Photography was invented in many small steps by many different people. It all started with (dangerous) chemical experiments.

1727
Johann Heinrich Schulze

I discovered that some salts change color when exposed to light.

1802
Thomas Wedgwood
Humphry Davy

We smeared these salts onto a piece of paper and made a 'photo'.

Our photo's could not be kept.

1826
Nicéphore Niépce

1834
William Henry Fox Talbot

I was intrigued! But could't think of a use for my discovery.

I discovered how to 'fix' a photo: making light-fast so you can keep it.

1839
Louis Daguerre

We did a lot of our research together. I discovered how to expose a light-sensitive copper sheet and how to keep it as a stable photo: the Daguerotye.

I discovered how to make a sheet of metal light-sensitive. And I invented the diaphragm and the bellow so we could focus our camera.

1842
John Herschel

And I discovered blueprinting!

And it continued...
Highlights:
1861: first ever colorphoto
1930: rolls of film available for all
1948: Polaroid
1950: color-photography for everyone!
1981: digital photography

I did many different things. That was very common for scientists in my time. I studied math, astronomy, photography, color blindness, plants and wrote about science.

We want to be like that too!

And you discovered blueprinting. Can you explain how it works?

Of course. First you make a solution using two chemicals: potassium ferricyanide and ferric ammonium citrate.

The solution looks like old tea with spinach, Grossi!

Nothing happens as long a you keep the sunlight away. You can smear the solution on (uncoated) paper or cloth (like a t-shirt).

When exposed to UV light (sun!) a chemical reaction will start. The iron (from the potassium ferricyanide) will change into a different type: from Fe^{3+} to Fe^{2+}.)

By rinsing it with water you complete the reaction: the deep **Prussian blue** appears.

1. solutions

Do not use metal cups or spoons!

Make solution 1:
- 5 g potassium ferricyanide
- 50 ml water

Make solution 2:
- 15 g ferric ammonium citrate
- 50 ml water

Close the curtains! Do not expose your work to direct sunlight.

2. mix

Mix both solutions. Gently stirr.

3. prepare

Smear your paper. It is easy with a spunge.

Cover your workbench with plastic.

Leave to dry, use a hairdryer when in a hurry.

4. choose

Choose the things you want to blueprint. Look for nice shapes!

Make drawings on transparant plastic sheets.

Plants are nice!

Do not oversee everyday objects. (Bubblewrap!)

5. expose

Place your object on the prepaired paper en expose it to direct sunlight.

30 seconds to 1 minute. in bright sunlight, longer when it is cloudy. (5 mins. or more)

6. rinse

Rinse the exposed paper under a running tap. The exposed part will turn a deep blue! Rinse until all the yellow is gone.

7. dry

Leave to dry. Done! Don't you love it!?

And that's chapter 6!
Thank you **Marten Hazelaar** (martenhazelaar.nl/) and **Per-Ivar Kloen** (twitter.com/__pi), supermakers that have been bluerpinting with their students since forever.

We plan to make the full fifty chapters on all the tools on our poster, one by one. Each with some history, nice facts and lots of DIY ideas for home and schools.

We'll do it all together with the international maker-community. (You!) We'll make all chapters available for free through our website. (CC: BY-NC-ND 4.0)

Do you like our project and want to keep track of it? Or do you want to join in? Please follow our progress and get in touch: **www.lekkersamenklooien.nl**. You'll also find a free download of the 50 tools poster there. Or find me on Twitter: **@astridpoot**.

<3 love, Astrid

Soon: **7. matches**

The Big Fat Book is a project by Astrid Poot.

the Big Fat Book by Max & Ro

blue print

6.