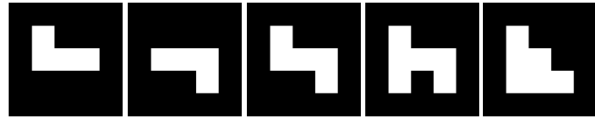


# Magic AR Paper



## Quick Guide

1. Open 2Create a Superstory and choose Magic AR Paper
2. Add a picture and an animation. Print the page out.
3. Plug your webcam into your computer
4. Open your web browser and go to [www.2simple.com/ar](http://www.2simple.com/ar)
5. Hold the printed paper in front of the webcam.
6. The object on the paper will appear to move!

The last story template in **2Create A Superstory** is named “Magic AR Paper”. The “AR” stands for “Augmented Reality”. This means that when you view a video using your webcam, the program looks at the video image and changes it before it gets displayed to you, usually adding something useful. In 2Create a Superstory, you can use the AR feature by choosing an animation for your picture and then printing the page. The printed paper will include a coded grid (some examples are displayed at the top of this page) which, when held up to a webcam on our website, will make the object on the paper appear to move! This offers an exciting new dimension to storytelling and science write-ups.

## How to get started

- Open the program, select the AR template (bottom right) and click OK.
- Paint a picture or right-click and import an image onto the square in the middle of the screen. Add your writing to the bottom area. (Note – you cannot add objects in this screen)
- Click on the clock at the top of the screen and drag one of the actions on the left down to the timeline at the bottom – the action you choose will automatically get copied across to all frames in the timeline. Click OK.
- Click the print button and print your work (if you need to change the printer, click on the printer name which appears in grey in the print dialog box). When you print, a coded grid will get added to the paper on the top left corner. The grid will be different depending on which animation you have chosen.



## How to use the AR viewer

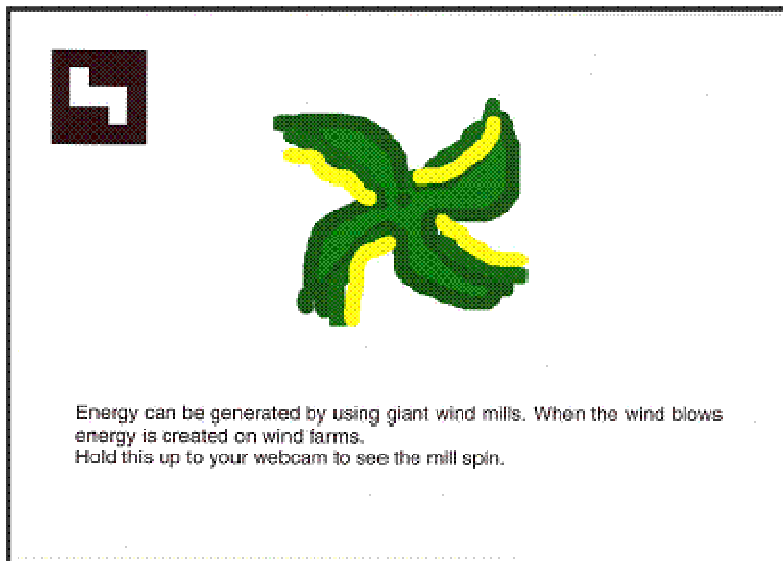
- Make sure you have your webcam plugged into your computer.
- Make sure you have the latest version of Adobe Flash Player installed from [www.adobe.com](http://www.adobe.com)
- Open your web browser and go to [www.2simple.com/ar](http://www.2simple.com/ar)
- The first window that will be displayed is from Adobe and it will ask you to allow the program to access your webcam. Click “Allow” (see bottom of this document for how to prevent this message from appearing every time)



- You will now see a video image from your webcam on your screen.
- Hold up the paper you have printed off so that it is visible on the video.
- The coded grid on the paper needs to be **within the green square** on the top left corner, for the program to recognise it.



- You may need to move the paper further away from the webcam if the grid is bigger than the green square, or move the paper closer if the grid appears very small. Ideally the grid should occupy most, but not all, of the area within the green square.
  - You may need to move the paper left or right as well to fit in with the green square. This can be tricky because you need to remember that when you move the paper to **your right**, it moves to the **\*left\*** on the webcam image!
  - Try to keep the paper as steady as you can
  - Try not to include anything besides the grid within the green square, such as your fingers!
- The program should start animating the picture as soon as it recognises the grid. Keep the grid within the green square while the animation continues. Enjoy!
  - Tip: The **light level** can affect how well the program works. Depending on the light level, the white of the paper may appear as a shade of grey when viewed with the webcam, and this can make it more difficult for the program to interpret the grid correctly. When you start up the AR viewer, it will cycle through some light level values until it finds the best one to use – (ie which shade of grey should be regarded by the program as white). You can see the current light level setting by looking at the vertical slider on the left. You can also vary the level yourself. The coded grid on the left of the screen shows how well the program is detecting the grid on your paper.
  - Since the AR viewer runs online, we plan to improve how it works and make it as easy and effective as possible – without you having to reinstall anything! It also means a child can print out work at school and take it home and use the AR viewer there.



**Q: How do I prevent the Adobe “Allow webcam” window from appearing every time I use the 2Simple AR viewer?**

A: When the window pops up, click the blue question mark on the top right corner. This will open a new web page with more information about Adobe Flash Player settings. Scroll down until you see the question: “Do I have to answer this question every time I run an application from this website?”

**Q: I go to [www.2simple.com/ar](http://www.2simple.com/ar) but it gets stuck on “initialising”**

A: Make sure you have a webcam plugged in to your computer before you go to this web page.

**Q: I go to [www.2simple.com/ar](http://www.2simple.com/ar) but in the middle of the screen I just get displayed a white background and an empty green square.**

A: This can happen if you have a webcam plugged in, but in use by another application (including possibly Windows Explorer.) Make sure no other applications are using the webcam and then refresh the web page.

**Q: What is the education value here?**

A: 1. It is introducing and making children aware of new technologies. AR is being used more frequently in real-world applications and is innovative and powerful. AR programs analyse webcam images and add value in many different ways.

2. Increased parental engagement - children do not need to save and load files to demonstrate this part of the program - they can simply print it out and take it home to show.

3. Provides a stimulus to edit and improve work to create a better effect.

Some curriculum links: [http://curriculum.qcda.gov.uk/new-primary-curriculum/Understanding the Arts](http://curriculum.qcda.gov.uk/new-primary-curriculum/Understanding%20the%20Arts)

E1 - "To explore a wide range of media and materials, tools and techniques to create artworks ... using ICT as a medium in itself and to explore other art forms. This includes 2D, 3D and technologies such as computer art and graphics, animations, electronic compositions, videos and so on..."

M4 - "To explore alternative approaches to develop and refine performances and communications, working in a variety of digital forms (Including computer graphics, presentations, animations, sound sequences, videos etc) when appropriate"

L5 - "To investigate, explore and record (This includes using sketch books, journals, Photographs, mood boards, ICT and video) information, to appreciate aesthetic qualities and generate imaginative ideas"

[Scientific and technological understanding](#)

M8 - "to refine sequences of instructions to control events or make things happen using ICT"

L3 - "to explore and explain how significant innovations and inventions have come about and how they have changed the way people live..."

L15 - "to investigate and explain how scientific and technological developments affect the physical and living worlds"

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