

# Drawing for Science, Invention & Discovery Even If You Can't Draw by Paul Carney

[Paul Carney](#), educational consultant and author has created six activities for AccessArt that meet the National Curriculum needs of both Science and Art & Design. The following resources explore methodical and chance drawing processes, together with visualisation, adaptation and memory drawing activities. The projects encourage observation, recording, creative thinking and invention; skills fundamental to the roles of artist and scientist.

Adapted from the book '*Drawing for Science, Invention & Discovery*' by [Paul Carney](#)

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**paul carney arts**

## Methodical Drawing



\_\_\_\_\_ This activity demonstrates how drawing is used by scientists as a means of

recording and cataloguing large amounts of complex information. It shows you how and why drawing can help us to better understand the objects we are studying and the importance of organising and sorting information.[Read More](#)

## Serendipity Drawing



Many of the world's greatest inventions have occurred by chance. This activity shows you how chance plays an integral part of the making process in art and shows you how artists try to manipulate it to further their creative purposes.[Read More](#)

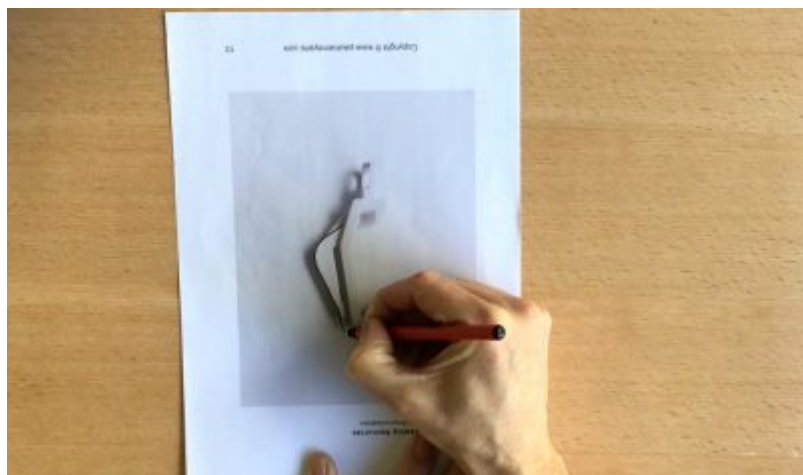
## Trial and Error Drawing



Mistakes aren't an unwanted outcome of the creative process, they are integral; a

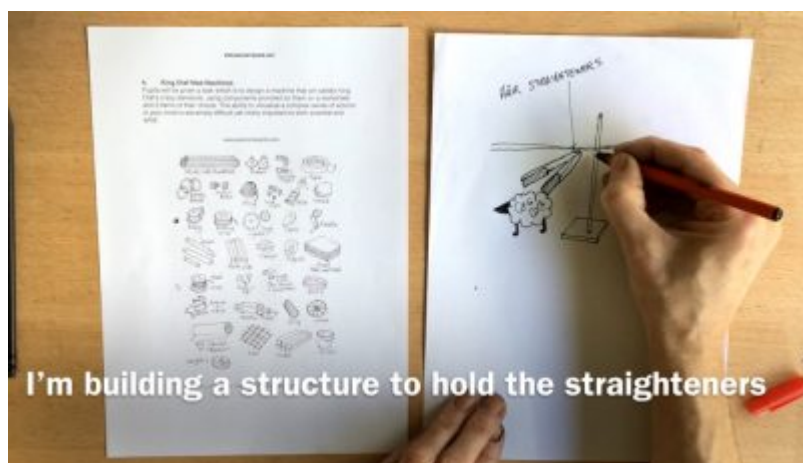
vital part of making. In this session we learn how to develop our working memory so that we might understand the creative process of action, mistakes and action better.[Read More](#)

## Adaptation Drawing



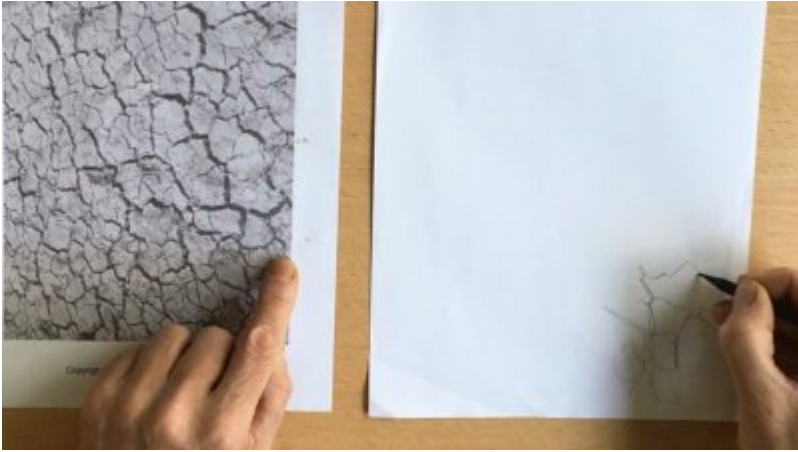
[\\_](#)This session is designed to explain the cognitive approach used by scientists to utilise the properties of one material for another, quite different purpose. It will also assist in developing pupil's ability to cognitively imagine and invent.[Read More](#)

