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

Teacher, Pupil Design Awards
Contents

i. Introduction 4

Part 1: Teacher overview 5
   1. Timeline 6
   2. Design thinking 7
   3. Judging criteria 8
   4. How to submit pupils' work 9
   5. Judging process 10
   6. Scheme of work 11
   7. Teacher insights 13

Part 2: Lesson plans 16
   1. Week 1 16
   2. Week 2 18
   3. Week 3 20
   4. Week 4 22
   5. Week 5 23
   6. Week 6 24
   7. Week 7 25

Part 3: Lesson resources 26
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.

- 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 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.

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.
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!
## Scheme of work

### Week 1

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

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

### 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>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pupils should understand how to select research relevant to their context.</td>
<td>Pupil Response Sheet</td>
</tr>
<tr>
<td>2 Pupils should be able to identify areas where further investigation is needed before developing design ideas.</td>
<td>Fixperts 'Customisation' activity</td>
</tr>
<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>
<td></td>
</tr>
</tbody>
</table>

### Week 3

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

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<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>
<td>Researching with people worksheets</td>
</tr>
<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>
<td>Fixperts 'Levels of Listening' activity, Tell Stories activity</td>
</tr>
</tbody>
</table>

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

**Objective**
To (i) identify initial ideas for the project based on research findings and (ii) describe or visualise ideas.

**Outcome**
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.

4. Pupils should be able use a variety of methods to help generate a wide range of ideas.

5. Pupils should be able to communicate their ideas to someone else in different ways.

**Resources**
- Fixperts ‘Idea Generation’ activity
- Examples of mind maps and product design sketches

### Week 5

**Objective**
To (i) test ideas against target audience feedback, (ii) develop initial ideas towards a single, final idea.

**Outcome**
6. Pupils should demonstrate a critical approach to testing and evaluating their ideas.

7. Pupils should use the feedback of others in addition to their own opinions to test and evaluate their ideas.

8. Pupils should apply the result of their testing and evaluation to identify clear ways to develop their ideas further.

**Resources**
- Fixperts ‘Designing the Detail’ activity
- Fixperts ‘Sticky Storyboard’ activity
- Fixperts ‘Brief Specific’ activities

### Week 6

**Objective**
To build, refine and complete final idea.

**Outcome**
9. Pupils should take action based on feedback from their target audience and peers.

10. Pupils’ proposals should clearly reflect the needs of their target audience.

**Resources**
- Examples of previous submissions

### Week 7

**Objective**
Create final portfolio by completing submission boards.
Refining presentation until students are confident in their submission.

**Outcome**
11. Pupils should be able to use advice and success criteria to make decisions about the communication of their project.

12. Pupils should be able to communicate effectively by telling a story visually through their boards.

**Resources**
- Judging Criteria

Tip: Support your pupils to make their boards visual. Judges won’t have time to read through a lot of text, so they need to consider the communication design of their proposal.
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, them and what might be helpful for you.

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.
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.

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.

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.
Lesson Plan: 
**Week 1**

**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.

---

### 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>1 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>2 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>3 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>

---

**RSA Pupil Design Awards Teacher resourcepack 2021-22**

16
**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.

**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.*
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.

---

**Secondary Research: Finding Information and an Audience**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>To research information for the chosen brief.</td>
<td>1 Pupils should understand how to select research relevant to their context.</td>
<td>— A computer room or access to computer for each group.</td>
</tr>
<tr>
<td>To identify a target audience.</td>
<td>2 Pupils should be able to identify areas where further investigation is needed before developing design ideas.</td>
<td>— Pupil Response Sheets</td>
</tr>
<tr>
<td>To delegate research responsibilities.</td>
<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>
<td>— Fixperts ‘Customisation’ activity</td>
</tr>
</tbody>
</table>
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.
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.

### Planning Primary Research

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<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></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>
</tr>
<tr>
<td></td>
<td></td>
<td>— Tell Stories Template</td>
</tr>
</tbody>
</table>

Lesson Plan:  
Week 3
**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

<table>
<thead>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and form initial ideas for the project based on research findings. Describe or visualise ideas.</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 — Examples of mind maps and product design sketches</td>
</tr>
<tr>
<td></td>
<td>2 Pupils should be able use a variety of methods to help them generate a wide range of ideas.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 Pupils should be able to communicate their ideas to someone else in different ways.</td>
<td></td>
</tr>
</tbody>
</table>

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>
<tr>
<th>Objective</th>
<th>Outcome</th>
<th>Resources</th>
</tr>
</thead>
<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>
</tr>
<tr>
<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>
</tr>
<tr>
<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>
</tr>
</tbody>
</table>

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.

