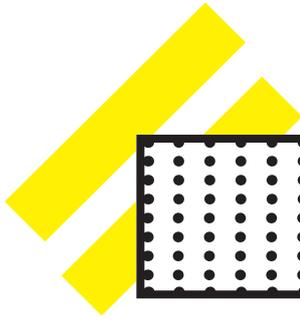




**PUPIL
DESIGN
AWARDS**

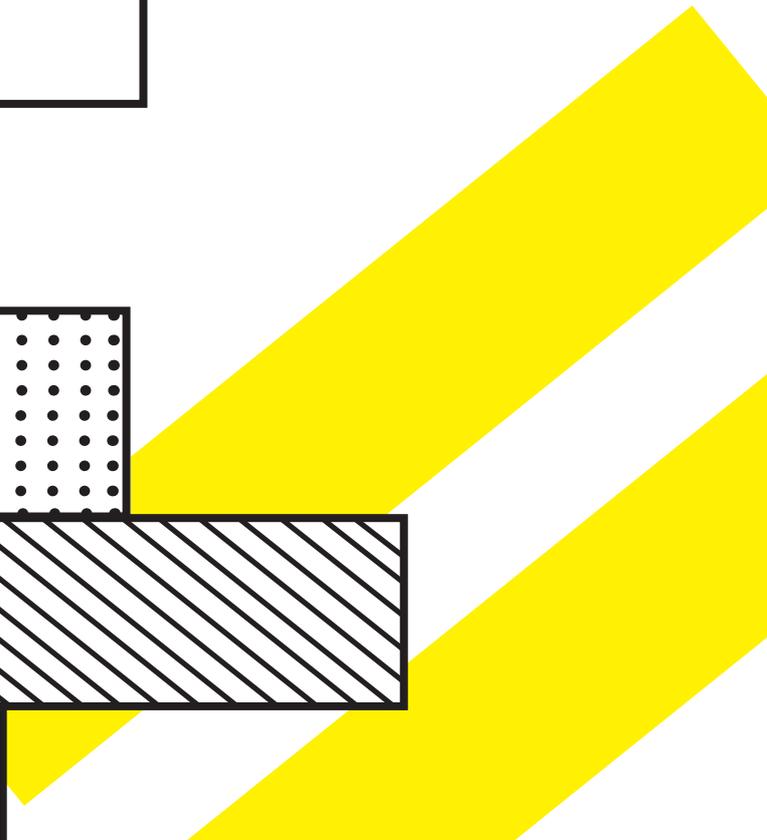
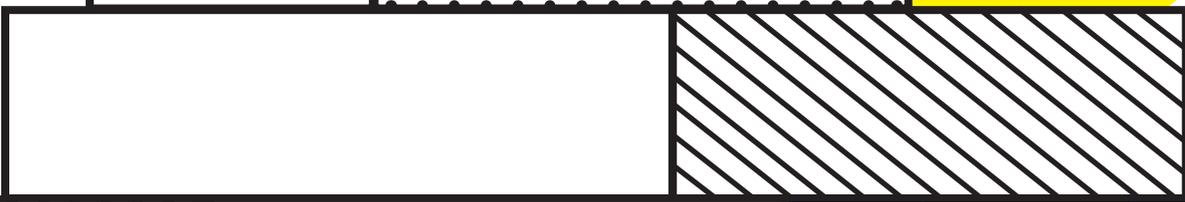
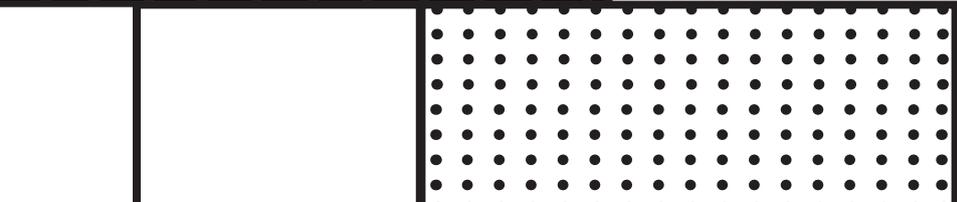
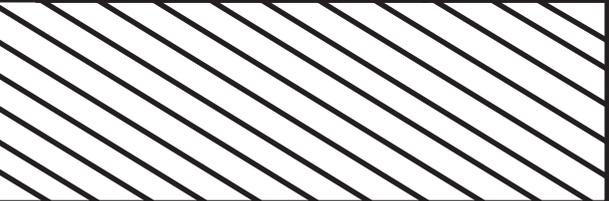
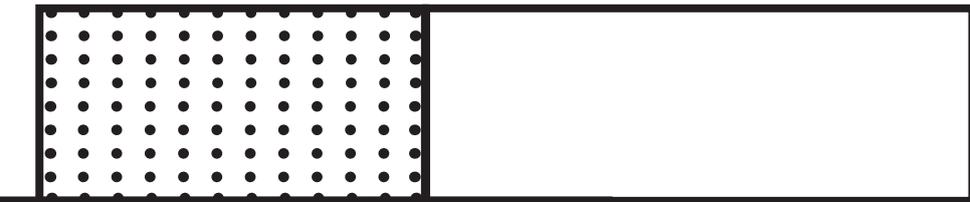


COMPETITION

PACK



2019/20



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

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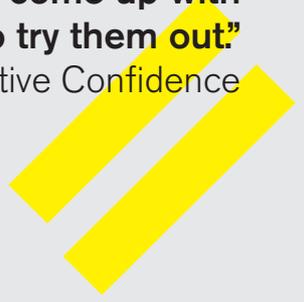
With thanks to our Partners:

 four acre trust



“That combination of thought and action defines creative confidence: the ability to come up with new ideas and the courage to try them out.”

Tom Kelley, Creative Confidence



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Introduction

The RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce) believes in a world where everyone is able to participate in creating a better future. Through our ideas, research and a 30,000 strong Fellowship we are a global community of proactive problem solvers. Uniting people and ideas to resolve the challenges of our time.

Through the RSA Pupil Design Awards, we invite you to join our community of changemakers. We are calling on you to demonstrate how design has the potential to unravel complex problems, explore new possibilities and unlock new ways to meet the needs of people and our planet.

Our 2019/20 briefs pose tough challenges and they open up a range of possibilities to present creative designs. How might we tackle climate change in our local communities? How might we reinvent the way we produce clothing to eliminate waste? How might we use technology to develop positive connections between people?

We know that amongst you there is an abundance of talent, appetite and determination to address the challenges of today and paint tomorrow with hope. Now in its seventh year, the Pupil Design Awards has been a catalyst for great ideas, innovative products, and pioneering designs. We can't wait to see what's in store this year!

The 2019/20 RSA Pupil Design Awards are brought to you by The Comino Foundation, Four Acre Trust and the RSA.

With additional support from Fixperts.

