. Apples | raisins | cherries.
- Payed for by the government sugar tax

Observation:
Companies like Moshi Monsters have loads of different character so therefore children are angry when they can’t collect them all.

Match-A-Snax will have a small range of characters so that it won’t be as hard and frustrating for the children.
THE PITCH

YOU ARE WHAT YOU EAT

We decided to choose this topic because it outshone the others and interested us more. In only 2014, 62% of adults were overweight, whereas 20 years earlier it was 69%. What are the government doing about this? On the 5th April 2017, the government put in place a sugar tax, which aims to cut down on the amount of fizzy drinks that people were buying. 13 or 24¢ were added to the drinks depending on the sugar content.

There are different programs that the government have implemented to try and help obesity in adults but what about children? In 2015 and 2016, 9.8% of 4 and 5-year-olds were overweight and 19.1% - 19.8% of 10 and 11-year-olds were overweight in 2017.

Mya’s dad works at an Indian restaurant called Nian Brill. As you may know, Indian cuisine is very unhealthy, so when we asked for a healthy option, the only thing was salad.

WE WHAT ARE DOING?

We have decided to make ‘Match-a-Snack’ which are Top Trump cards for children ages 5+. They are collectable and children can play with them with their friends.

HOW DOES IT WORK?

They are going to be in the fruit and veg sections so that in order to get them, they would need to walk through this aisle, which would make them buy more.

When they open the recyclable paper wrapping, it will reveal cards made out of recycled yoghurt pots. You can see a photo of them on the ‘Final idea’ board. Once eaten out, these cards can be played and turned over to receive a healthy treat! On the back, there will be an activity that the child would have to do to get one snack.

Fun fact - did you know that in a small 330ml can of Coca Cola, there is 35g of sugar, which is 7 teaspoons! The recommended sugar intake for it is 20g - just by drinking this can of pop, you have already taken up all of their daily intake and more!
Loneliness in teens is a serious issue. It makes them feel disconnected from others. You don't have to be alone to be lonely, just imagine that you're in a room full of strangers.

Loneliness: Friends:

So, to tackle the most common problem, feeling lonely when joining a new school...

We have made a friendly app for teens who are going to a new school. This app will help them make friends in a safe and secure way.
Loneliness in Teens and School

* Loneliness can be negative.
* Loneliness can be harmful.
* Loneliness can affect health.

What problem do you want to solve? We want to solve loneliness in our students.

Why do you want to solve this problem? Because we care about our students and want them to be happy.

What are you being asked to do in this project? To create a solution that will help reduce loneliness.

Important: If you have any questions, feel free to ask.
AN APP TO MAKE NEW FRIENDS!

† SOMETHING THAT IS ACCESSIBLE TO MOST TEENS, AN APP

† FOR PEOPLE MOVING TO A NEW SCHOOL OR WHO STRUGGLE TO MAKE FRIENDS IN SCHOOL

† DESIGN IDEAS

† LINKED TO SCHOOL SYSTEM FOR SAFEGUARDING

† OUR LOGO WILL BE SOMETHING THAT MAKES PEOPLE HAPPY BECAUSE THAT'S HOW THEY WILL FEEL AFTER USING THIS APP, A SMIRKY FACE

† BASED ON THIS COLOUR SCENE TO BE GENDER NEUTRAL AND THE YELLOW TO REPRESENT HAPPINESS

† SELECT SCHOOL, CLASS, INTERESTS AND HOBBIES AND RESULTS WILL COME UP OF PEOPLE THAT YOU CAN BECOME FRIENDS WITH

† VIDEO CALL, CALL AND TEXT MESSAGE PEOPLE WHO YOU WANT TO BE FRIENDS WITH

† SOME PEOPLE ARE HONEST ABOUT THEY STRUGGLE TO MAKE FRIENDS TO THIS APP HAS TO MAKE HAVING FRIENDS LIST REVERSE RACING AND AWARD

† AGE RANGE 9-18
This app will prepare you for your new school. The nervous moment when you try to make a friend will vanish.

Final idea

Friend-ly Friends

This is what the inside of our app will look like

Ages 8+

Bulgy-free

Anxiety-free

Child-friendly

Connected to the school system to bully will be out of sight
Feedback!

To make our idea secure and it's best we needed to get others opinions, so that we know how to improve.

Parents:
At the beginning we were more focused on the app itself than the safety of it.
However, one parent suggested, "what about my child's safety, how do I know that they won't get bullied?"

Building on this, we decided that our app would be linked to the School's system, so that teachers can see what's happening.

