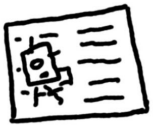
Magnificent Makers Handbook

i. Why I should join?

Thank you for checking out our Magnificent Makers handbook. If you have come this far you must be wondering what we are all about. We think that children have amazing imaginations and when matched with the skills and experience of experts, makers, designers and artists, something magical really happens…

The thousands of invention ideas on our website can be made by anyone and we encourage makers of all abilities and ages to have a go at bringing a sketch to life. This handbook is for makers who want to take it to the next level but there are lots of tips here everyone will find useful.



Your starting point will be a child's invention drawing and your challenge is to translate their idea into something that looks great and communicates the idea brilliantly to anyone who sees it. This can be a working prototype, a 3D render, architectural model or even animation. The key is you take the idea seriously, showcase your skills and make it as real as you would for any other client.

Making an invention is a lot of fun, be prepared to stretch your brain cells and skills to make the bonkers and brilliant real. Hundreds of makers have found that giving some of their time to inspire a child is a fulfilling challenge and opportunity to make something truly unique.

Truly magnificent makes enter into our collection which travels around the world and has been shown in exhibitions from the V&A in London to the Triennale museum in Milan.

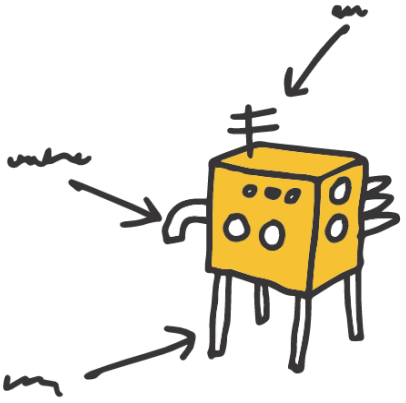
Six steps to magnificence!

ii. Complete these steps to become a Magnificent Maker

Step 1 Join and sign up as a Maker

Step 2 Pick an idea to make

Step 3 Plan your make and contact us to arrange a call your with little inventor



Step 4 Make your invention and film it as you go

Step 5 Take some nice photos on a white background

Step 6 Upload your documentation And write a blogpost.

This sounds amazing, sign me up!

1 How do I join?

If you are a professional maker, artist, designer passionate hobbyist, or skilled company we are looking for you!

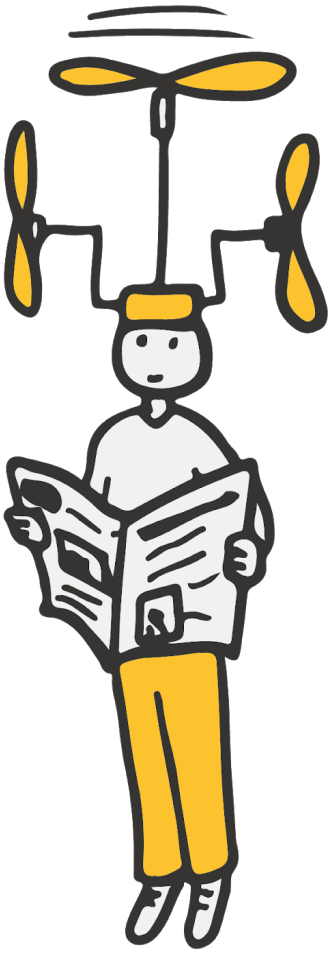
First, you will need to create a 'maker profile' from the main page of our website go to Makers > Join Us.

www.littleinventors.org/makers/join

Once approved you will be able to tell us a bit about yourself and select inventions to make. Once you have chosen your invention, you will be able to create a blog of your progress from idea to reality.

As your blog post fills up, the Little Inventor who you are working with will be able to see the progress of their idea. This way they really become a part of the making process.

Any photos/videos you take will be published on the website via your makers profile as well as used for other forms of publicity, so they need to be of a decent size and quality.



Ooh what shall I make?