The RSA Pupil Design Awards

The RSA Pupil Design Awards is a free, national design competition for secondary school and sixth-form pupils aged 11-17.

Pupils are encouraged to use their creativity and imagination to tackle real challenges facing people and the planet.

Schools are provided with lesson plans, training, and mentors to support participation. Teams or individuals submit design proposals and material explaining how they approached their problem.

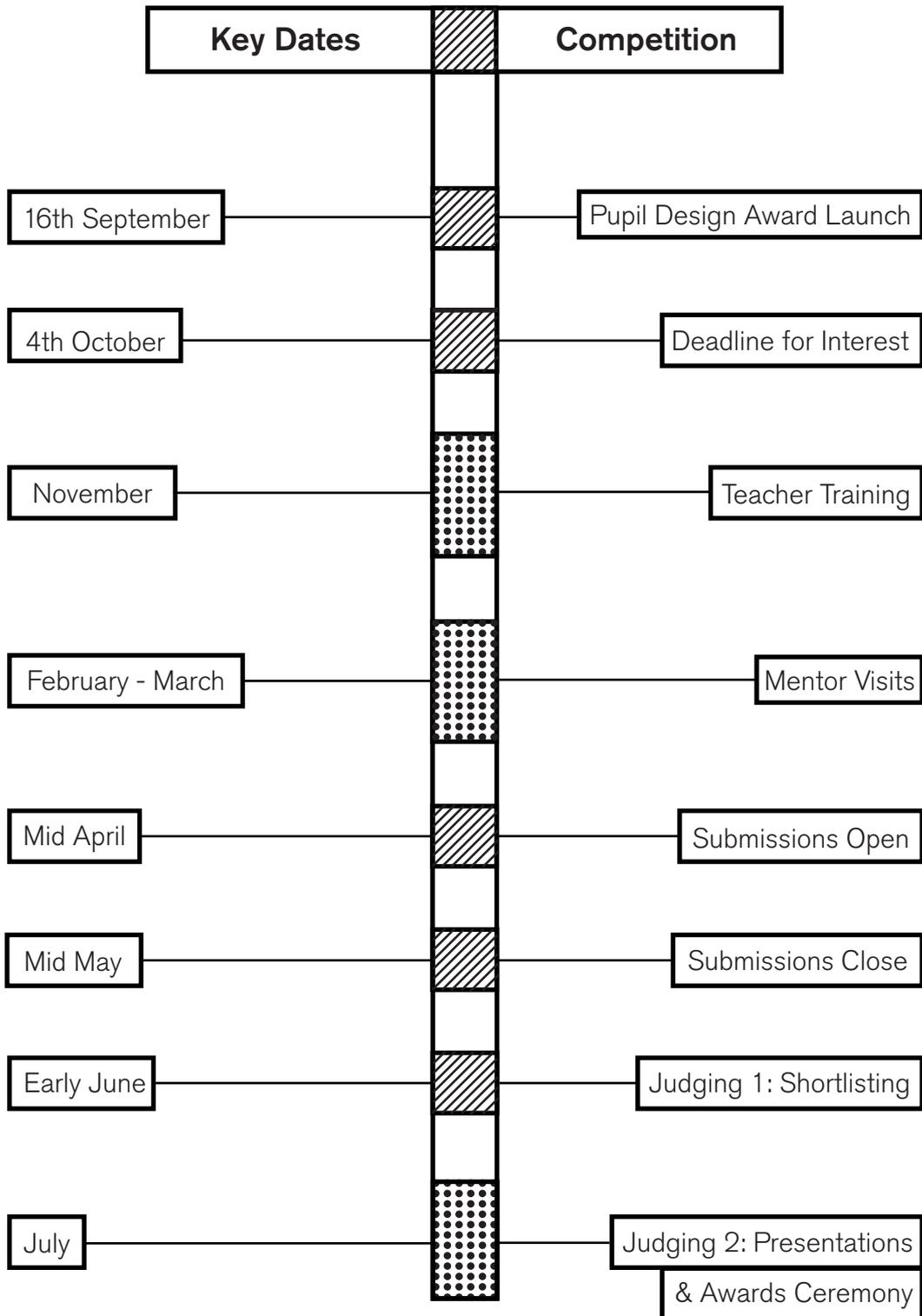
Finalists pitch their ideas to industry expert judges for prizes in three year group categories (Years 7 & 8, Years 9 & 10 and Year 12).

Advocating for design

Through the competition, we advocate for the role of design and innovation in education to bring about positive social change. The RSA Pupil Design Awards aims to:

- broaden definitions of how design can be applied
- introduce social design and design thinking to teachers and pupils
- build creative confidence in young people

Timeline

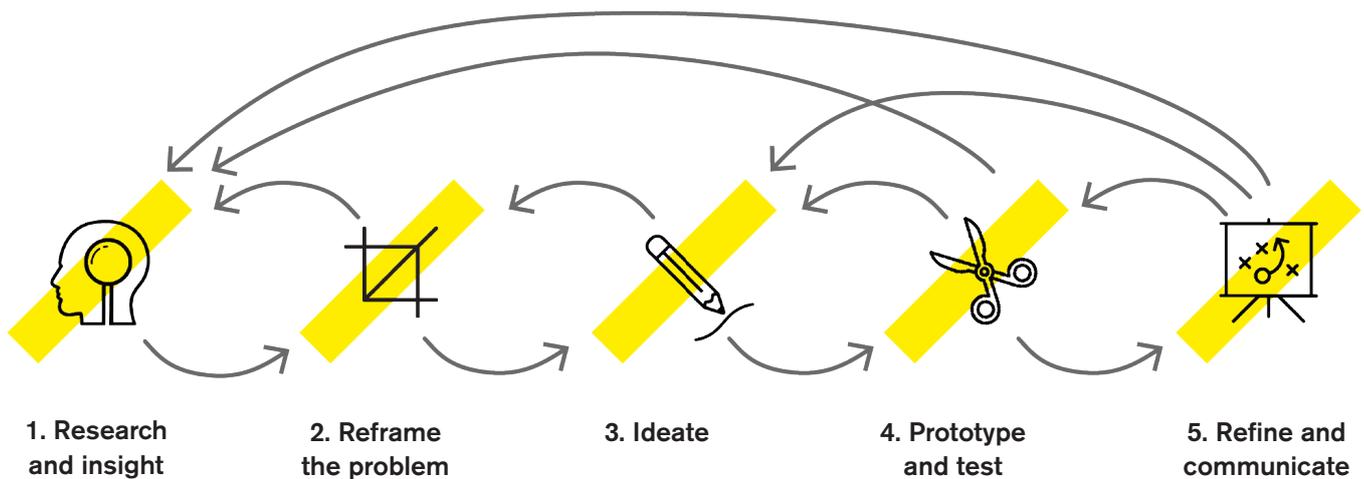


What is Design Thinking?