Teachers:
After sharing these ideas with some teachers, most of their answers went along the same lines as this one, by a year 7 teacher at Ipsley CE RSA Academy: "I believe this is a great platform for new pupils, transitioning into a new school, to make new friends. I also believe by going through the school network, it will be a safe way for pupils to communicate."

A new pupil, in year 7, said that they think this would be a great way to make new friends without the stress. That's why we say...
Friendly
Friends

APP icon

With this app, you will already have new friends in your new school!

#NOStress

Friendly
Friends

by- Rosie Davis, "Lena Dilla, and Chloe Baud

Make friends without the anxiety

Class 7b:

Rosie
Age 11
Interests: animals and space

Heidi
Age 12
Interests: unicorn

Ruby
Age 11
Interests: books
According to Dr. Cardiello and his theory about health and chromotherapy, the colour blue helps to suppress someone's appetite.

**Desk Research:**

**Energy**: 2000 kcal
- **Fat**: < 70g
- **Saturates**: < 20g
- **Carbohydrates**: < 260g
- **Sugar**: 90g
- **Protein**: 50g
- **Salt**: < 6g

**Obesity Percentages**

- **Overweight boys 4-5**:
  - Current: 25%
  - Overweight: 4%
- **Overweight girls 4-5**:
  - Current: 25%
  - Overweight: 4%
- **Overweight boys 10-11**:
  - Current: 25%
  - Overweight: 5%
- **Obese girls 10-11**:
  - Current: 25%
  - Obese: 5%

**The Eatwell Guide by the NHS shows that to have a healthy, balanced diet, people should try to eat:**
- 5 portions of fruit & vegetables a day.
- Base meals on starchy foods like potatoes, bread, rice or pasta.
- Have some dairy alternatives.
- Eat some beans, pulses, fish, eggs, meat and other protein.

**The NHS has also attempted to create awareness about healthy eating with 8 eat well tips:**
- Base your meals on starchy carbs.
- Eat lots of fruit and veg.
- Eat more fish including oily fish.
- Cut down on saturated fat & sugar.
- Eat less salt.
- Get active & be a healthy weight.
- Don't get thirsty.
- Don't skip breakfast.
Human Research:

HYPOTHESIS

Research shows that the public's food portion sizes are far too large which is resulting in overeating and consequently weight gain. This suggests that it is one of the main factors contributing to unhealthy choices when it comes to food. This experiment will hopefully identify whether the public is in fact affected by eating portions beyond their nutritional requirement. By asking if the subject can identify the serving size of KELLOGG'S COCO POPS, TROPICANA ORANGE JUICE SMOOTH, HARIKRO TANGFASTICS, GRAPE, CATHEDRAL CITY MATURE CHEDDAR CHEESE, FUSILLI PASTA, PRINGLES SOUR CREAM AND ONION, we can collect physical evidence that they can't visualize a single portion.

SMART SMALL and if a child wants more, then eat it.
Initial Ideas:

1. Food Abacus: Tracks intake of different food groups
2. Cereal Measure: For different sugar content
3. Traffic Light Plate: Weighs your meal
4. Glass: Marked for different drinks
5. Spaghetti Measure: Adjustable to portions
6. Scratch Poster: By a new food every week
Testing and Developing:

- Deep dome
- Shallow dome
- Handle connector
- Handle (x2)
- Connector far back
- Small capacity sugary cereal
- Connector far forward
- Large capacity non-sugary cereal
Final Idea:

- One handle for shallow dome
- One handle for deep dome

Tab:
- When tab is used by connector, the shallow dome rises up.
- When connector is far back, there's a smaller capacity for sugary cereal.
- When connector is far forward, there's a larger capacity for non-sugary cereal.

Shallow Dome:
- For smaller capacity.

Deep Dome:
- For larger capacity.
The Pitch:

CORNFLAKE BLUE PRESENTS:

not enough time in the morning to measure a serving use?
don't know how to keep breakfast balanced?
children getting hyper off sugary cereal?
If you have any questions, you can get in touch in the following ways:

1. With the RSA Pupil Design Awards team: pupildesignawards@rsa.org.uk

2. Once you have been assigned a mentor and they are preparing to visit the school, feel free to contact them with any specific issues regarding the design process that you would like them to address.

We look forward to seeing your pupils’ entries!

The RSA Pupil Design Awards Team

“I feel that the skills I have learnt and the problems that we overcame have really benefited me in becoming more confident within myself”

Finalist, Pupil Design Awards
The Pupil Design Awards is a competition run by the RSA, a registered charity in England, Wales (212424) and Scotland (SC037784) © 2021

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