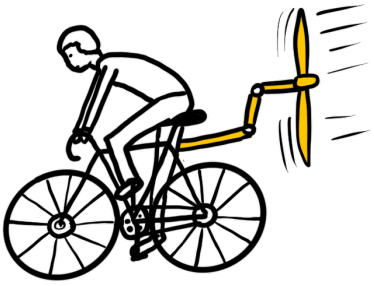
2 Selecting an idea for making

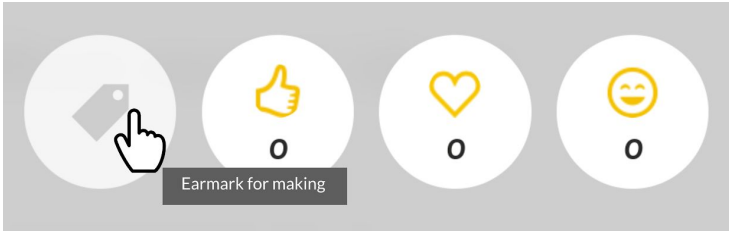
Now you need to find an invention that you find inspiring and you would like to bring to life!

To select an idea for making head to the ideas section of the website. Here you can sort through the database of over 10000 inventions by country, challenge, age staff picks and more.

https://www.littleinventors.org/ideas/

Collect ideas for making by clicking on the invention which opens up the invention's page. Here you can click the little grey tag icon on the left to 'earmark' for making'





Some tips to pick an invention

- Start with the '**PICKS**' tab to see our favourites
- Focus on the idea, not the quality of the drawing.
- What's new or innovative about it?
- How would it translate as a 3D prototype?
- Think about the technology or behind it.
- Interpret don't illustrate the invention.
- Take time to look through, we have 8000 ideas to choose from!
- Use your own personal interests and expertise.
- Google it - does it exist? can you enhance it?
- Can you improve the idea and take it further?

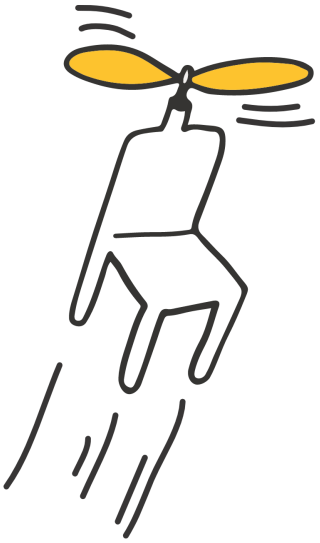
Hi, what a great idea!

3 We help you meet with your Little Inventor

Keeping your Little Inventor up to date is a great way to give them some professional insight into your making process and help them to really feel like their idea is being taken seriously.

Meeting in person

Ideally, every child would get to see their invention in real life by visiting you in your studio/workshop. If you are nearby your inventor, **contact the Little Inventors team** and we will connect you with the inventor's teacher and guardian to arrange a visit. We connect makers and children from across the whole of the world and so this isn't always practical so many connect online. Only ever contact the child with the Little Inventors team's help.



Connecting online

When meeting in person or online follow these tips:

Tip 1 Introduce yourself and your expert skills, what makes you the right person for the job?

Tip 2 Tell them what you liked about their invention, and why you chose to bring it to life. What did you think was clever about their design. What do you think makes their idea stand out?

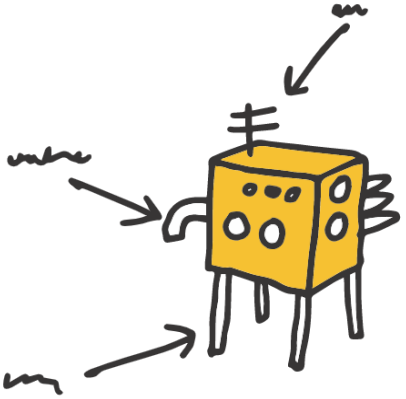
Tip 3 Explain how you are making it, what special features does it have? How have you used their design to inform your making. What techniques have you used.

Tip 5 Ask them questions, these will be needed for your film! Why did you invent this, what material is it made out of? How does it work?

Remember to record your screen while skyping your inventor!

Right, now I'm ready to make this!