**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**

<table>
<thead>
<tr>
<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>
<tbody>
<tr>
<td>Create final portfolio by completing submission boards. Refining presentation until pupils are confident in their submission.</td>
<td>1 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>2 Pupils should be able to communicate effectively by telling a story visually through their submission boards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Idea 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?

Idea 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.

Idea for Plenary Activities

Presentation to peers of final submission sheets. Use this experience to practise for the presentation to judges if selected.
Brief hunting activity

This short activity asks students to use their critical skills to evaluate potential design briefs and responses by identifying opportunities for design through observation and personal experience.

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.

Duration, Location and Materials

30 minutes

Any classroom – no specialist equipment needed

Plain paper, pens and pencils, category labels
Introduction:
As a class, discuss the idea that designing is a form of problem solving, and useful products are designed as a response to problems people have. Designers are often presented with a problem from their client, and must use this to develop their design brief.

Activity 1:
Using the ‘What’s your problem?’ template, students should list all the problems, annoyances and irritations they have experienced during the day so far. e.g. tangled headphones, soggy cereal, crowded public transport.

Activity 2:
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:
Students should present their solutions to the class, so that everyone can see the variety of approaches people use to solve problems.

Plenary:
Using the category labels, ask 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 designing. Can students identify any life hacks that have become commercially manufactured products?
What's your problem?
Lifestyle changes
Products
- could make in school

Brief hunting activity
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
Duration, Location and Materials

Minimum 1.5 hours [ideal to split over two 1-hour lessons]

Workshop with access to tools [ideally power tools, but hand tools are sufficient]

Introduction to fixing presentation and Customisation presentation

Customisation activity

This workshop explores the concept of human-centred design by thinking about the needs of a specific user, and applying that in a real-world context by customising an existing product to meet those needs.

Learning objectives

Exploring contexts
Highlight the importance of designing for different users.

Real-world design
Customise an existing product to meet the needs of a specific user.

Hacking culture
Students will explore the concept of hacking, learning to evaluate the properties of different components.

Practical skills
Work together to create fast prototypes of design ideas.

Communication skills
Articulate thought processes clearly and reflect on design decisions through short presentations.
**Introduction:**
Watch the Introduction to fixing presentation together. With each slide, direct questions to the class – What’s the image? What’s the fix? Show a Fix Film which demonstrates the concept of Fixperts.

**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 the user’s behaviour.

**Activity 1:**
**Product analysis**
Divide the class into teams of 3-4 students. Each team is given a simple wooden broom. The basic design of the broom hasn’t changed in years. 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**
Offer each team a user profile from the presentation. They should 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 of how they would like to execute it.

At this stage encourage students 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
Prototyping
Encourage students to prototype their idea first, test it and decide any changes before adapting their broom. Emphasise to students 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.

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

Activity 4:
Summing up
Presentation
Students 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 students 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.

Activity 5:
Presentation
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.

*Time as available or as required according to number of students
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.

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.

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.

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.

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)

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
- Acrylic paint & brushes
- Access to workshop hand tools and machines

Materials for sketching

- Paper (A4 / A3, sugar paper for team idea development)
- Pencils
- Markers
# Customisation: project summary

Use this worksheet to record your design process.

<table>
<thead>
<tr>
<th>Our team:</th>
</tr>
</thead>
</table>
| **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 |
Levels of listening activity

This activity explores the complexity of carrying out good interviews. Developing this skill allows students to go on to identify opportunities for design through conversation and observation later in their Fixperts project.

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.

Empathy
Learn how to gain the most useful information out of a conversation with a user / client / Fix Partner, developing their understanding, insight and empathy.

Duration, Location and Materials

30 minutes

Any classroom – no specialist equipment needed

Levels of listening presentation, awkward scripts handout, paper and pens for note-taking
Introduction:
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:
Put students into groups of 4. Each one has a different role:
1. Interviewee
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:
After the interviews, ask the interviewees to feedback to their groups about how they felt and whether the questions were good. Ask the observers what was said (content), what type of language was used, what body language they noted. Did the language used and body language ‘match’ with the content? What did they learn about their interviewee’s experience?