Design thinking is a process and a mindset used to tackle complex problems. It can help us explore new alternatives and to imagine and bring to life ideas that didn't exist before. It offers us an opportunity to design with communities, to deeply understand the people we'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 you can go back and forth as many times as you need to reach an idea that addresses the problem you have identified.

The non-linear design thinking process



What is a design brief?

A design brief is set at the start of a project to give guidance and focus, whilst leaving room for open ended, creative responses. A good brief helps frame the challenge you are being asked to explore and provides detail on important considerations and key information.

Once you have your design brief, you can then apply your design thinking and start on your design journey. Make sure that throughout your design journey you constantly refer back to your design brief to ensure your proposal is responding to the challenge you have been set.

What is a design proposal?

A design proposal comes at the end of a project once you have completed your design journey, to summarise your idea and communicate it to others. Make sure your proposal responds to each area of the submission criteria.

Stories are the most powerful way to communicate your proposal and your experience of the design journey. Think about how to get your audience interested in your idea and craft a short, engaging story focusing on the most important aspects of your proposal. For example: name the brief you've explored, describe what inspired your idea, your key findings from your research, how it responds to the needs you learnt about and explain how you have tested and developed your proposal further.

A good design proposal communicates the value of your idea and explains how it makes a positive difference to the natural world or people involved. Make sure you build your proposal to motivate others and bring your idea to life.

"The designer's mindset embraces empathy, optimism, iteration, creativity, and ambiguity. And most critically, design thinking keeps people at the center of every process."
IDEO, Design Thinking

How to approach the briefs applying a design thinking process:



1. Research and understand people's needs and motivations:

Undertake open research to help understand the needs and motivations of the people affected by the problem posed in the brief. This could be done in different ways, such as through interviews, conversations, observation and stories. Make sure you capture your findings (what does the research say?) and insights (what did you learn? This can include patterns or behaviours that might lead to ideas).



2. Reframe the problem:

Choose a specific problem within the brief that you would like to solve and consider your audience. Who is currently affected by this problem? They will be your partners in this process. When applying design thinking, we focus on people as the source of inspiration and direction for our ideas.



3. Ideate:

Let your imagination flow and explore lots of ideas that address the problem in the brief (don't be afraid of including silly ideas!). Once you have come up with as many ideas as you can, you might want to focus on one or two that seem interesting and original.



4. Prototype and test:

Experiment and develop your idea further and try to make it visual and tangible. For example, make a drawing that explains a process or create a product out of cardboard. Share your proposal with your audience and gather lots of feedback. Make lots of changes to your idea based on that feedback. Your audience will help you to improve your proposal and make it even better.



5. Refine and communicate:

Once you have modified your proposal, refine how to present it. In particular, consider the way you are going to communicate and think about following this structure: what, how, for whom, and why. How will your idea work in the real world? For example: R.O.B. (Robot of Business), is an interactive system that teaches pupils valuable skills such as how to write CVs and prepare for job interviews.

Design thinkers are...

unlike other
problem
solvers

we tinker and test, we fail early and often

and we spend a surprising amount of time

not knowing the answer to the challenge at hand.

And yet, we forge ahead.

We're

optimists

and

makers

experimenters

and

learners

We

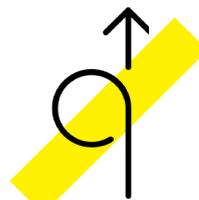


empathize

&

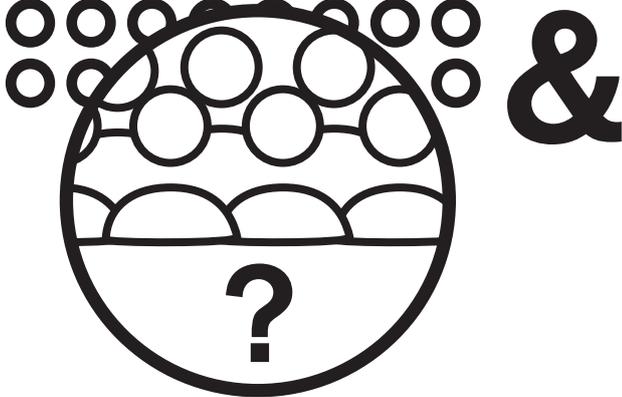
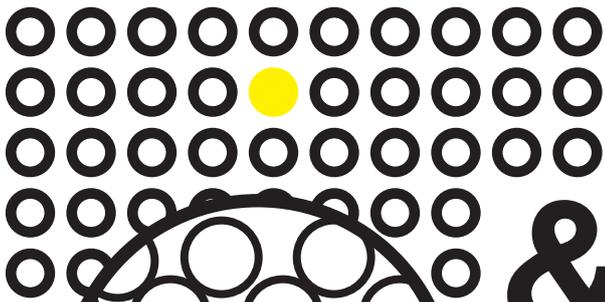


we look for inspiration
in unexpected places



iterate,

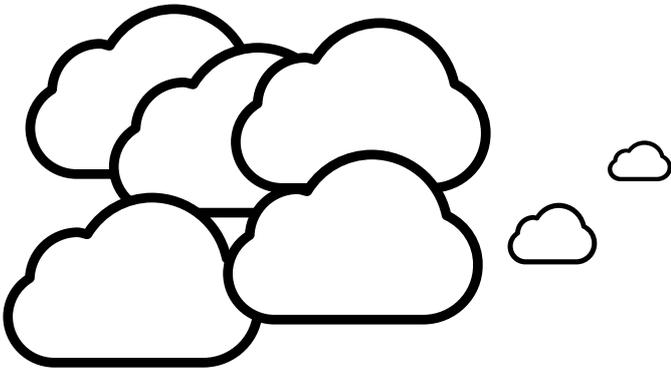
We believe that



a solution is out there

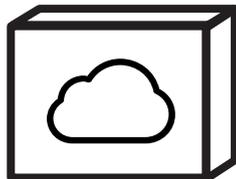
that by keeping focused on the people we're designing for and asking the right questions,

we'll get there together.