4 Top tips for making



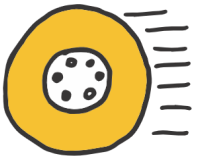
You've seen an invention idea, it inspires you and now you want to make it real! Fantastic! So how do you get started?

Tip 1 Think of the child as your client - it's important to treat their idea with respect and take it seriously.

Tip 2 The drawing is your brief - bring you make to life by following the child's specified colours, features and accessories.

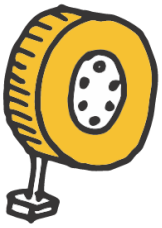
Tip 3 Allow your expertise to shine through - are you an architect, animator, creative technologist, apply these skills to your making.

Tip 4 A drawing is 2D, an object is 3D - Your first job is to figure out how it will work - some makers do planning drawings first.



Tip 5 Size it up - Some invention ideas can be very big or very small. Think about how you will represent the invention idea - it could be life-size or it could be a model.

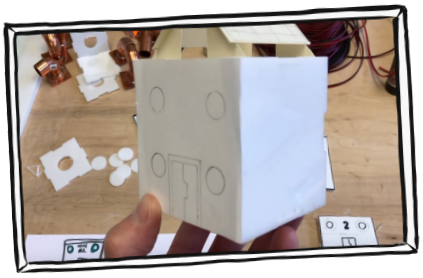
Tip 6 Make it real - we try and go beyond just a model and work really hard to make inventions 'real'. Can you use arduino to embed sensors, use real materials or animate the models to bring it to life?!

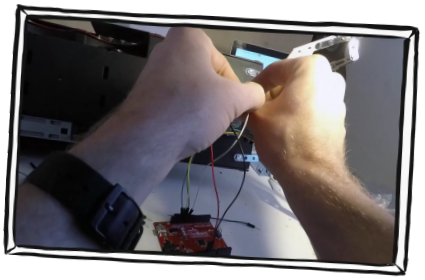


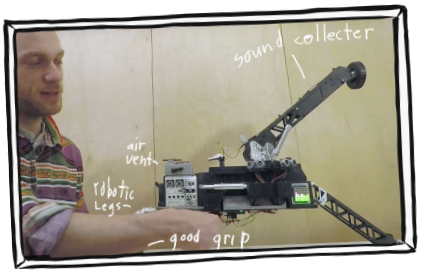
Tip 7 Talk to us! Your judgement and creativity is as important in the process - tell us what you want to do and take this idea to the best place it can go!

Lights camera action!

Storyboard your making







Showing your Little Inventor how something comes to life is as magical as seeing the finished object - a good video is as important as the finished object. Your Little Inventor may be far away and the only way they can see your make is through a well-crafted video.

Scene 1 Meeting the Little Inventor, asking questions about their drawing. We can assist in arranging this with the school, in person or online using a screen recording app. Jump to **Connecting online** Section for more **>example**

Scene 2 Sketching, shopping, modelling. Record how you plan your **making.** If you are buying parts, film this bit. We have a chest strap on our camera so we can film in a natural way while we do tests. If you do a 3D render first, screen record this. **>example**

Scene 3 Assembly of the object. It is good to make your object for disassembly so that we can pack for exhibition. The step by step putting together of the invention makes for fun viewing. **>example**

Scene 4 The reveal. Film the completed object working on a neutral background and describe it to-camera or with voice-over. Include close-ups of important parts of the object, that clearly illustrate the invention, and how it works. **>example**

Bonus Scene! If possible film your Inventor seeing the made real version online or in person. Or act out a scene of it being used (ie. a kitchen invention shot in a kitchen)

Document everything... all the time!

How to record your making

We would love you to document your making process by taking photographs and making videos. Documenting your making process is another way to bring an idea and your work to life to share with our audience.

D.I.Y is Fine!

Vlogging is a great way for a maker to communicate their work and many makers are used to documenting their work and have kit already. We have tested two simple set ups to enable you to record the making process without getting in your way.

It's easy to film you progress on a smartphone.
For best results, consider getting an external microphone to record you talking and make sure you film in a well-lit area.

We tried out a method of vlogging using a Gopro, external mic and some photo lighting.