Activity 3:
Ask the class: were the questions helpful, or did they confuse the conversation? 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. How would you adapt the scripts or interview technique to improve the experience for the interviewee? Record the class discussion in a spider diagram on the board.

Plenary:
Introduce the concept of an interview being research ‘data’. What is the impact of inaccurate research data when it comes to developing design ideas? How can they ensure they get the most accurate data when carrying out interviews in future?

Stretch and challenge:
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.
# Awkward scripts handout

<table>
<thead>
<tr>
<th>Clothing questions:</th>
<th>Correcting mistakes questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Explain your level of interest in fashion and clothing.</td>
<td>- Do you get frustrated when other people make mistakes?</td>
</tr>
<tr>
<td>- Have you ever had a clothing malfunction</td>
<td>- What kind of mistakes annoy you?</td>
</tr>
<tr>
<td>(trousers ripped, skirt tucked in, broken heel, chewing gum on clothes, etc.)?</td>
<td>- Have you ever tried to correct someone’s mistake and been wrong?</td>
</tr>
<tr>
<td>- Where were you?</td>
<td>- If so, how did they respond?</td>
</tr>
<tr>
<td>- Who was around you?</td>
<td>- How did you deal with the situation?</td>
</tr>
<tr>
<td>- How did you deal with it?</td>
<td>- How did this make you feel?</td>
</tr>
<tr>
<td>- How did you feel?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Losing questions:</th>
<th>Forgetting questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Give an example of a time you have lost (a game, a competition, a debate, etc.)</td>
<td>- Explain the last time you forgot something really important.</td>
</tr>
<tr>
<td>- What was the cause of losing?</td>
<td>- What was the impact on other people?</td>
</tr>
<tr>
<td>- Was it more about skill or luck?</td>
<td>- What was the impact on you?</td>
</tr>
<tr>
<td>- Did you let anyone down?</td>
<td>- How did you deal with it?</td>
</tr>
<tr>
<td>- How did it make you feel?</td>
<td>- How did you feel?</td>
</tr>
<tr>
<td>- What would you have done differently to win?</td>
<td>- Has it changed what you do to help remember things now?</td>
</tr>
</tbody>
</table>

©Fixperts Ltd 2018 licensed under Creative Commons Attribution NonCommercial 4.0 International License.
# Ideas generation workshop

This workshop explores a range of ideation techniques to suit different learning styles, allowing students to develop and loosen their creative thinking skills. It encourages a constructive relationship with feedback and criticism.

## Duration, Location and Materials

- **Minimum 1 hour for full workshop including 3 of the 5 possible activities. Individual activities can be run in isolation**
- **Any classroom – no specialist equipment needed**
- **A4 paper, A3 paper, pens and pencils, modelling materials, selection of images for activities 2 and 4, SCAMPER presentation**

## Learning objectives

### Ideas generation

Experience a range of ideas generation techniques including brainstorming, collaboration and analogy.

### Agency

Develop the confidence to generate design ideas by exploring different techniques to suit diverse learning styles.
**Introduction:**

Ideas don’t just appear. Coming up with ideas can be challenging and sometimes frustrating too. Discuss with students 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**

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, and in half again, and one more time to get 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 students to draw the same idea with one variation.
- Share a few ideas from each table.

**Activity 2:**

**4x4**

This activity explores developing ideas collaboratively. Hand out images of products paired with images of restricted movement. For example: products: a pen, a paper clip, toothpaste tube. Restrictions: broken arm, arthritic fingers, people with limb loss.

**Method:**

- Working in groups of 4, each student gets their own blank sheet of A3 paper and folds into 4 quarters.
- Set timer to 2 minutes. For each pairing, each student should draw a quick design improvement in the first quarter of the page. 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 the next person in the group, and the timer is set again. They may alter one thing in the product, e.g. ergonomics, how it solves the problem. This aims to bring the group together, to let people feel free with ideas and to show how far an idea can progress.
- Repeat to fill all 4 quarters of the page, then return sheet of paper to first team member for discussion. Compare the 4 solutions and question which is more appropriate – encourage analysis and criticism of each idea. Ask how it feels to relinquish ownership of an idea so that it can be developed further. What’s the benefit of working in a team to develop ideas? What mindset do you need to make the most of this teamwork?
Activity 3:
Everyday scenarios
This activity helps with finding a starting point. It looks at breaking down daily activities to find opportunities for improvement, e.g. 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 map it out through words and sketches, perhaps a comic strip or diagram.
- Working in pairs, take 5 minutes to consider the scenario using only one hand. What would the problems be? Try to think about each stage in the process of carrying out the scenario.
- Pairs suggest an idea to fix one of the problems they’ve highlighted and present back to the class.

