



ANIMATION PACK

ANIM18
A CELEBRATION OF
BRITISH ANIMATION

A quick guide to British animation, with handy tips for programming and participation. Created as part of Anim18: A Celebration of British Animation.

   @Anim18UK | #Anim18

INTRODUCTION

Anim18 is a UK-wide celebration of British animation, taking place from April to November 2018.

From early techniques to emerging technologies such as VFX, gaming and VR, animation has allowed us to be transported by immersive experiences, without necessarily thinking about the processes used to create them.

The UK has continually been at the forefront of innovation, with a host of British talent bringing us some of our most cherished stories and characters - from troublesome tykes to yellow submarines, giant were-rabbits and more. Animators from around the world have made their homes in the UK, and international connections between animators and studios have made for groundbreaking work.

Creating animation can be a great way to learn about the art form and about film more widely, and there is an ever-increasing array of apps, games and software available to help budding animators get started. Animation can appeal to all ages, abilities and interests, engaging diverse audiences everywhere from cinemas, art centres, libraries and museums, to schools, youth centres and at home.



Image: Bonzo the Dog by George Studdy (1925). Courtesy of the BFI

In this booklet we'll take you on an animated journey through some of the key titles in British animation and introduce you to examples of techniques and technologies. We'll suggest some activities to get you started and tools you might need along the way. You can find even more at www.anim18.co.uk.

Additional resources, tips and tricks from experts and partners can be found at:



www.bfi.org.uk



www.intofilm.org



www.skwigly.co.uk



animateprojects.org

Cover Images top left clockwise: Sandra Greatorox QUAD, Anim18 Trailer (2018), *Only Motion*, QUAD, Transformer (1968), *Trick Films*, courtesy of the BFI.

CONTENTS

This pack gives a brief introduction to British animation, with suggestions for programming and participation.

TOP TIPS FOR VENUES: P4-5

Programming British Animation

QUICK GUIDE: P6-19

Animation Techniques & Activities

- ▶ Early Animation P 6-8
- ▶ Stop Motion P 13-15
- ▶ Digital Animation P 16-19

PULL-OUT POSTER: P9-12

Introducing British Animation

TOOLS: P20

Apps and Software for 2D and 3D Animation



POP-UP ANIMATION STATION:

Available separately at www.anim18.co.uk

ANIM18
A CELEBRATION OF
BRITISH ANIMATION

This pack has been created as part of Anim18: A Celebration of British Animation, to share insights into British animation and inspiration to create your own - in a venue, a group setting or at home.

Made in partnership with Derby QUAD (content) and Firecatcher (design). For more information contact: education@derbyquad.co.uk



ABOUT ANIM18

Anim18 was developed to showcase and celebrate the best of British talent - past, present and future - by bringing together a newly developed network of industry expertise, exhibition partners, and community-focused organisations.

Led by Film Hub Wales and Chapter (Cardiff) working with the BFI Film Audience Network and a host of project partners, Anim18 set out to generate renewed interest in British animation by bringing classic titles back into the spotlight, celebrating British talent in new releases, and delivering a programme of;

- ▶ Film screenings
- ▶ Workshops and masterclasses
- ▶ Events, talks and special projects
- ▶ Newly commissioned experiences
- ▶ Animation challenges, including
 - ▶ The first ever AniJam UK
 - ▶ The Anim18 GameJam: Pixelheads Dash! with The National Videogame Arcade
 - ▶ Animation creation with MediaActive, IntoFilm and the YMCA

Full details and additional resources at www.anim18.co.uk



Anim18 is led by Film Hub Wales and Chapter (Cardiff) working with the BFI Film Audience Network and project partners supported by the BFI awarding funding from the National Lottery, by Arts Council England and the organisations above.

   @Anim18UK | #Anim18

Image: Wallace & Gromit: The Curse of the Were-Rabbit
© 2005 Dreamworks Ltd. All rights reserved.

TOP TIPS PROGRAMMING BRITISH ANIMATION



As part of Anim18 we researched and developed a season of British animation in partnership with venues, festivals and organisations right across the UK.

Here are some top tips we picked up along the way, which may help you to programme your own events.


CHOOSING CONTENT

When choosing content, think about;

- ▶ **Themes/Strands** to bring content together. See page 9 for a starting point.
- ▶ **Target Audiences** for your programme. Tips on this later!
- ▶ **Diversity** on-screen and behind the scenes. Resources on the Anim18 website.
- ▶ **Access & Inclusion** for all - see the BFI Film Audience Network's Access for All Strategy for details.

TECHNICAL REQUIREMENTS

Remember that available formats can vary (especially for less common titles). You may need to screen films from DCP, DVD, BluRay, 35mm, Digibeta, or other digital files, and there are additional technical considerations when working with VR, gaming and other new technologies. Ask for a tech spec and make sure you have the necessary equipment.



SECURING RIGHTS

Securing the rights to exhibit work can be a tricky process. Terms will vary and rights-holders will often charge a fee.

As part of Anim18, we researched and collated details of titles and rights for a large catalogue of British animations. **You can find these at www.anim18.co.uk/films.**

You may also want to try:

- ▶ **Distributors** such as Launching Films and BBFC.
- ▶ **Organisations** such as Cinema For All, Filmbank Media, the Independent Cinema Office and The Space.
- ▶ **Archives** including regional and national archives - many are listed at films.britishcouncil.org.
- ▶ **Festivals** who may be happy to advise on rights to animations they've included in their programmes: Check out Cardiff Animation Festival, Manchester Animation Festival, Encounters Short Film & Animation Festival, Aesthetica Short Film Festival, Glasgow Short Film Festival, Edinburgh International Film Festival and the British Animation Awards.
- ▶ **Studios** who create animation can often advise on how to source rights to their work.
- ▶ **TV Stations** such as S4C, Channel 4, BBC and ITV may point you in the right direction for animations they have broadcast.
- ▶ **Animators** may be keen for you to showcase their work, and may hold the rights or know who does.
- ▶ **Universities** may have a range of student animations available for showcasing.

AUDIENCES

Animation is not just for children!

Check out our website for recommended titles and resources to help with programming British animation especially for;

- ▶ Pre-school Audiences
- ▶ Young People
- ▶ Schools
- ▶ Adults

ACCESS AND INCLUSION

Animation can be especially suited to audiences with additional access needs, for example light-hearted animations with easier to follow storylines (such as Wallace & Gromit) can be perfect for dementia-friendly screenings. Check out our resources for inclusive animation programming created by the BFI FAN Access Officer: www.anim18.co.uk/resources and the BFI FAN Access for All Strategy (available on the Film Hub Wales website: www.filmhubwales.org).

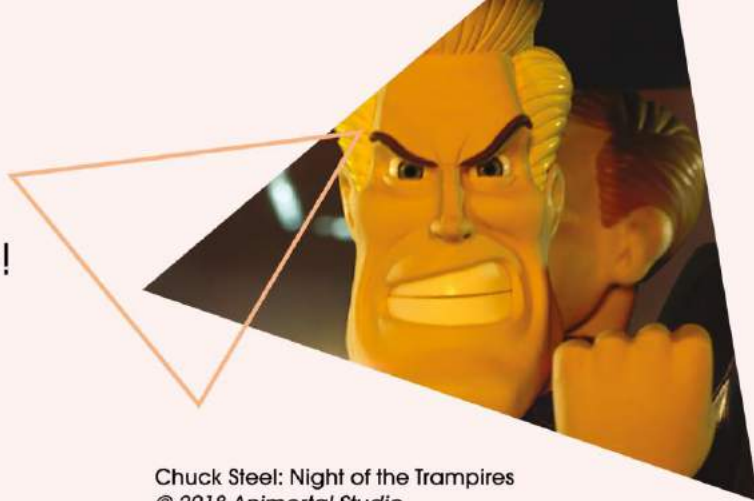
EVALUATION

Gaining feedback on your work is an important way to evaluate how effective it is. Finding the best techniques can ensure you are gathering the most meaningful data. There are lots of examples and templates available on the Anim18 website, including;

- ▶ Surveys
- ▶ Challenges and Competitions
- ▶ Animated Evaluation Game

For other examples, try;

- ▶ Roald Dahl on Film - Evaluation Game
www.roalddahlonfilm.co.uk
- ▶ ICO toolkits
www.independentcinemaoffice.org.uk
- ▶ Arts Councils and Organisations - Workshops and online guidance
www.artscouncil.org.uk
www.creativescotland.com
www.arts.wales
www.artscouncil-ni.org



Chuck Steel: Night of the Trampires
© 2018 Animortal Studio

TAKE CARE

HEALTH & SAFETY AND SAFEGUARDING

When delivering participatory activity, there are considerations around health & safety and safeguarding, especially when working with children and young people. Please visit our website for guidance documents.

A few things to bear in mind:

- ▶ **DBS Checks** for artists and support workers who are working with children, young people and vulnerable adults
- ▶ **Risk Assessments** for potential hazards and how to minimise them
- ▶ **Permissions** for photography and filming. For under 18s you must have signed parental/carer permission detailing how you will use and manage the photographs
- ▶ **Emergency Contact Details** for parents of children who are unaccompanied
- ▶ **Medical and Access Needs** for participants in your care

Templates for Emergency Contact/ Photo Permissions Forms can be found online, and should be completed at the time of booking or on arrival.

QUICK GUIDE:

ANIMATION TECHNIQUES AND ACTIVITIES



From prehistoric shadow play to contemporary technologies, animation has long been a source of fascination, information and entertainment.

It has played a fundamental role in the development of film and continues to break new ground today. Here's a quick guide to some of the techniques and technologies, and some examples of activities you can try yourself - at home, with a group, or in a venue.

You can view more than 300 films from the history of British animation online with the BFI Player's 'Animated Britain' collection, or book special screenings from the BFI 'A New History of British Animation' three-part packages.

EARLY ANIMATION

Animation is the process of manipulating images or objects so that they appear to be in motion.

Motion is depicted as early as Palaeolithic or stone age era cave art. Sequential images of movement can be found on 5,000 year old pottery found in Iran and 4,000 year old Egyptian murals. Shadow play puppets also date back to prehistory. Moving imagery began to be projected in the 17th and 18th centuries with magic lanterns.

19th century techniques and devices began to sow the seeds of invention that were the forerunner not only of animation as we know it today but cinematography in general.

See the Animation Timeline in the centre pages for more on the development of British animation.



ANIFACT!



Prehistoric Thaumatrope-style discs were found in French caves, but the invention of the named device is credited to British physician John Ayrton Paris, when he demonstrated one at the Royal College of Physicians, London, in 1824. His written description appears in a children's book in 1827, with an illustration by George Cruikshank.

HAND-DRAWN ANIMATION

Here are some quick and easy ideas to have fun with hand-drawn animation (and perfect for a workshop setting!).



MAKE A THAUMATROPE

Turn two images into one with this illusion, which uses a key principle of animation - 'Persistence of Vision'. The eye sees an image for a fraction of a second after the object is gone, so when you add another quickly it blends the two.

1. Think of an image, like a bird in a cage, that can be separated into two pictures.
2. Draw two circles (the same size, bottom of a cup should be good) on a piece of card and cut out.
3. On one piece of card draw and colour in one of the images, i.e. the bird.
4. On your other piece of card draw the other image, i.e. the cage.
5. Tape your stick to the back of one of the circles, then glue the other circle to it, back to back, making sure that your pictures line up with each other.
6. Spin your Thaumatrope and watch the images become one!

SHARE YOUR CREATIONS WITH US

   @Anim18UK | #Anim18

MAKE A FLIPBOOK

Turn a series of images into a sequence of movement using 'Illusory Motion'.

1. Think of a simple character to draw.
 2. Fold a blank A4 piece of paper into eighths and cut along the folds into equal size.
 3. Make into a tidy stack and staple down one of the long sides to make into a small book.
 4. With staples at the top, on the first page draw your character in the bottom half of the page, so it's visible when you flip through your book.
- If you draw in pencil first, you can correct mistakes as you go, and add colour or darker lines once you are happy with your animation.
5. On each new page draw your character in the same place with a small change in shape or position to make it move or walk across the page. Keep flipping back and forth to check your changes.
 6. Flip through your book and watch your character come to life.



Get more adventurous by adding characters or objects that interact with each other.

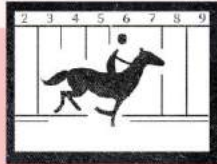
Think about how they appear – gradually from one side of the page or suddenly in a puff of smoke! Add more detail (like shadows) and backgrounds.

PHOTO SEQUENCING

MAKE A ZOETROPE

Create perceived motion using one of the earliest forms of moving image, the zoetrope.

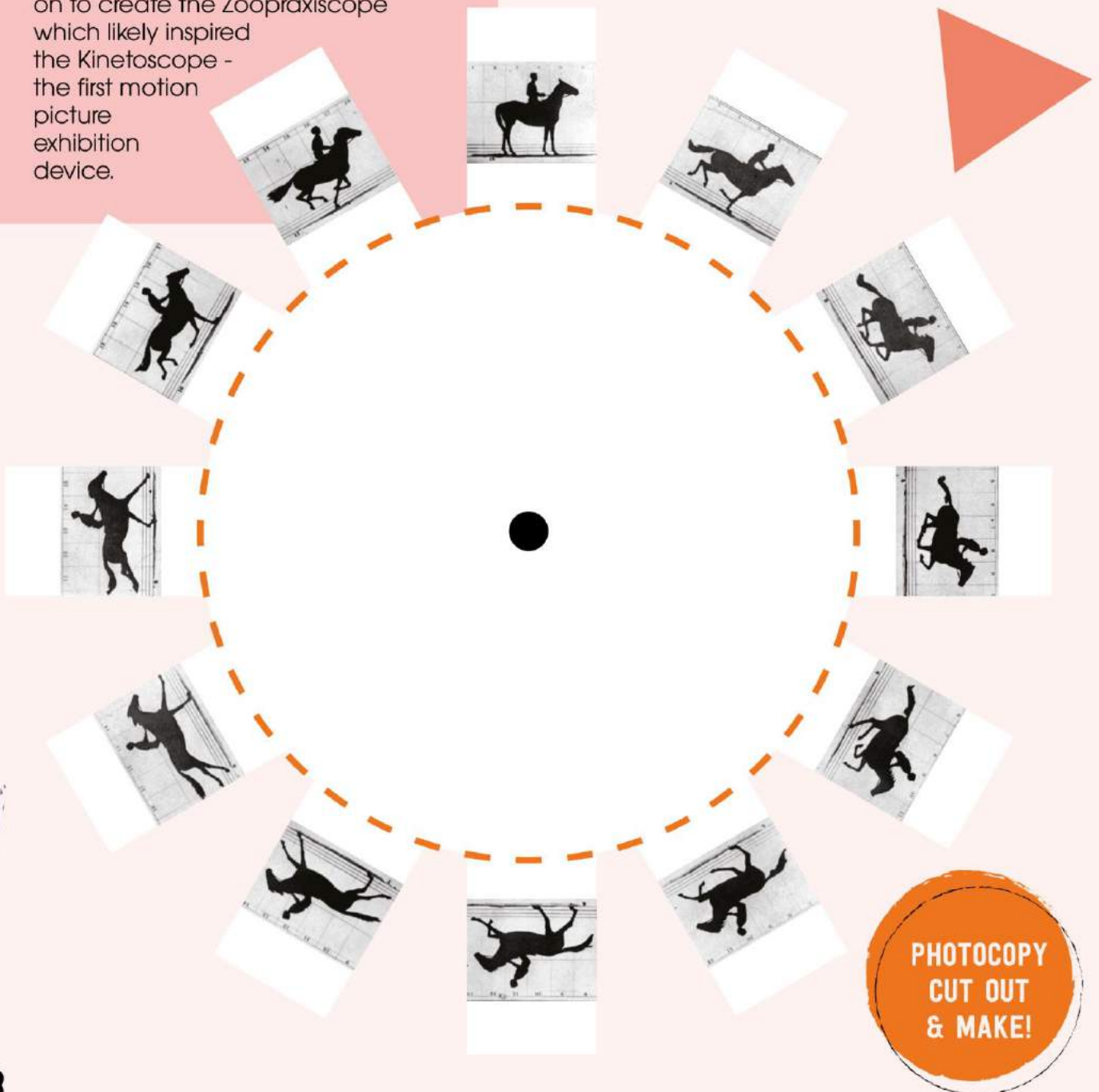
ANIFACT!



Eadweard Muybridge created this zoetrope in 1834. He photographed a galloping horse and placed the images in sequence. He went on to create the Zoopraxiscope which likely inspired the Kinetoscope - the first motion picture exhibition device.

1. Photocopy this template onto A4.
2. Carefully glue your photocopy to a sheet of A4 card, smoothing out any bumps.
3. Cut out the Zoetrope.
4. Fold the tabs along the orange dotted line, with the images facing into the centre.
5. Place a pencil (with an eraser top) underneath the centre of the base and push a drawing pin through the black spot to fix it to the eraser.
6. Spin the Zoetrope and watch the horse gallop.

Alternatively, draw a series of small characters in slightly different poses to cut out and cover each of the horses on the tabs.





AS PART OF ANIM18 WE DEVELOPED FOUR KEY STRANDS TO SHOWCASE THE VARIETY IN BRITISH ANIMATION.

You can use these as inspiration for your own programming.

STRANDS

POLITICS AND PERSUASION:

From propaganda films to adverts, music videos and social campaigns, animation has long been used to convey powerful messages and persuade an audience.

Examples: *Animal Farm*, *When The Wind Blows*, *Britannia*.



YOUNG AT HEART:

Appealing to children and the child in all of us, this strand is dedicated to youthful spirit and quirky humour in British animation. Perfect for intergenerational, dementia-friendly or supportive environment screenings and activities.

Examples: *Yellow Submarine*, *Wallace & Gromit*, *Cosgrove Hall*



BREAKING BOUNDARIES:

Experimentation and innovation is at the heart of British animation. This strand celebrates the animators who have pushed the boundaries, from early techniques to new technologies, and have shaped the way we create and experience animation today.

Examples: *Len Lye*, *Margaret Tait*, *Bolex Brothers PLUS VFX*, gaming and VR



CONNECTIONS:

Celebrating the art of collaboration, this strand traces international connections between animators, studios and stories. Showcasing British connections in international animation, and artists from around the world who have worked in the UK or made their home here.

Examples: *Lotte Reiniger*, *Ray Harryhausen*, *Wes Anderson*



CHAPTER



Anim18 is led by Film Hub Wales and Chapter (Cardiff) working with the BFI Film Audience Network and project partners, supported by the BFI awarding funding from the National Lottery, by Arts Council England and the organisations above.

INTRODUCING BRITISH ANIMATION

Here's a whistlestop tour of British animation inspired by the Anim18 programme. This is just a small selection and there's so much more to discover! For screenings, resources and extra information visit www.anim18.co.uk

ANIMATED FILMS

1908 *Dreams of Toyland*, Arthur Melbourne Cooper

1916 *John Bull's Animated Sketchbook No 15*, Anson Dyer

1922

Bonzo the Dog, George Studdy



1958 *The 7th Voyage of Sinbad*, Ray Harryhausen



1954

Animal Farm, Halas & Batchelor

1938 *Love on the Wing*, Norman McLaren

1935 *A Colour Box*, Len Lye

1926 *Prince Achmed*, Lotte Reiniger

1925 *Jerry the Troublesome*, Tyke Sid Griffiths



1961 *Do It Yourself Cartoon Kit*, Bob Godfrey

1968 *Yellow Submarine*, George Dunning

1974 *Aerial*, Margaret Tait

1978 *Watership Down*, Martin Rosen

1981 *Pretend You'll Survive*, Leeds Animation Workshop

1986



When the Wind Blows, Jimmy Murakami

1986 *Street of Crocodiles*, The Quay Brothers

2018

ISLE OF DOGS, Wes Anderson
© 2018 Image courtesy of Fox

2018 *Chuck Steel: Night of the Trampires*, Michael Mort

2017 *Loving Vincent*, Hugh Welchman and Dorota Kobiela

2016

Ethel and Ernest, Raymond Briggs/Lupus Films

2011 *Welcome to Kitty City*, Cyriak

2010 *The Illusionist*, Sylvain Chomet

2005 *Wallace & Gromit: The Curse of the Were-Rabbit*, Nick Park

1993 *The Secret Adventures of Tom Thumb*, bolexbrothers

1988 *Who Framed Roger Rabbit*, Robert Zemeckis

1988 *Alice*, Jan Švankmajer

1988 *Feet of Song*, Erica Russell

ANIMATION TECHNOLOGIES



1825

Kineograph (flipbook)

1834

Zoetrope

1868

1879

Zoopraxiscope

Chroma Key

1889

1897

Stop Motion

Rotoscope

1915



Stereoscopic '3D'

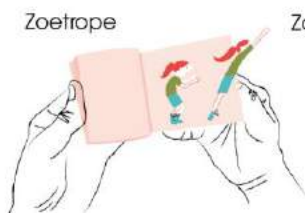
1952

3D Wireframe

1960s

1968

VR Headset



TV ANIMATION

1957 Pan-tele-tron, Digby Turpin 📺

1957 TVC London established by John Coates. Between 1957 and 1997 TVC made over 1500 commercials, 70 documentaries and 80 entertainment films.

1959 Peter Firmin and Oliver Postgate establish Smallfilms TV series include *Noggin the Nog*, *Clangers* and *Bagpuss*.

1966 *Camberwick Green*, Gordon Murray, Bob Bura, John Hardwick and Pasquale Ferrari. Series also includes *Trumpton* and *Chigley*.

1975 Cosgrove Hall Films established. TV series include *Noddy*, *Choriton* and *the Wheelies*, *Bill and Ben*, *Danger Mouse*, *Count Duckula*. 📺

1993 *Britannia*, Joanna Quinn 🎬

1986 *Sledgehammer*, Aardman with Brothers Quay

1987 *The Black Dog*, Alison De Vere 🎬

1982 *The Snowman*, Raymond Briggs, produced by John Coates/TVC London

1982 Channel Four and S4C in Wales launched. Commissioning Editor for animation, Clare Kitson, oversees one of the most successful periods in animation history.

