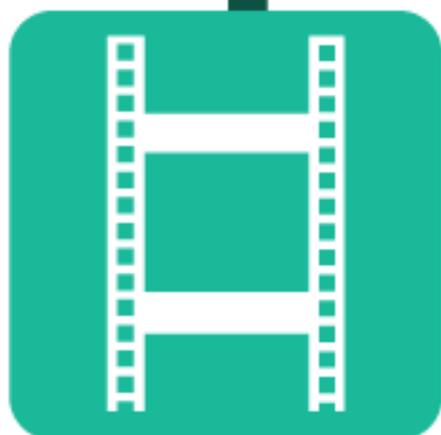




Computing

Scheme of Work

Unit 4.6 – Animation



Year Group: 4
Number of
Lessons: 3

From **2**simple



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Introduction

For these sessions, the children will need to have their own individual logins to Purple Mash.

If you are currently using a single login per class or group and would like to set up individual logins yourself, then please see our guide to doing so at [Create and Manage Users](#). Alternatively, please contact support at support@2simple.com or 0208 203 1781.

This series of three lessons will provide the children with the knowledge and understanding to create simple and more complex animations using 2Animate on Purple Mash.

A [user guide to 2Animate](#) is available in the [Guides and Resources section](#) of Purple Mash.

Medium-Term Plan

Lesson	Aims	Success Criteria
<u>1</u>	<p>To discuss what makes a good animated film or cartoon and what their favourites are.</p> <p>To learn how animations are created by hand.</p> <p>To find out how 2Animate can be created in a similar way using the computer.</p>	<ul style="list-style-type: none"> Children have put together a simple animation using paper to create a flick book. Children have an understanding of animation frames. Children have made a simple animation using 2Animate.
<u>2</u>	<p>To learn about onion skinning in animation.</p> <p>To add backgrounds and sounds to animations.</p>	<ul style="list-style-type: none"> Children know what the Onion Skin tool does in animation. Children can use the Onion Skin tool to create an animated image. Children can use backgrounds and sounds to make more complex and imaginative animations.
<u>3</u>	<p>To be introduced to 'stop motion' animation.</p> <p>To share animation on the class display board and by blogging.</p>	<ul style="list-style-type: none"> Children know what 'stop motion' animation is and how it is created. Children have used ideas from existing 'stop motion' films to recreate their own animation. Children have shared their animations and commented on each other's work using display boards and blogs in Purple Mash.



Lesson 1 – Animating an Object

Aims

- To discuss what makes a good animated film or cartoon and what the children’s favourites are.
- To show the children how animations are created by hand.
- To find out how 2Animate can be created in a similar way using the computer.

Success criteria

- Children have put together a simple animation using paper to create a flick book.
- Children have an understanding of animation frames.
- Children have made a simple animation using 2Animate.

Resources

- Sticky notes (such as post-its) and pens.
- Examples of paper animations such as flick books and scanimation books would be useful but not essential.

Activities

1. Talk to the children about some of their favourite animated films and cartoons. Why do the children enjoy them? Discuss with them why animated films can be much more fun than real images.
2. Animation can be something very simple and can start with simply animating a face so the character appears to smile when the animation is run.
3. Find out from the children what they know about how animated films are created.

Animation is described as a ‘process by which we see still pictures move’.

Each individual picture is shot on film one at a time. The pictures are shown at the rate of 24 pictures per second, which makes the pictures appear to move.