- Simple kit list

- Your existing smartphone
- Diy smartphone tripod - free!
- Lights from around the house - free!

- Pro kit list

- Gopro hero 5 black £100 - £150
- **Or** Huawei Mate 20 Lite £150 - £200
- Micro SD card needs U3 - £10 - £25
- tripod adapters + chest mount - £15 - £20
- BOYA BY-MM1 Cardiod Shotgun Mic - £15 - £20
- Gopro 3.5 mm mic adapter £50
- Gopro mic case
- Tripod £10 - £50
- Lighting £15 - £50
- Smartphone vlog rig

Documenting your masterpiece

5 Photograph finished objects

Now that you've completed your marvellous made real invention, it's important that the finished object is photographed and documented as well as possible. The better the images, the more likely we can showcase them on our website, for exhibitions and other promotional materials

We would like photographs of the following:

Photo 1 Clearly showing the whole object in clear light with a neutral background.

Photo 2 A couple of close-up shots of any tiny details that are vital to the design.

Photo 3 For objects that can move: Between 3 and 5 pictures showing different parts of the movement from the same position can help create gifs.

Photo 4 Where possible, a photograph of someone using the object, to show how it works and for scale.

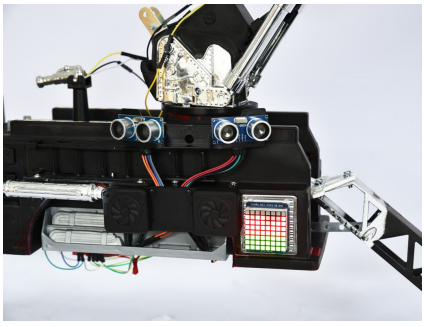


Photo 5 If the object has lights, please take a photograph in a dark space with the lights working.

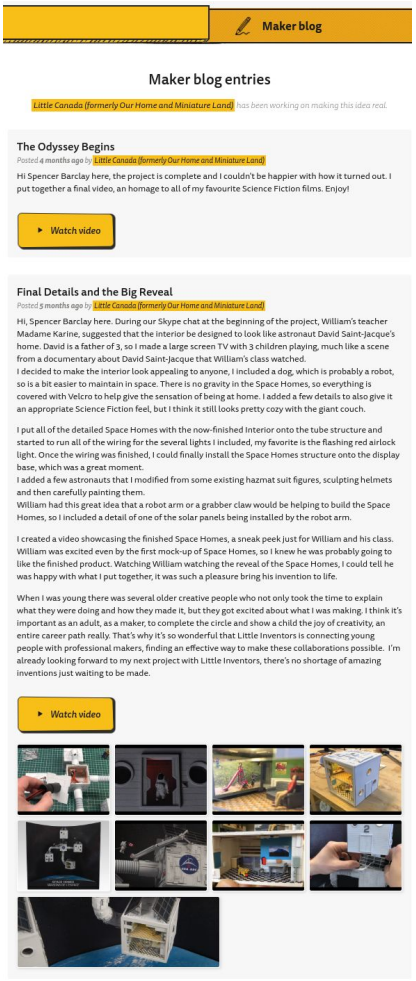
Videos If the object has moving parts, make a short video showing the invention in action.

For examples please take a look at the made real objects in the ideas gallery - https://www.littleinventors.org/ideas/#real

Telling the world how you did it

6 Write your Maker blog

On your maker profile you have the facility to write a blog. This is where the public and your inventor can see your process. You can either post as you go along or write one single post including all your content. Here is a checklist of the thing to include:



1 Introduce yourself and why you chose the invention

2 After your skype write up a few notes, has anything changed?

3 Prototyping process add some pictures of your progress.

4 Making the invention, maybe include a video of your workshop

5 The reveal! How was the invention received?

6 Final documentation pictures.

Take a look at this blog for inspiration:
https://www.littleinventors.org/ideas/space-homes/details#projects

Once you have submitted your blogpost, we will approve it and it will go live! We will then link your documentation pictures to the invention for the world to see. Thank you!

Some of our maker heroes!

Examples: