



WELCOME TO THE




# Challenge

your  
imagination

2020/2021

**All across the world, people are working hard to find solutions to challenging problems and we are excited to bring you this competition to test out your imagination across the year.**

Complete the different challenges and come up with your own innovative idea for how we can use lenses and/or robotics to help people to be able to see better.

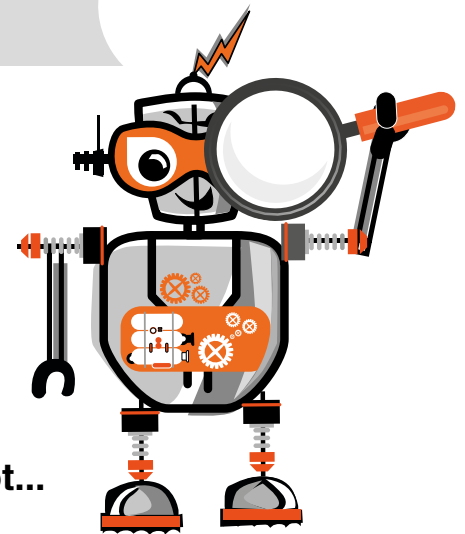


**We hope you have an amazing time taking part in the challenge!**

## Before you start

**Make sure you have everything you need:**

- ☐ A team of 4-6
- ☐ An individual workbook
- ☐ Pens, pencils and colours!
- ☐ Joined a digital welcome workshop



**Who's in my team...**

**Draw your team mascot...**

**Team name...**

## Doing the challenge

You are challenged to complete 10 key tasks across the year to develop your knowledge and an innovative idea. Use the checklist in this guide (or in your workbook) to tick them off as you go.

Each task is designed to take around 20 minutes but you can take a much or as little time as you like. Each task is paired with a bonus challenge that will take around 40-60 minutes.



Use this checklist to tick off all of the stuff you learn and do as part of the Challenge your Imagination competition!

### Challenge

- |           |                      |                          |
|-----------|----------------------|--------------------------|
| <b>1</b>  | Vision and Light     | <input type="checkbox"/> |
| <b>2</b>  | Amazing Colours      | <input type="checkbox"/> |
| <b>3</b>  | Adapting Animals     | <input type="checkbox"/> |
| <b>4</b>  | Aging Eyes           | <input type="checkbox"/> |
| <b>5</b>  | Visual Disabilities  | <input type="checkbox"/> |
| <b>6</b>  | Lenses and Mirrors   | <input type="checkbox"/> |
| <b>7</b>  | Robots               | <input type="checkbox"/> |
| <b>8</b>  | Creative Ideas       | <input type="checkbox"/> |
| <b>9</b>  | Developing your Idea | <input type="checkbox"/> |
| <b>10</b> | Presenting your Idea | <input type="checkbox"/> |

### Bonus Challenge

- |                                       |                          |
|---------------------------------------|--------------------------|
| Experiment – Human Shadow Clock       | <input type="checkbox"/> |
| Experiment – Colourful Chromatography | <input type="checkbox"/> |
| Research – Adapting Animals           | <input type="checkbox"/> |
| Design – Glasses                      | <input type="checkbox"/> |
| Research – Career Poster              | <input type="checkbox"/> |
| Model – Make a Mirrored Fun House     | <input type="checkbox"/> |
| Market a Robot Toy                    | <input type="checkbox"/> |
| Research – An Invention from History  | <input type="checkbox"/> |
| Modelling your Idea – Hands-on        | <input type="checkbox"/> |
| Presentation Games and Practice       | <input type="checkbox"/> |

## The Brief

Below is the competition brief. You don't need to worry about this straight way. Work your way through the challenge tasks and come back to the brief in a few weeks.

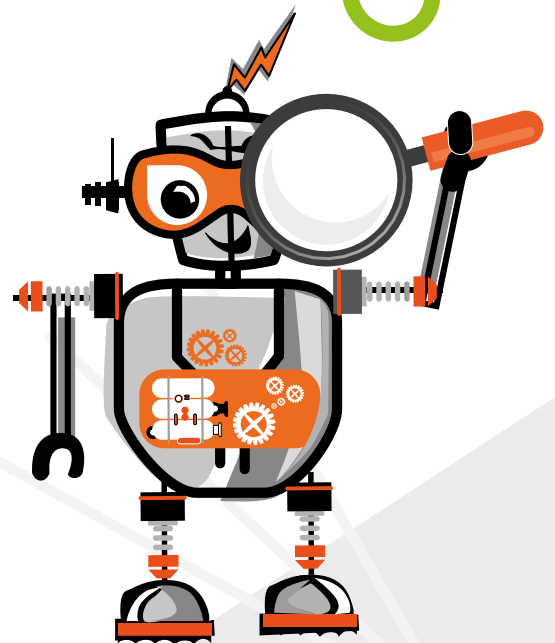
### How can we use lenses and/or robotics to help people to be able to see better?

#### More detail:

As a team you must create a design for a product that could be used to answer this question. Use the information you have learnt in the different sessions as you work through the challenge tasks.

There must be a focus on the use of lenses or reflective material.

Ideally your design should take visual disability into account, however designs to help people to see in certain more difficult situations e.g. surgery are also okay.





## Entries should include:

- ☐ A design of your product
- ☐ Supporting materials e.g.
  - Models
  - Advertising
  - Research posters
- ☐ A 2-3 minute elevator pitch (a short presentation that explains the key details of your product)



## Entries will be reviewed on:

- How well does the design fit the brief?
- Creativity and design
- Originality of idea
- Presentation of work
- Background information



**Good luck  
and enjoy the  
challenge!**





# PROJECT ENTRY

**Project name**

**Project team**

**Project summary (elevator pitch)**

**Supporting material (please describe)**

**Do you have:** A project design poster