4. Try working out:

If you need 24 pictures per second, how many pictures will you need for:

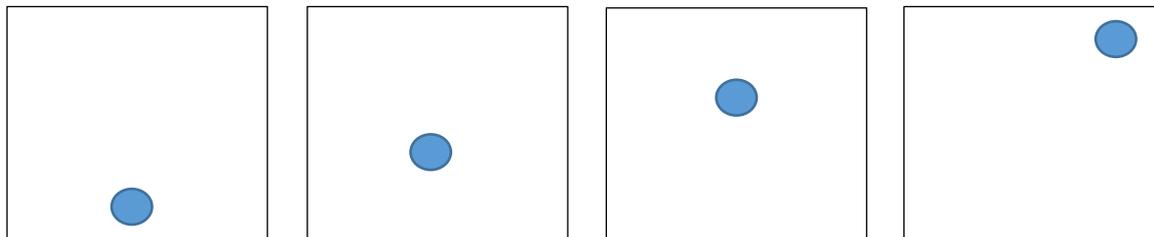
- ...a five-second animation?
- ...a 25-second animation?
- ...a 60-second animation?

That’s quite a lot of images!

5. Our brain holds onto an image for a fraction of a second after the image has passed. When our eyes see a series of images very quickly one after the other, because our eyes cannot cope with fast-moving images, they are tricked into thinking that the images are moving.
6. If the images you are seeing change in some way, you see this as animation.
7. Show the children how to make a simple flick book using a ‘post-it note’ pad.



- 8. Make a ball move by drawing it in different positions diagonally across several of the pages at the beginning of the post-it note pad. Now flick the pages very quickly to see the image move.



- 9. Before digital images were used, all the animations would be drawn by hand – a very time-consuming activity.

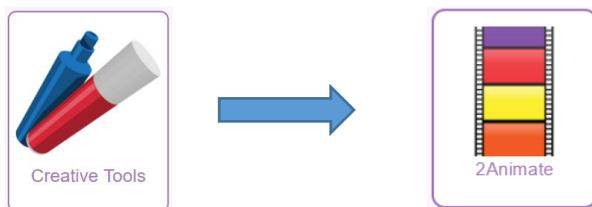


- 10. If you have access to [YouTube](#) see if you can find the first animated film created by Walt Disney.

- 11. Now see if you can find some of the very early Mickey Mouse animations.

- 12. Most of the images for animations today are created using computers. You can use 2Animate on Purple Mash to create both simple and more complex animations.

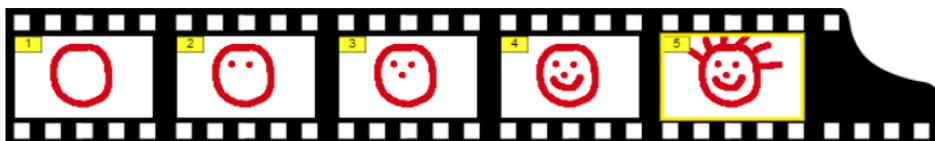
- 13. Find 2Animate in the Creative Tools section on Purple Mash.



- 14. Start by showing the children how to use 2Animate to create a series of frames, changing the picture in each of the frames.

- 15. Start with a simple face.

- 16. Show the children how to drag the first frame you draw onto Frame 2. This will copy the image so you don't have to draw the same image on Frame 2. Add to the image and drag it to Frame 3, etc.



- 17. Click on the plus sign to add a frame if you need an additional one and the minus sign to delete one of the frames if you are not happy with the image.



- 18. Let the children try making their own crazy faces.

- 19. Click on the green for 'go' arrow key at the top of the page to animate the frames.





Purple Mash Computing Scheme of Work Unit 4.6 – Animation – Lesson 1

20. Use the icons at the top of the page to speed up and slow down the animation or to pause and stop it and return to the previous screen.



21. Give the children the opportunity to create other animations.
22. Are there any topics you are currently working on about which the children could create an animation?
23. Examples are space, growing things or a character they have written about.



Lesson 2 – Other Tools

Aims

- To learn about onion skinning in animation.
- To add backgrounds and sounds to animations.

Success criteria

- Children know what the Onion Skin tool does in animation.
- Children can use the Onion Skin tool to create an animated image.
- Children can use backgrounds and sounds to make more complex and imaginative animations.

Resources

- None.