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.

Activity 5:
SCAMPER
This activity aims to broaden students’ creative approaches to designing. Introduce the SCAMPER exercise using the powerpoint presentation. Taking the favourite idea generated during any of the other activities completed so far, see what happens when SCAMPER is used.

Plenary:
In pairs, discuss if there was a favourite method of generating ideas experienced during the lesson. Ask students 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.
WEEK 5
Designing the detail activity

This activity takes a deep dive into the iterative design process, teaching an approach to development that can be applied to any design project. During this activity, students investigate the potential of inclusive design thinking.

Learning objectives

**Human-centred design**
This activity explores 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.

Duration, Location and Materials

1 hour

Classroom suitable for messy activities

Paper cups, scissors, glue, pens and pencils, masking tape, card, modelling clay
Introduction:
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. They should then swap roles.

Activity 1:
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:
Students should now take another 5 minutes to improve their cup design based on the results of their evaluation.

After 5 minutes, discuss with the class the emotions related to the usual aesthetics of inclusively designed products. Students may identify that they 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:
Students now have a final opportunity to improve and refine their cup design. As they are using modelling materials, they may wish to sketch their aesthetic developments to communicate their ideas clearly.

Plenary:
Ask each pair to demonstrate using their cup. 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.

Stretch and challenge:
Discuss with students the difference between ‘inclusive’ and ‘exclusive’ design. Inclusive design accommodates many 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.
Sticker storyboard

This short activity teaches students to develop a reflective mindset, focusing on editing and refinement.

Learning objectives

**Reflection**
Students will learn to identify their 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.

Duration, Location and Materials

- 30 minutes
- Any classroom – no specialist equipment needed
- Rolls of stickers, pens and pencils
**Time**

**Introduction:**
Storyboards are used to plan films, organising what scenes to include, the order and the type of shot. As a class, discuss how the process of a design project can be told as a story.

**Activity 1:**
Give students a story to tell in a visual format. For older students, ask them to explain a social or cultural topic in a documentary style. For younger students, familiar stories such as fairy tales could be used.

This activity can be done in groups or individually. Students should use a roll of stickers to create their story. Draw each part of the story on a new sticker on the roll, so that the story can be read by unraveling the roll one sticker at a time.

**Activity 2:**
Edit the story by removing stickers which don’t contribute to the core understanding.

**Plenary:**
Present ideas in groups of 4. Within each group, vote for the biggest risk taker.

---

**Stretch and challenge:**
Explain the advent of ‘open source’ approaches to software as well as other examples of open source design such 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?

Open source 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 (i.e. software) 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.
WEEK 6
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.
7. Games that relate to learning about different countries.

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

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.

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.

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.

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.

In Broad Context Research:

Does travel increase cultural understanding? Does it?

Cultural competency: Travelling outside your cultural zone and geographical location enhances your knowledge about distinct cultures. This is important when relating to others socially, especially in a place like “melting pot” America.

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

Do you think there are any specific barriers preventing schools teaching about different cultures outside of lessons? No, the biggest barrier is probably time. I am not sure that subject specific reasons really count.

Do you have any ideas on how to teach outside of lessons without changing the curriculum? Not entirely sure what this question means but having clubs/lesson that occur around interest in activities beyond the timetabled lessons. Apps and short courses through apps would be great as well.

Do you think it is easier to teach outside of lessons, or provide a tool that students can use during a specific lesson? I think this very subject specific, but I think both can be easily applicable

Do you think there are any specific barriers preventing schools teaching about different cultures outside of lessons? The only barriers I can think of is time and pupils’ priorities. It can be difficult to get pupils to engage in learning that is seen as ‘optional’ or ‘not on the exam’ so, if there is something you feel is really valuable for pupils to learn / know / understand, you need to put it within the formal curriculum.

Do you have any ideas on how to teach outside of lessons without changing the curriculum? Regular exposure, through celebrations, information displays and events will reach lots of pupils, but certainly not all. It’s impressive how young people are able to block such things out if it doesn’t interest them! But for many, putting displays or events in front of them so that they are unlikely to miss them can be a really effective way to put things across.