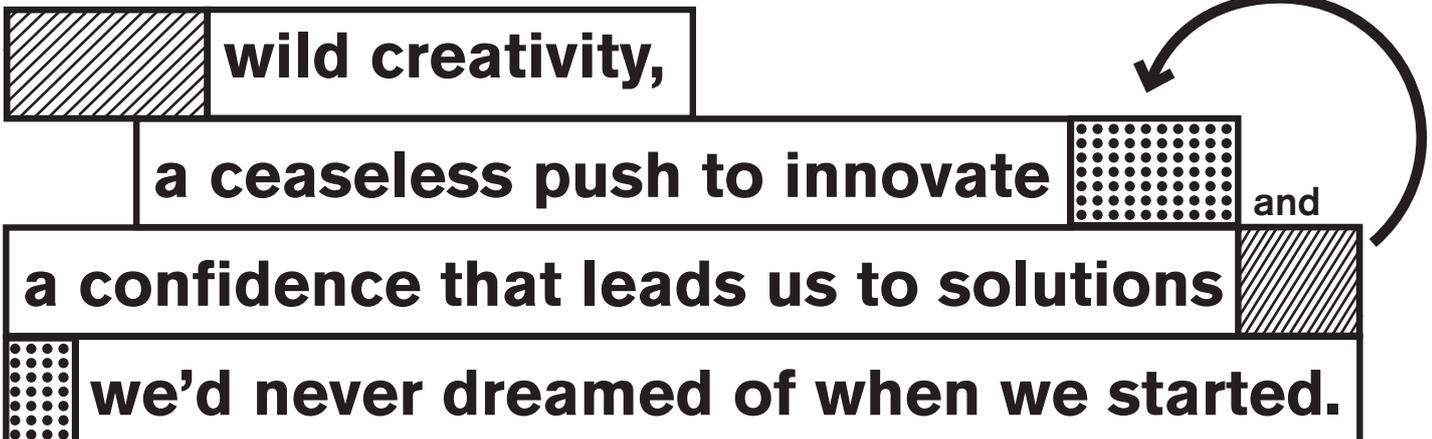
We dream up lots of ideas,

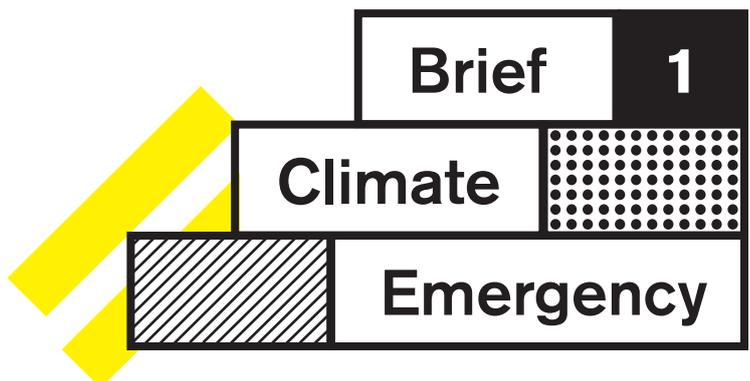
some that work and some that don't.



We make our ideas tangible so that we can test them, and then we refine them.

In the end, our approach amounts to





Brief 1

Climate Emergency

How might we support and engage our local neighbourhoods to respond and adapt to the challenges of climate change?

Background

- People have known about the dangers of climate change for more than thirty years but so far not enough has been done to prevent it. However, people demanding urgent action, particularly children and young people, are now making their voices heard.
- Human activity such as burning fossil fuels, destroying forests, and using fertilisers is increasing the level of 'greenhouse gases' in our atmosphere. These gases act like the glass in a greenhouse, trapping the sun's heat and stopping it from leaking out into space. Higher concentrations of greenhouse gases are contributing to the warming of the planet.
- The last four years have been the hottest on record and winter temperatures in the Arctic have risen by three or four degrees Celsius in the last 50 years. This means that weather patterns and ecosystems are changing faster than animal species and human communities can keep up with.
- Rising sea levels are forcing people to migrate, while increases in ocean temperatures are damaging aquatic environments such as coral reefs which host more than a quarter of all marine species. Reefs also provide protection from flooding and sustain fishing and tourism industries. Their disappearance will have drastic consequences for humans and wildlife alike.
- Climate change is also affecting the land around us. More droughts and floods, as a result of climate change, could mean we have less land available for food production and more limited water supplies.
- This may seem like a daunting problem - but we can prevent it from getting much worse through the choices we make as individuals and by changing the behaviour of businesses, neighbourhoods and society as a whole.

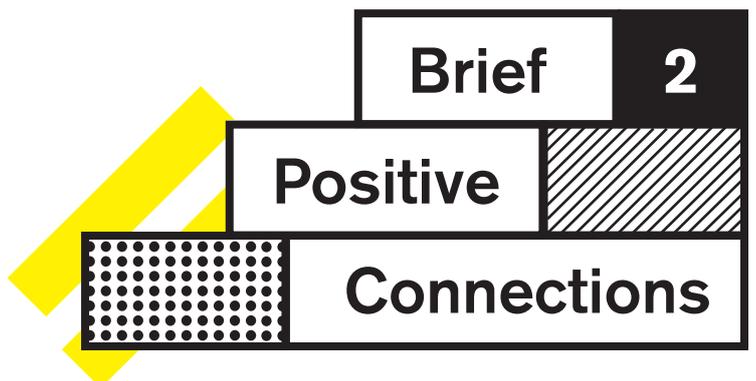
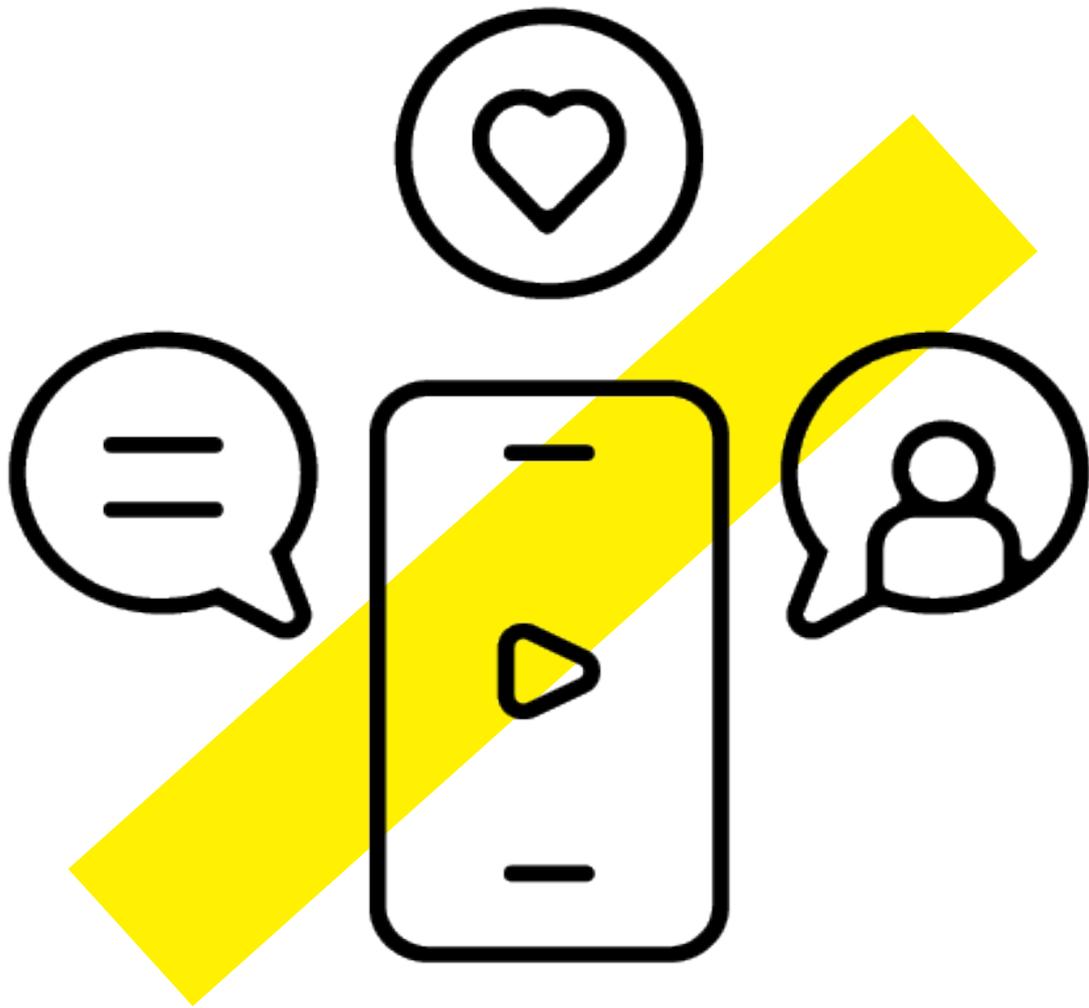
How should you approach this brief?

Your design brief is to: **Design a proposal which supports and engages your local neighbourhoods to respond and adapt to the challenges of climate change.**

- Focus on your local neighbourhood. What are some of the problems your neighbourhood is facing because of climate change? What is the impact of these changes in your local area as well as in the wider world?
- Find out about what other people are already doing to tackle climate change. What immediate actions can you take to reduce your carbon footprint? How could your school or neighbourhood act to reduce its collective carbon footprint?
- Once you have identified the problems, choose one issue that you will focus on. For example, you could focus on restoring waterways, producing clean energy or collecting local data for farmers to help them better manage their crops. Make sure you focus on an issue that is relevant to your local neighbourhood.
- We know that small actions can lead to big changes, so think about how you can encourage people in your neighbourhood, your school or your local government (for example, the local council, the mayor, or your local MP) to take action on climate change. Identify the people and organisations you could work with to make things better.

Here are some examples of proposals that could meet this design brief:

- a. A set of pollution sensors located on busy roads that help gather and share data about air pollution.
- b. A campaign that encourages the local government to protect and restore local rivers while providing an educational experience for local visitors.
- c. A service that makes it easy and fun for people to walk or cycle for short distances instead of using cars or buses.



Brief 2

Positive Connections

How might we support young people to use technology responsibly in ways that develop positive relationships?

Background

- The digital world is more important than ever. Young people, in particular, now communicate through a range of digital channels, which allow them to connect with new people, express themselves, and support each other. Young people themselves play an important role in ensuring their online environments are based on trust, respect and consent.
- For the younger generation, being online means feeling part of a larger community. Research from the UK Safer Internet Centre shows that 65% of young people say they would feel disconnected from the world if they couldn't be online, with 13-17 year olds (72%) much more likely to feel this way than 8-12 year olds (57%).¹
- However, these new norms of communication can bring with them pressures and expectations to look or act in particular ways, to buy certain things, or to always be online so you don't miss out on anything. Online bullying is common, with around half of young people surveyed by the UK Safer Internet Centre saying they had experienced it in the last year.²
- We need to support young people to take control of their digital wellbeing. By understanding the effects that digital technologies have on self-esteem and mood, young people can work towards achieving a healthy relationship with technology. It is also important that young people feel supported by friends, family and at school, so that they feel confident to speak up about any worries they have.

References

¹Internet Matters (2019). Accessed September 2019 at: <https://www.internetmatters.org/hub/news-blogs/new-research-reveals-the-positives-and-challenges-of-young-people-sharing-content-online/>

²UK Safer Internet Centre. (2018). Digital Friendships: the role of technology in young people. Accessed September 2019 at: <https://d1afx9quaogywf.cloudfront.net/sites/default/files/Safer%20Internet%20Day%202018/Digital%20Friendships%20-%20the%20role%20of%20technology%20in%20young%20people%27s%20relationships%20-%20SID2018.pdf>

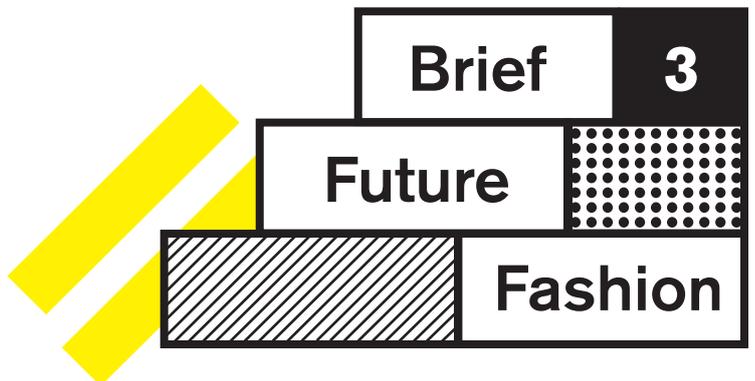
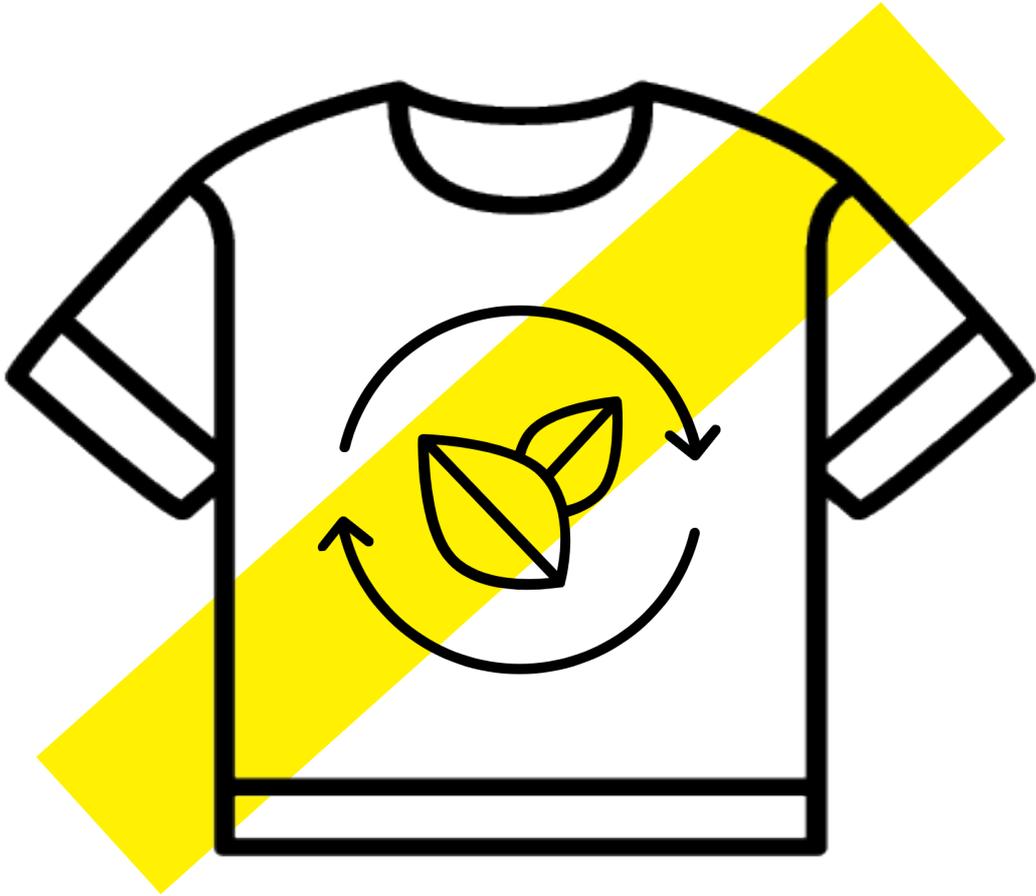
How should you approach this brief?