1981 *Rupert and the Frog Song*, Geoff Dunbar 🎬



2004 *Peppa Pig*, Astley Baker Davies

2007 Animate Projects founded, building on groundbreaking work of 'animate!' scheme from Arts Council England & Channel 4

2009 *The Gruffalo*, Max Land and Jakob Shuh/Magic Light Pictures

2015 *Hey Duggee*, Grant Orchard/Studio AKA 📺



2015 *Twirlywoos*, Ragdoll productions 📺

KEY

STRANDS

- POLITICS & PERSUASION
- BREAKING BOUNDARIES
- YOUNG AT HEART
- CONNECTIONS

SEE MORE

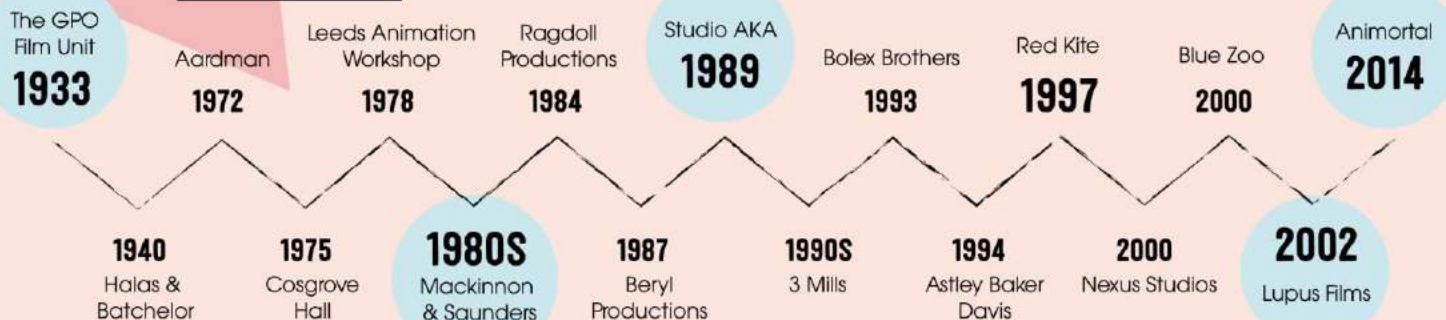
SPECIAL ANIM18 EVENTS

AVAILABLE ON
The BFI Player: 'Animated Britain' player.bfi.org.uk

AVAILABLE IN
The BFI's 'A New History of British Animation' packages

AVAILABLE AT
The National Library of Scotland's 'Moving Image Archive' movingimage.nls.uk

ANIMATION STUDIOS



Animated computer games



1970S
CGI (in films)

Key Frame Animation

1980s

1987

GIF



AR (named)

1990

Motion Capture (in video games)

1990s

Digital Morphing

1990s



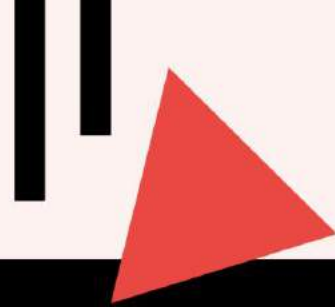
Projection Mapping (first patent)

1991

3D Printing (in feature films)

2009

TIMELINE TRIVIA



YEAR	NAME	FACT
1926	The Adventures of Prince Achmed	The oldest surviving animated feature film created by Lotte Reiniger. Events with live score as part of Anim18.
1933	The GPO Film Unit	Established by the General Post Office to create public information films. Animators include Lotte Reiniger, Len Lye and Norman McLaren.
1935	A Colour Box	One of the first animations to be painted directly onto film. Created by Len Lye.
1953	Norman McLaren	Won an Oscar for 'Neighbours' (1952) - a film using the 'pixilation' animation technique.
1954	Animal Farm	The first British animated feature released in cinemas. Created by Halas & Batchelor, who also made the first European stereoscopic '3D' film (<i>The Owl and the Pussycat</i> , 1952) and the first ever British animated feature film (<i>Handling Ships</i> , 1945).
1981	Pretend You'll Survive	Created by Leeds Animation Workshop - a women's filmmaking collective set up in 1978 to produce and distribute animated films on social issues.
1986	Sledgehammer	Peter Dinklage's music video produced in two weeks at Aardman with a large collaboration of animators. Went on to win dozens of awards.
1988	Who Framed Roger Rabbit	Animation directed by Canadian Richard Williams, who established a studio in England and spent almost 40 years creating <i>The Thief and the Cobbler</i> (1993).
1991	Lemmings	Animated computer game created by DMA Designs in Scotland. Went on to develop Unrally and Grand Theft Auto, and now called Rockstar North.
1993	Britannia	Joanna Quinn's political satire won three awards at the Annecy Film Festival before being screened on Channel 4.
2002	Animators' Survival Kit	By Richard Williams and regarded as the 'bible' reference for animators.
2005	Wallace & Gromit: The Curse of the Were-Rabbit	The first feature-length Wallace & Gromit film won an Oscar. Now a 'Scratch n Sniff Cinema Presents...' experience created for Anim18.
2005	Corpse Bride	UK studio 3 Mills worked with Tim Burton to create this stop-motion feature, followed up with <i>Frankenweenie</i> (2012) and Wes Anderson's <i>Fantastic Mr Fox</i> (2009) and <i>Isle of Dogs</i> (2018).
2007	Animate Projects	A strategic agency that develops, produces, curates and programmes initiatives to support creative animation practice.
2009	Coraline	Laika used 3D printed animation to bring British author Neil Gaiman's story to life.
2010	Titanic Studios	One of Europe's largest film studios based in Belfast. Created VFX for the HBO series <i>Game of Thrones</i> .
2010	The Illusionist	Directed by Sylvain Chomet in Edinburgh. Picked up numerous top film awards.
2012	Projection Mapping	Used at the opening ceremony of the 2012 Olympic Games in London.
2018	Yellow Submarine	50th anniversary celebrations. Tour and sing-alongs as part of Anim18.
2018	BFI: Animated Britain	A collection of over 300 British animations made available for free on BFI Player.