Do you think it is easier to teach outside of lessons, or provide a tool that students can use during a specific lesson? As I said above, if you need to know that everyone has engaged, you need to do it within a lesson or within a structured activity that is mandatory (e.g. a trip or an off-timetable day).

Please feel free to leave any extra comments on the issue. Everyone loves a celebration, so finding reasons to celebrate other cultures or events within them can be a great way to grab young people’s attention and get some learning across in the process.

“Expectation that we should learn about our country 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.”

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.

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 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

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.

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 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.

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.

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

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.”
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 first started off the design process by brainstorming and sketching a couple of ideas. 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.

A Search Engine that provides diverse information rather than the most popular search results.

An Educational website for schools.

Informative display box.

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, ie: 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.

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.

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.
Developing my Design Idea

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.

“Colour, add arrows on the home screen to show where to swipe/contents page, search bar”

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.

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.
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.

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

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

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
• Would it make sounds as well as visual outputs?
• Fix pictures with margins their shapes can be different but fix the margins

Good things:
- Colours 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.

Initial Research Questions:

<table>
<thead>
<tr>
<th>Question</th>
<th>Original answers</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the problem I am trying to solve?</td>
<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 depended on the curriculum, teachers or lesson times. It can be used at any time.</td>
</tr>
<tr>
<td>Design question</td>
<td>How might I educate students about different cultures in schools?</td>
<td>Educated students in an interactive way which can “drive engagement”</td>
</tr>
<tr>
<td>What impact am I trying to have?</td>
<td>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</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>

| 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 fact checked. 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. | 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. |

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 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 think this helped me questions whether I met my aims with my design.

I think this helped me questions whether I met my aims with my design.
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.

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

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.

Has a contents page so the user knows the featured content, or they can search something with the search bar. There is also the date and time as an additional feature.

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 use of the clothing, which is huge.

The process removed garments involve many thousands of litres of water and each stage of damaging involves more waste and reduces the life of the clothing.

The biggest problem is that materials and clothing ideas we researched:

- Some are clothes transport
- The lifecycle of materials
- Production of clothing
- Why ethical clothing is important?
- Where do clothes come from?
- Ethical vs unethical clothing
- Sustainability

The biggest problem is the CO2 emissions with the fashion industry releasing 1.2 billion tonnes per year.

The biggest problem is that audiences and customers are drawn to non-sustainable clothing due to cheaper prices.

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.
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?

**Research**

We conducted a survey questioning people about their knowledge and interests surrounding the topic of brand sustainability. We received 80 responses, highlighting the problems found with the way brands promoted sustainability, the prioritisation of branding and the lack of understanding.

**Contacting brands...**

From our survey it was clear that a problem with the knowledge of sustainability was with 48% wanting to learn more.

- We emailed 8 major high street brands, including M&S, new look, urban outfitters, asos and many more.

- We asked the question what do you do as a company to become or be sustainable.

**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.
Do you think fashion brands prioritise brand sustainability?

- yes
- some do
- no

Do you think brand sustainability is advertised enough?

- yes
- maybe
- no

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

- yes
- maybe
- no

OVERVIEW

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

we recieved a wide range of answers, all which showed they contribute positively to the world around us but many of the goals, problems and solutions mentioned were unknown to the general public. We realised that this gap i knowledge was a major problem to the consumers and that we needed to focus on getting this view point out.

companies like asos have fully recyclable boxes and plastic bags but due to the lack of communication and knowledge many people don't know this.

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.
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, banning us from releasing contact information.

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

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.

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!
Thank you for your interest in our brand H&M.

"The H&M Group's sustainability work is integrated into our culture and values. We believe a long-term approach is a must when it comes to dealing with complex sustainability issues, and we work to ensure that sustainability is integrated into all aspects of everything we do."

Please click here to find out more what we already did to be friendly to our environment and also what we planned for the future.

I hope this information was helpful.

Should you have any questions, please don't hesitate to ask.

Dear Aynia,

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

The app rates high street and local brands on sustainability.

Hangers

During garment transportation, hangers are used to move clothing.

Tickets can be attached onto hangers using velcro, improving its sustainable usage.

A workshop

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

Idea

- Branded will be rated based on their product packaging, sustainability in terms of sustainable fashion and material sources.

- Helps people find a use for old clothing which would otherwise contribute to waste in landfills.

- Helps spread awareness to stop the practice of fast fashion and prove that old clothes can be refurbished and reused.

A tag

- A tag that is used in fashion chains and high street stores.