Your design brief is to: **Design a proposal which supports young people to use technology responsibly in ways that develop positive relationships.**

- Conduct some research to find out about the benefits and potential risks of communicating online. You could start by looking at the website for the UK Safer Internet Centre.
- Think about how much time you spend online. Do you notice changes in how you feel as a result of using particular apps or spending a lot of time online? What might cause these changes?
- Speak to your teacher to decide the best way to find out about other people's experiences and views of communicating online. For example, you could prepare questions and hold a discussion group supported by your teacher, or you could speak to members of your family.
- What are the positive things about being online and using digital technologies? How can you promote these positive things while making sure people are informed about the risks of being online?

Here are some examples of proposals that could meet this design brief:

- a. A toolkit designed by young people for young people, to help them make better decisions online.
- b. A service that offers workshops run by young people for young people to regularly talk about online wellbeing, friendship and digital responsibility.
- c. A product that provides reminders and ways of asking for support from peers, parents and carers.



Brief 3

Future Fashion

How might we reinvent the way we produce, use or access everyday clothing items so that we design out waste?

Background

- Our clothes protect us and allow us to express ourselves. No wonder many of us love fashion. Globally, the fashion industry is worth around \$1.3 trillion per year in sales.
- But fashion has a problem: the way fashion producers make clothes assumes that we can use whatever materials we want and that we can throw clothes away when we no longer want them.
- By doing this we are damaging natural systems. For example, growing cotton uses up a lot of water and the production of cotton clothes often uses large amounts of chemicals. Many man-made fabrics are produced from the same chemicals we use to make plastic and release small fibres into water as they are washed, adding plastic into rivers and oceans. Transporting clothes around the world, from China to the UK, for example, causes greenhouse gas emissions that contribute to climate change.
- There is no such thing as throwing something 'away'. It must go somewhere and this often harms the environment. Every second, an amount equal to one truck of textiles is sent to rubbish landfill or burned.
- What if we saw waste and pollution as design problems and tried to prevent their creation right from the beginning of a garment's life? This is 'circular economy thinking'. When we design using a 'circular economy' approach we should ask: how might we design so that clothing is kept in use for longer? How might we design so that materials and resources can be easily recycled or reused? How might we design so that natural resources, like water and soil, are restored rather than damaged?

How should you approach this brief?

Your design brief is to: **Design a proposal which can reinvent the way we produce, use or access everyday clothing items so that we 'design out' waste.**

- Focus on everyday items of clothing. This means items that are worn regularly and produced in large amounts, not ones that are worn only occasionally. You might consider: jeans, t-shirts, shirts, underwear, uniforms, basic shoes or wool jumpers.
- Think about the whole life-cycle of clothing, from the raw material (such as cotton) to the point where it is thrown away. You could draw the life-cycle, to learn about which parts have negative impacts, and then think about how you could change them.
- Talk to your friends and family about their reasons for buying clothes: is there pressure on people to keep up with the latest trends? Is social media affecting what clothes we buy or how many we buy? Is there a difference between older and younger people?
- Think about how people use clothes: how long do they keep them? Do they repair them if they get damaged? If they don't, what might be stopping them?
- Think about what happens to clothing when it is no longer wanted: where does it go? What impact does this have? Could clothes be designed differently so they don't end up as rubbish when one person has finished using them? Don't think just about recycling or reusing existing waste, think about how that waste could have been prevented in the first place.
- Remember, it isn't only clothes that need to be designed. Fabrics are also designed, the way we shop for clothing is designed, the way we share images on social media is designed. So, there are lots of places to apply design to make positive change to the fashion industry.

Here are some examples of proposals that could meet this design brief:

- a. A clothes-swapping service that makes it easy for people to exchange clothing that they no longer want rather than buying something new.
- b. A garment that can be worn in more than one way, suiting different environments and ensuring that it is kept for a long time.
- c. A set of workshops that help people become aware of fast fashion waste and teaches simple ways to repurpose clothing.

Submission Criteria

Your proposal will be evaluated based on the following criteria:



Social and environmental impact:

- How can it make a positive difference to people or the natural world?
- How will it use materials and resources in a sustainable way?



Rigorous research and compelling insights:

- Have you undertaken first hand research by identifying the needs and motivations of people affected by the problem in your brief? Have you conducted research into the wider context of the problem on the internet or through reading material?
- How does your proposal build on the insights you have gained from your research?
- How does your proposal respond to the needs and motivations of people identified through your research?
- How did you develop your proposal by incorporating feedback and testing new ideas through prototyping and iterating?



Viability:

- Have you considered how your proposal will work in practice?
- Have you considered the cost of your proposal?
- What potential challenges have you identified that might prevent your proposal working in practice, and how could these be overcome?
- How would you measure the success of your proposal if it became a reality?



Creativity and innovation:

- What makes your proposal different from existing solutions? How might it be better or more useful?
- What unexpected or surprising elements are included in your proposal? What value do these add to the idea?

How to submit your work

To enter your work into the RSA Pupil Design Awards you will need to present your proposal on **six A3 boards**. These six boards need to tell the story of your design thinking process from research to final idea. The judges will be looking for the story of how your design developed over time. When the judges first look at your work, you won't be there to explain it, so your six boards need to do all the explaining for you!

Remember, this is a design competition, so make sure you think about how your boards look. We don't just want pages of writing. Include sketches, photos, technical drawings and images of any models/prototypes you have created.

Your 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.