ANIMATION TECHNIQUES & ACTIVITIES CONTINUED

STOP MOTION

Stop motion is the process of photographing a series of successive drawings or objects to create an illusion of movement once the images are presented as a sequence.

The UK is renowned for being at the forefront of stop motion animation. Here's how you can create your own.



Image: Sandra Creatorex

YOU'LL NEED

SOFTWARE AND EQUIPMENT

- ▶ A phone, tablet or computer (you may need to add a webcam - make sure you choose one that can be angled and is sturdy enough to attach to a tripod or stand).
- ▶ Apps or software (examples on the back page).
- ▶ A tripod or stand. If you are doing 2D animation above, you will need a tripod so that you can place the camera horizontally. Make sure the stand is firm enough to avoid any shaking when you take each shot.
- ▶ Lighting. You may have plenty of available light but, if not, try angle poise lamps, torches (with coloured gels/acetate) or fairy lights to add dramatic effect.

HOW TO ANIMATE:

Most apps or software will come with really easy instructions. The basic principle is to create movement by taking lots of still images and moving your character very slightly between shots. Experiment by moving limbs or moving the whole figure. The more still images you take, the longer your film will be.

ADD SOUND, TITLES, SPEECH SLIDES AND OTHER EFFECTS:

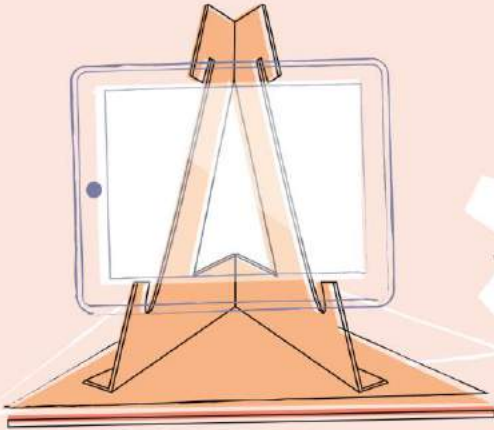
- ▶ Adding speech bubbles can be fun. Decide what your characters will say before you start animating. Write short pieces of speech and draw speech bubbles around them, or print out speech bubble templates from the internet. Add these into your scene (stick on your background or onto/next to your character as you animate).
- ▶ Many apps and software have inbuilt title and credit pages, sound effects or speech slides for you to add in. Do this once you have completed the actual animating.

Make sure you have permission to use any sound, music or other content.

USE WITH THE ANIM18 POP-UP ANIMATION STATION



1 MAKE A STAND FOR A TABLET OR PHONE



PAPERCLIP PHONE STAND!



Use pliers to bend the tip to 90 degrees then bend the inner loop back 45 degrees.



Download a template to help - there are plenty online. You could use wood or cardboard.

2 CHOOSE A THEME OR STORY TO ANIMATE



- ▶ Space
- ▶ Adventure/exploration
- ▶ Dinosaurs/monsters
- ▶ Children's stories, text excerpts from novels, scenes from plays

HEALTH AND SAFETY! BE CAREFUL OF:

- ▶ Trailing wires
- ▶ Hot lights
- ▶ Sharp equipment (scissors, knives etc)
- ▶ Allergies to art materials
- ▶ Do a risk assessment before you start - many schools will request one for their own records before a visit

ANIFACT!



The world's smallest stop motion character called Dot is just 10mm tall. Created by Sumo Science and shot on a Nokia N8. 'Dotty' is also the name of the Cardiff Animation Festival mascot.

Image: Cardiff Animation Festival

3 CREATE A STORY

Decide **who** your characters are, **what** they are going to do and **where** the action happens.

Is your character:

Are they wearing any clothes?



ANIMAL

HUMAN



completely made up

Do they have any super powers?



WHAT DO THEY LOOK LIKE?



4 PLOT A STORYBOARD

Plot your story on a storyboard. There are lots of templates for this online. This could be as simple as 6 boxes (2 rows of three) on a piece of landscape paper. Draw a piece of action in one box then the next in order

You could put 2 or 3 lines underneath each box, and write down notes or speech for the scene.



Images: Isle of Dogs XXXXXXXXXXXXXXX

SHARE YOUR CREATIONS WITH US

   @Anim18UK | #Anim18

5 MAKE A CHARACTER YOU COULD CREATE...

- ▶ 3D character made from modelling clay or plasticine
- ▶ 2D paper or card figures
- ▶ Everyday objects and toys:
 - ▶ Action figures
 - ▶ Plastic animals and dinosaurs
 - ▶ Building blocks
 - ▶ Kitchen utensils!
 - ▶ People and body parts

6 CREATE A BACKGROUND AND PROPS

- ▶ Draw a background onto a piece of A3 card
- ▶ Use different materials (tin foil, shiny wrappers, old clothes, sand, wool, cotton wool) to create different landscapes and ground textures
- ▶ Use the surrounding environment as a backdrop for your characters to interact with
- ▶ Use the Anim18 background supplied with this pack



2D CUT OUT CHARACTERS

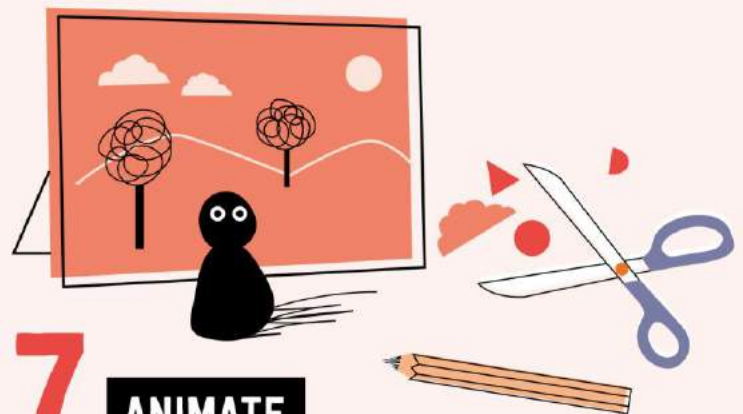
Draw your character on paper. Cut it out and cut the arms and legs off but don't throw them away! Attach the arms and legs to the underside of the body with blu-tack – you can now move the arms and legs into different positions when you shoot the individual frames of your film.