An Instagram account

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

Encourages them to recycle and introduce them to more sustainable ways of garment disposal.

Information on where to recycle and donate clothes - this is personalized to the area of the store.

- Shows animal welfare policy, etc. recyclable bags, etc.

Makes people interact with brands and give a bag.

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.

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.

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.

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.

The prototype - we created a prototype to see how in practice the mechanism and hanger work. We also used this as our prototype to test the feedback.

A & A Feedback

- What will the company do after using the hanger concept?
- As the hangers are foldable, they can be stored for later use either for transportation or in store.
- Some hangers come in different sizes for 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 used with attachable sizing guides that can be interchanged. They will also be made of wood which we will source from local wood items meaning they will not be transported. How will you ensure the hangers work?
- They will have a lock mechanism when straightened allowing them into supporting the hanger. These hangers will use small sets, so it will have a more structure to support the system.

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

- The thought that hangers are just thrown away is embarrassing. 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**

---

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

---

**Materials**
- **WOOD**
  - It is a cost-effective material.
  - Sturdy and long-lasting material.
  - Relatively light in weight.
  - Effective for transport.

---

**Labels**
- **VELCRO**
  - Sizing labels will be attached using velcro.
  - Easily removable and reusable.
  - Labels will have a velcro backing.

---

**Colour**
- **NATURAL WOOD**
  - We kept the original colour to convey qualities of sustainability, nature, and simplicity.

---

**Storage**
- During transport, hangers will be folded.
- Enables a higher storage quantity.
- Easily stored and reused in stores and transport.

---

**Hinges**
- We chose metal hinges to enable the hanger to easily fold inwards.
- Convenient to transport and store.
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 guides allowing it to be applied and removed when necessary and its foldable hinges meaning it can be stored for later use, it will help decrease the high demand of single use hangers.

100 million+ hangers are thrown away every single year

Funding: We would approach brands focused on sustainability such as H&M conscious 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.

\[ \frac{2}{10} \] of women were overweight.

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

9.1% 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.

In 2015/2016, 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 related to obesity.
REAL HUMAN RESEARCH

Mya Begum - Miah
+ Wsieni Nangah

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 those 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 that they are wasting.

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

We deduced from this that this menu must have been constructed from observing the customers’ choices in their orders. This shows customers’ 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 wanted 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 zero 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.
INITIAL IDEAS

# 3

- Try to get them to eat healthier.
- Around 5+?
- Not as many things trying to help younger child obesity.
- What age?

YOU ARE WHAT YOU EAT

What is already helping this?

- Change 4 life
- 100 calorie snacks

What we have so far:
- Top Trumps cards
- Ages 5+
- Collectable
- Made of recycled yoghurt pots
- Money from sugar tax

What do children like?

- Playing cards
- Top Trumps
- Fidget spinners
- Rubik's cubes
- Squishies

TOP TRUMPS

- Match, AttaX
- Football cards
- Why do they like them?
- Play with friends
- Collectable
- Fun characters

What are they going to be made of?
- Recycled yoghurt pots?
- Money?
- Get money from the government (sugar tax)
Testing + Development

Matching u = Snax!
We pitched our idea to some of our students and this is what they said:

Our responses:
We’ll make sure that we keep it up.

"Effective research"
"Varied facts"
"Great idea"

Only focussed on ‘Fats’ and ‘Sugars’ as unhealthy - no ‘proteins’ or ‘healthy fats’. Why not a balanced diet? Could you have an app that could go with it? The card could have an app icon on the basics 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."

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

We decided to focus on fats and sugars as these are what is causing the problem. We also thought that by using these deals 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. 😊

WWW.
- Specific target audience
- Consider where the profits would go.

Our feedback told us where we were very successful and where we needed to improve.
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

- 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 their kids.
- Healthy treat e.g. apples raisins cherries.
- Paid 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

MYA BEGUM - MIAN
NISHI GAMAGE

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 53%. 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 the amount of fizzy drinks the people were buying. 18g or 24g 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, 9.3% 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 Mian Brill. As you may know, Indian cuisine is very unhealthy, so when we asked for a healthy option, the only thing was salad.

WHAT ARE WE DOING?

We have decided to make ‘Match-a-Snax’ 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 section so that in order to get them, they would need to walk through this aisle, which would make the buyer 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 taken 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 the 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

Loneliness is a serious issue in teens, 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.

So, to tackle the most common problem, seeing lonley when joining a new school...