## Visualisation Drawing



[\\_](#)Can we learn how to improve our ability to visualise complex sequences of information in our mind? Artists and scientists use this skill when thinking about the possible future stages of their work, but can we learn how to get better at it, so that we might become more successful practitioners?[Read More](#)

# Doppelganger Drawing



Many people find drawing difficult so I've developed this simple technique to show you how you might improve your drawings. What I want you to do is to hold your fingers out like this in front of you, and I'd like you to try and start moving them in synchronisation. [Read More](#)

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**This is a sample of a resource created by UK Charity AccessArt. We have over 1500 resources to help develop and inspire your creative thinking, practice and teaching.**

**AccessArt welcomes artists, educators, teachers and parents both in the UK and overseas.**

**We believe everyone has the right to be creative and by working together and**

sharing ideas we can enable everyone to reach their creative potential.

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**Visualisation Drawing**

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**Adaptation Drawing**

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**Trial and Error Drawing**

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**Methodical Drawing**

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**Serendipity Drawing**

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# **Rowan: Clay Coiling Techniques to Make Penguins, Tweety Pie and a Dalek too!**

Artist led facilitation in a setting for adults with learning disabilities; Abi, Sarah and students show how they made clay birds using clay coiling techniques and with a plaster mould for the birds' bases.

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## **Perseverance, Determination and Inventiveness: Building Nests**

Year 4 pupils from Comberton Village College and Cambourne Village College feeder schools met for a Gifted and Talented Sculpture Masterclass led by AccessArt at Bourn Primary Academy. The session centred around an exploration of the materials and construction methods we might use to build inventive, sculptural nests.

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## **Playing with tape,**

# **projectors, Wicky Sticks and so much more!**

Accessible approaches for collaborative drawing with visually impaired students with Sara Dudman and Debbie Locke at the Thelma Hulbert Gallery in Devon

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## **Astronaut Paper Body Casts by Gillian Adair McFarland**

A non messy, big impact project in a day on the theme of space exploration to fit with Tim Peake going to the International Space Station.

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## **Rowan: Making a Clay Bird from a Mould**

Abi Moore and students show how they made a collection of ceramic birds, from robins and dotterels to ducks using a plaster mould and coloured slip glazes to create individual and unique pieces.

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# **Art Curriculums: How to Get Started and Avoid Overwhelm**

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## **Artist Studio Series: Emma Sandham King**

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### **Water and Rock: Teenagers explore building drawings with graphite and modroc**

Teenagers look at pieces of chalk and flint and explore the physicality of rocks and geological processes with graphite and plaster.

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### **Barbie & Ken Transformation**

This adaptable resource shares how we transformed Barbie dolls using paper, fabric, modroc and paint. We had great fun researching and designing costumes and exploring appropriate materials. By Paula Briggs



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## **Year 3 & 4 Making Club: Animal Parade – Week Three**

This was the third and final session in a series of 'Animal Parade' workshops for children at Making Club at Milton Road Primary School where children painted their finished masks

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## **Year 3 & 4 Making Club: Animal Parade – Week Two**

This was the second session in a series of three 'Animal Parade' workshops, where children at Making Club at Milton Road Primary School, made 3D animal masks.

After having chosen their animals and created unique designs based on their Carnival Mask Templates in week one, children now attempted to cut and staple their creations to make them three dimensional.

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## **Teachers Start the New Year with Sketchbooks**

AccessArt introduces teachers from English Martyrs Catholic Primary School in Worthing, whistle stop introduction to

drawing and sketchbooks as tools for recording and thinking.

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## **Year 3 & 4 Making Club: Animal Parade – Week One**

To use our Carnival Mask Template to create animal masks for an Animal Parade at the end of this half term.

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### **Drawing Flames**

Teenagers are led on several guided drawing exercises exploring mark making to the rhythm of a burning flame.