3D PLASTICINE CHARACTERS

Modelling clay/plasticine is available in individual colours or bulk buy assorted colours. Newplast offers great quality especially on bulk orders, but there are multiple brands and sellers online.



Image: Sandra Greatorex



7 ANIMATE

Use one of the apps listed on p.20 to animate your story shot by shot.

GOING DIGITAL

New techniques and technologies are offering exciting new ways to create and present animation. Here are some examples of digital animation, and tips on creating your own.

WHAT IS DIGITAL ANIMATION?

Digital animation is a bit of a catch all term that includes the use of digital devices, equipment and/or software to create moving imagery.

DIGITAL WORKSHOPS

It can be surprisingly easy and inexpensive to deliver digital workshops. Here are some tips...

- ▶ Phone and tablet apps are often free and easy to use.
- ▶ Some software packages have educational discounts.
- ▶ Look for open source alternatives (like Blender) that are free.
- ▶ Younger participants tend to pick up these skills really quickly given some basic tuition.
- ▶ Contract an experienced artist, facilitator or other organisation to run introductory workshops, longer term projects or CPD for your staff. Some larger organisations can bring their own equipment too.

Check out the apps and software on page 20.

COMPUTER ANIMATION VS CGI

Computer animation is the process of generating animated images – think just the moving image.

CGI (computer generated imagery) includes static and moving images – think both the scenery and moving characters.



Image: Graham Lucas Commons



Image: Brave (2012)
Image courtesy of
Park Circus/Disney

TECHNIQUES

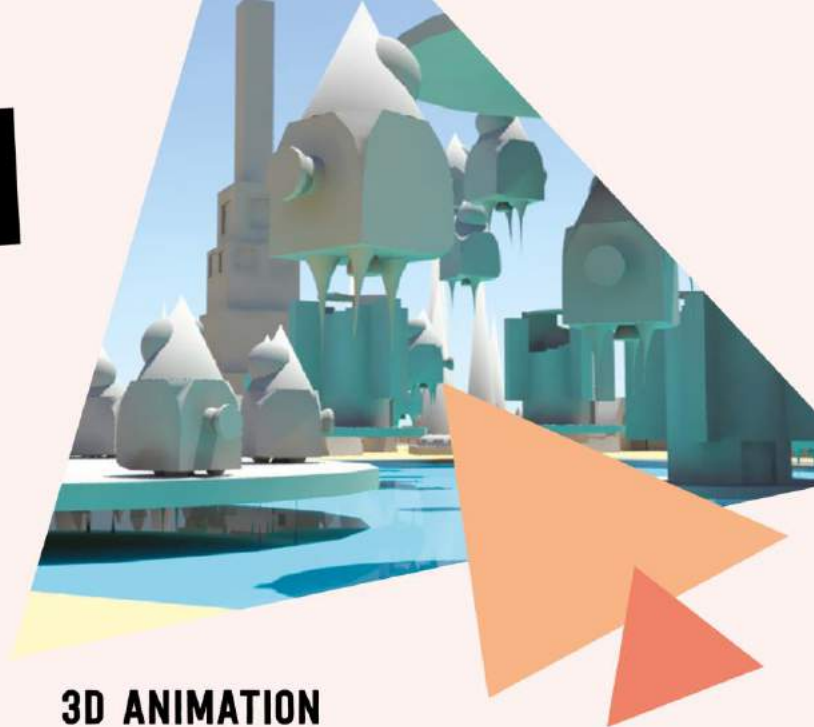
A selection of apps and software that you could use to recreate some of these techniques are listed on the back page.

KEY FRAME ANIMATION

Traditional stop motion animation requires every single frame to be photographed in a linear order. Digital keyframe animation streamlines the process and offers more non-linear control by setting a keyframe at the start position and another keyframe at the end position. Any changes to the character/object between the two keyframes will be calculated and animated by the computer.



Images: QUAD



3D ANIMATION

Computer Generated Animation (CGI) has been used since the 1960s to add special effects to film. Digital 'puppets' are modelled, textured and rigged into a posable skeleton with using 3D software. CGI is also often used to create crowd scenes and backdrops.

CGI is now the primary animation medium for big Hollywood studios but CGI and VFX in live action film is often produced outside the US. Baby dragons in Series 1 of Game of Thrones were created by British company BlueBolt.

Try creating your own 3D models and animation using Blender or Maya software, listed on page 20.

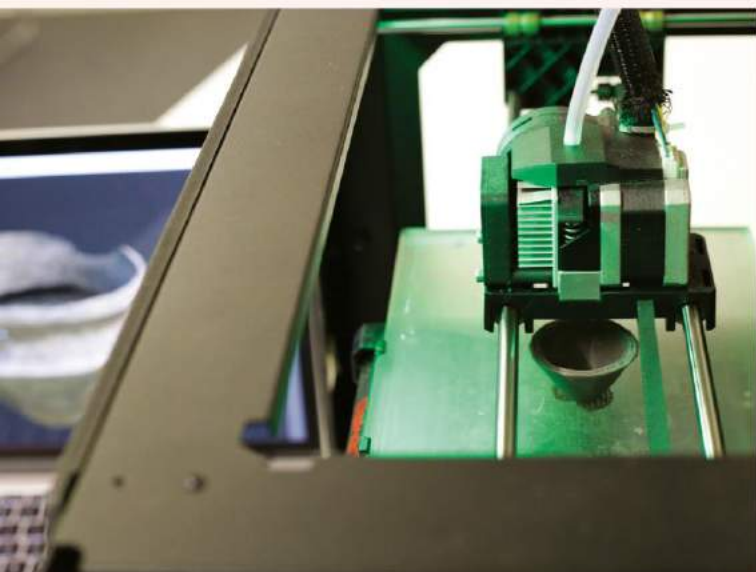
MORPHING

Technique used to transform one image or shape into another.