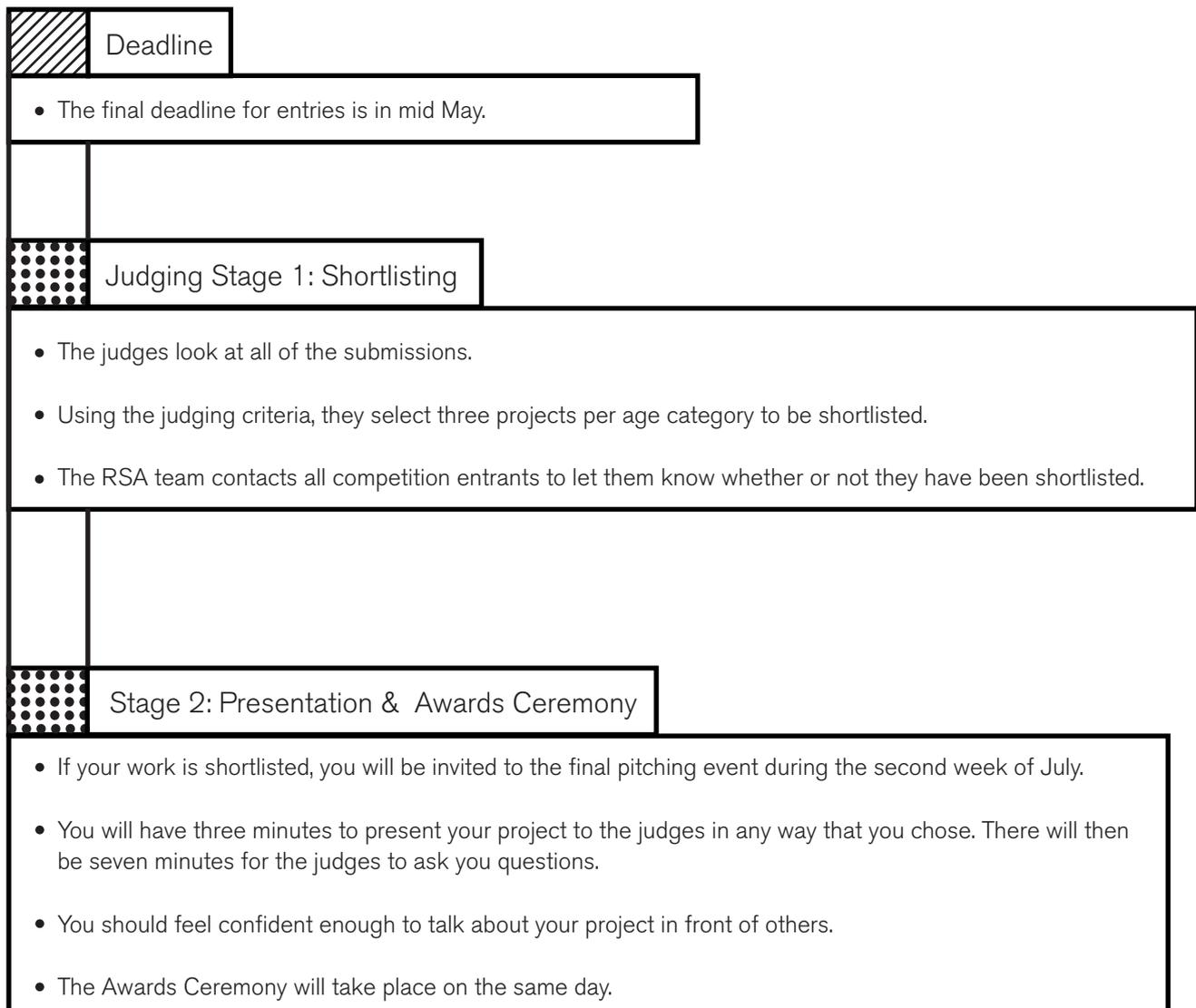
Who is your proposal aimed at and why?

What makes it different to existing solutions?

Judging Process

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 and the final deadline is going to be in mid May - check our website for updates.

The judging process is divided into two stages and the panelists for each category will include RSA Student Design Award Alumni, Royal Designers for Industry, practising designers and RSA staff. The judges will look at all of the projects entered and using the judging criteria they will select three to five projects per age category to be shortlisted.



Audience - the people who your design proposal is aimed at. It's almost impossible to come up with an idea that will be able to help everyone, so it's often better to focus on a specific group of people with a specific problem and to design a proposal for them.

Campaign - a planned set of activities that people carry out over a period of time in order to achieve something such as social or political change.

Carbon Footprint - the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular person, organisation, or community.

Circular Economy - a circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems.

Climate Change - a change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.

Design Thinking - Design thinking is a process and a mindset used to tackle complex problems. It can help us explore new alternatives and to imagine and bring to life ideas that didn't exist before.

Ecosystems - a biological community of interacting organisms and their physical environment.

Fossil Fuels - a natural fuel, formed in the geological past from the remains of living organisms. Fossil fuels contain high percentages of carbon and include petroleum, coal, and natural gas.

Greenhouse Gases - a gas that contributes to the warming of the Earth's surface and the air above it. Carbon dioxide is an example of a greenhouse gas.

Human Centered Design - Human-centered design is an approach to problem solving, commonly used in design, that develops solutions to problems by involving the human perspective in all steps of the problem-solving process

Ideation - the formation of ideas and concepts. As part of the design thinking process, ideation is the time to come up with as many ideas as possible before deciding which ones are the best ones to develop further.

Insight - an accurate and deep understanding of someone or something. This is the key bit of information or perspective you gained about the problem you are tackling that will help you decide how to address the problem and come up with ideas.

Iteration - a cyclic process of prototyping, testing, and refining your idea. Based on the results of testing the most recent iteration of a design, changes and refinements are made to improve it.

Mentor - an experienced person who is there to support and advise you throughout your design journey, maybe helping to give you a different perspective or try out something you hadn't thought of before.

Migrate - move to a new area or country in order to find better living conditions.

Natural System - a system is a group of parts that act together within a relationship. A natural system is one that exists in nature, independent of any human involvement.

Pollution - the presence or introduction into the environment of a substance which has harmful or poisonous effects

Primary Research - research that you conduct for yourself, such as interviews or taking photographs of a space or situation, as opposed to consulting books or online research done by other people.

Proposal - A design proposal comes at the end of a project once you have completed your design journey, to summarise your idea and communicate it to others.

Prototype - the first, rough, working version of an idea which you can use to test and gather feedback to improve your idea.

Royal Designers for Industry - an award given by the RSA to designers who have had a significant impact on their field of work.

Reinvent - change something so much that it appears to be entirely new.

Secondary Research - research that has been conducted by others but which you use to inform your work. This can be reading a book, an interview, researching online or looking at photographs someone else took and the work they did to inspire you.