We have made Friendly Friends 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 as harmful to your health as smoking 15 cigarettes a day!

Moving to a new school makes teens lonely.

You may feel lonely in a room full of people because you don’t know anyone there.

Loneliness can be where people feel disconnected.

Children aged 10-15 feel more lonely than boys and girls aged 5-15.

Possible to not feel lonely when alone because you are happy with your life.

Loneliness and social isolation are most common in ages 14-22.

Everyone can feel lonely.

What are you being asked to do in this project and why is it important?

We are being asked to make a product that will help reduce or get rid of loneliness. This is important because kids our age are feeling horrible each day because they don’t have anyone to talk to. We’ve all experienced loneliness, we know how it is.

What problem do you want to solve and why?

We want to solve loneliness in new students. We want to do this.

Which age group are you targeting and why?

We are targeting ages 9-18 because we are in that category ourselves and can relate to some situations.
**Design Ideas**

- **An app to make new friends!**
- **Something that is accessible to most teens, an app**
- **To prevent the loneliness that comes with joining new schools**
- **For people moving to a new school or who struggle to make friends in school**
- **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**
- **Based on this colour scene to be gender neutral and the yellow to represent happiness**
- **Our logo will be something that makes people happy because that's how they will feel after using this app, a simmy face**

**Age Range 9-18**
This app will prepare you for your new school. The nervous money when you try to make a friend will vanish.

Find people in your school that you might want to be friends with.

Our app's mascot.

Final idea

Friend-ly Friends

No awkward. A real aid.

This is what the inside of our app will look like.

FRIENDLY FRIENDS

Ages 8+

Easier to make new friends.

Bully-free

Anxiety-free

Child-friendly

Connected to the school system so bullies 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 CofRSA 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.

#NoStress.
Friendly Friends

By: Rosie Davis, Louis Dille, and Chloe Savad Hodgson

Make friends without the anxiety!

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

#NoStress

Class 7b:

- Rosie: age 11, interested in animals and space
- Heidi: age 12, into interests, animals
- Ruby: age 11

APP Icons:

- 🌟
- ☠️
- 🌋
According to Jay Cardiello and his theory about health and chromotherapy, the colour blue helps to suppress someone's appetite.

**Desk Research:**

<table>
<thead>
<tr>
<th>ENERGY</th>
<th>FAT</th>
<th>SATURATES</th>
<th>CARBOHYDRATES</th>
<th>FIBRES</th>
<th>PROTEIN</th>
<th>SALT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000 kcal</td>
<td>&lt; 70g</td>
<td>&lt; 20g</td>
<td>&gt; 260g</td>
<td>90g</td>
<td>50g</td>
<td>&lt; 6g</td>
</tr>
</tbody>
</table>

**Obesity Percentages**

- **Normal males**
- **Overweight males**
- **Obese males**
- **Obese females**
- **Overweight females**
- **Obese females**
- **Obesity rate 25 years ago**
- **Current obesity rate**

- **Overweight boys 4-5**
- **Obese boys 4-5**
- **Overweight girls 4-5**
- **Obese girls 4-5**
- **Overweight boys 10-11**
- **Obese boys 10-11**
- **Overweight girls 10-11**
- **Obese girls 10-11**

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, Haribo Tangfastics, Grapes, Cathedral City Mature Cheddar Cheese, Fusilli Pasta, Pringles Sour Cream and Onion, we can collect physical evidence that they can't visualise a single portion.
Initial Ideas:

- Spaghetti Measure: adjustable to portions
- Traffic Light Plate: weighs your meal
- Food Abacus: track intake of different food groups
- Scratch Poster: try a new food every week
- Drinks Glass: marked for different drinks
- Cereal Measure: for different sugar content
Testing and Developing:

- Deep dome
- Shallow dome
- Handle connector
- Connector far back
- Small capacity sugary cereal
- Large capacity non-sugary cereal
- Handle x 2
Final Idea:

- **Shallow Dome**: for smaller capacity.
- **Deep Dome**: for larger capacity.
- **Tab**: when tab is lifted by connector, the shallow dome raises up.
- **Handles**: one for shallow dome.
- **Handle Connector**: 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.
The Pitch:

CORNFLAKE BLUE PRESENTS:

not enough time in the morning to measure a serving size?
don't know how to keep breakfast balanced?
children getting hyper off sugary cereal?

Less Sugar
Be Full
Save Time
Teach Kids
Reduce Waste
Have Confidence
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**