First film to use detailed morphing was *Willow* (1988), created by George Lucas' visual effects company Industrial Light & Magic, which has a base in London.

A range of apps are available and can be used to simple (and fun) effect to transform one face into another.

DIGITAL ANIMATION



3D PRINTING

3D printing technology is now being used to combine computer generated animation with more traditional stop motion techniques. Characters' faces are modelled and animated digitally, then thousands of replacement heads with slightly different facial expressions are 3D printed for the stop motion process.

British animation studio Aardman used this technique to make The Pirates! series of films.

GIFS

GIF is an abbreviation for Graphic Interchange Format, a compressed file format used for sending still and moving images. More often used to describe short animated or moving images. Debate still rages whether it should be pronounced 'jif' or 'gif'.

The format became popular with the rise of the internet in the early 1990s and has found a new generation on social media sites usually as a tool of communication. There are plenty of apps/software available to easily transform still and moving images into this format.

Check out p20 for examples of apps and software to try.

Image: QUAD

ROSCOPING (DIGITAL) AND MOTION CAPTURE

Digital rotoscoping is a computer assisted alternative to earlier hand drawn rotoscoping techniques. Filmed movement is traced over by animators, frame by frame, to create realistic motion but is very labour-intensive. Digital rotoscoping is quicker but now more often used to bring objects to life, rather than characters, and in video game development. Loving Vincent was the first fully painted animated film. Live action was first shot against a green screen and artists then painted over the action in the style of Van Gogh.

Motion Capture (or Mo-Cap for short) is the process of filming human (or animal) movement and using that to digitally create 2D or 3D character animation. Movement is captured on film multiple times per second and/or from multiple camera positions, though the latter technique is not used as much now. Used in both live action and animated movies. One of the most notable examples of Mo-Cap is Andy Serkis as Gollum in the Lord of the Rings series. Serkis went on to co-found The Imaginarium, a London-based production company developing and using digital performance-capture techniques.

For additional resources
visit The Space and Into Film
www.thespace.org/resources
www.intofilm.org/resources



**INTO
FILM**



Image: QUAD

GAMING

Computer games incorporate different stored animations that are controlled by the player's action or the computer (artificial intelligence). For example, a character standing still would trigger an idle animation, when running it will switch to a run animation.

For examples of animation in gaming and resources for running a GameJam challenge, check out the 'Anim18 GameJam: Pixelheads Dash!' with the National Videogame Arcade.



Image: Charlotte Jopling

VIRTUAL REALITY (VR)

Virtual Reality (VR) is developing as an exciting platform for animated storytelling. VR presents a fully immersive 360-degree experience, with animations taking place all around the viewer and giving them control of the camera via a head-mounted display. Major animation studios are investing in the development of VR storytelling for the home entertainment and tourist attraction markets.

Examples include: *My Name is Peter Stillman* by 59 Productions

Anim18 VR Gallery (created by QUAD).



Image: TECH:SQUAD

PROJECTION MAPPING

Projection Mapping uses an object as the canvas to project animation onto. In the public realm building facades are used to popular effect at large scale events – recent British examples include the Opening Ceremony of the London 2012 Olympics.



ANIFACT!

TOMB RAIDER

Tomb Raider icon Lara Croft was originally developed in Derby in the mid 1990s and published in 1996 for Sega Saturn, PlayStation and MS-DOS.



APPS



Here are some of the most low-cost and easy-to-use apps and software to get you started with creating animation.

ANIMATION CREATOR HD

Simple, yet powerful drawing tools, colour options and easy frame management brings drawn animation to life.

FLIPA CLIP

Digital version of the traditional flipbook.

GIF X

Bring your photos and videos to life, and share with friends and family.

GIFBOOM

Allows you to create animated GIF images directly from your device's camera.

ANIMATE IT!

Easy to use animation app from Aardman.

I CAN ANIMATE

Easy to use app for creating your own 2D and 3D stop motion animations.

STOP MOTION STUDIO

Easy to use app for creating your own 2D and 3D stop motion animations.

TOONTASTIC

Draw, animate and narrate your own cartoons.



SOFTWARE

AFTER EFFECTS, by subscription. Education edition for students and teachers available.

Create digital visual effects and motion graphics. Industry standard.

ANIMATE IT!

All you need to start animating: an HD webcam, software, green screen and modelling clay from the people that brought you I Can Animate software and Aardman.

BLENDER

Open source software for 3D graphics animation and modelling.

CINEMA 4D, by subscription.

Industry standard 3D animation, modelling and rendering software.

FLASH, part of Adobe Creative Cloud package.

Multimedia software platform used for producing animation.

I CAN ANIMATE, (7-day free trial available).

Award winning stop motion animation software for all ages.

MAYA (also known as Autodesk Maya), by subscription.

Industry standard 3D animation, modelling, simulation and rendering software.

In app purchases cost extra. Apps widely available across iPad, iPhone and Android platforms. Software available across Mac and PC platforms. Before purchase, check your device meets the minimum recommended requirements.

Anim18 and QUAD are not responsible for the content of these apps. Please note that it is illegal to use social media under the age of 13.



Anim18 is led by Film Hub Wales and Chapter (Cardiff) working with the BFI Film Audience Network and project partners, supported by the BFI awarding funding from the National Lottery, by Arts Council England and the organisations above.

   @Anim18UK | #Anim18
www.anim18.co.uk