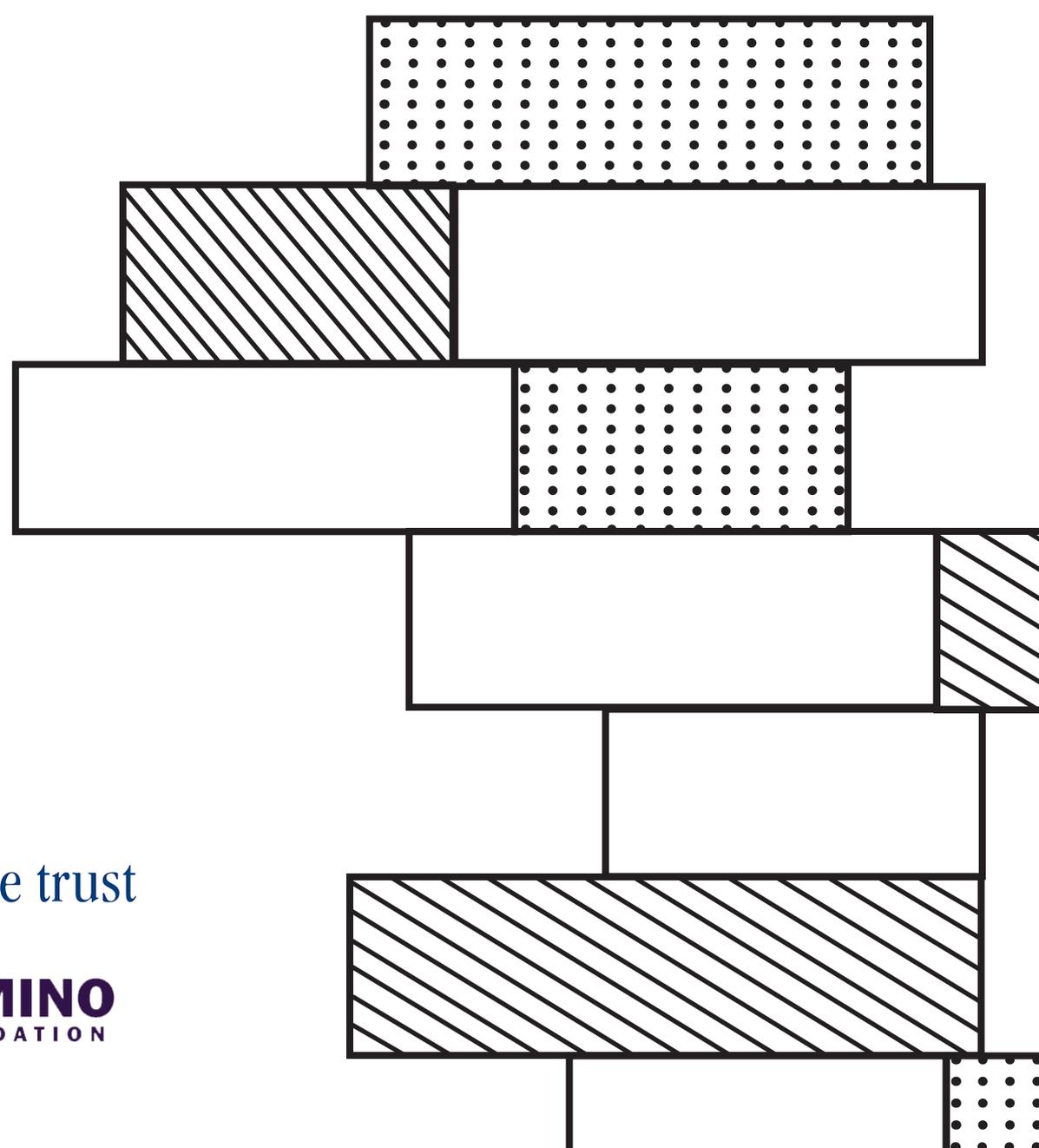
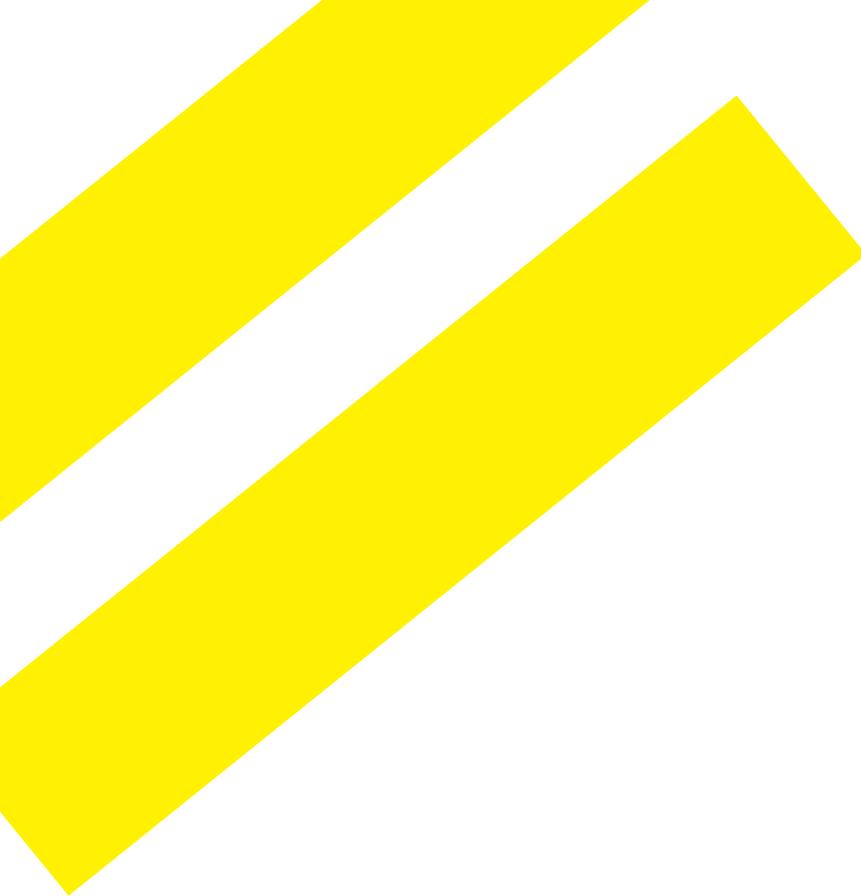
Service - a number of interactions and/or objects and technologies which all come together to provide something to the user. For example, sending a letter in the post or ordering something online and getting it delivered are both services made up of different parts.

Submission Criteria - are the set of guidelines that judges will follow when looking at your work so they can evaluate it in a fair and equal way, especially when comparing different projects.

“At its core, creative confidence is about believing in your ability to create change in the world around you.”

Tom Kelley, Creative Confidence





RSA
21st century enlightenment

 four acre trust

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FOUNDATION