Activities

1. Talk to the children about their animations and how simple it is to add to an image once you have copied it from frame to frame.
2. The original example (the face) was being added to but the face itself didn't move.
3. Talk to the children about making the whole object animate, e.g. a ball moving through the air.
4. Animating an object to make it look as though it is moving in a direction would call for a little more help from the Onion Skin tool.

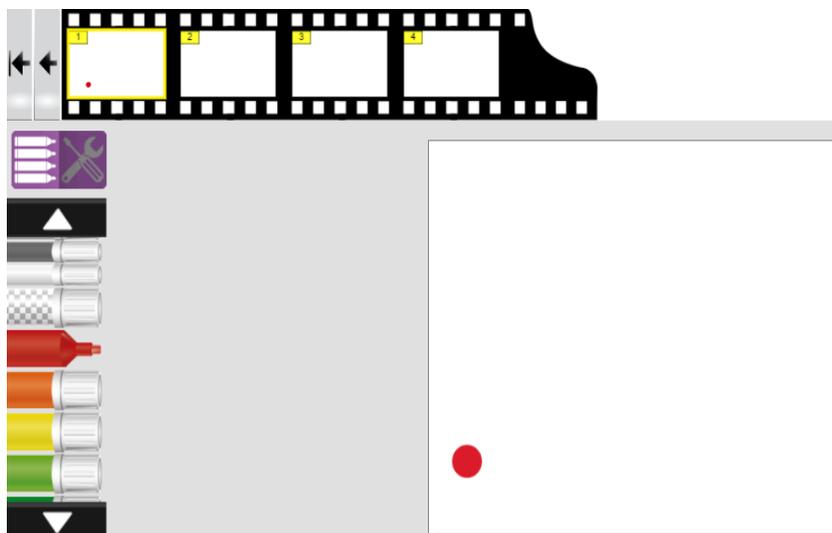


5. Demonstrate the Onion Skin tool to the children as follows.

Tell the children that you want to create an animation of a ball that has been kicked from one side of the screen to the other.

The Onion Skin tool helps you by showing you the shadow of the object on the previous frame.

6. Create your first frame by using the Pen tool and adding a circle at the bottom of Frame 1.



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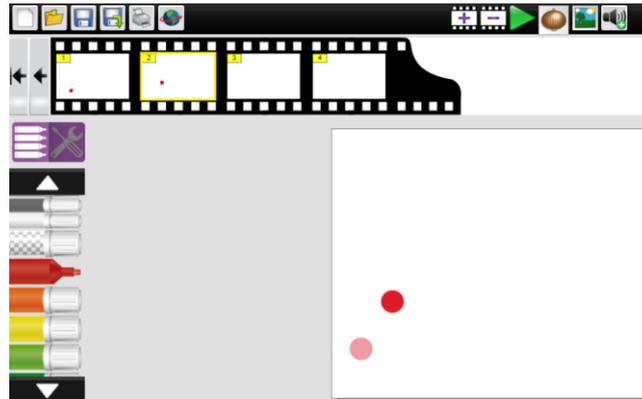


Purple Mash Computing Scheme of Work Unit 4.6 – Animation – Lesson 2

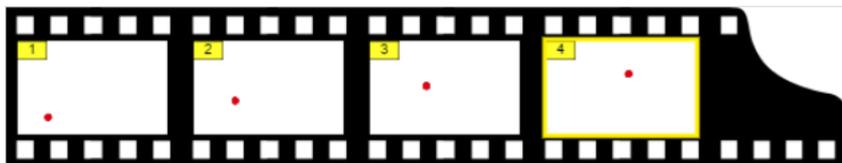
- 7. Now move to Frame 2, a blank frame (unlike with the first animation, we did DO NOT copy Frame 1 onto Frame 2; leave Frame 2 blank).
- 8. Select the Onion Skin tool from the top of the page. This will turn brown, indicating that it is turned on.



- 9. You should now see the shadow of the ball from Frame 1 on Frame 2. The Onion icon looks as though it is making Frame 2 into a piece of tracing paper so that you can see through onto Frame 1.
- 10. Now add the second circle a bit further away from the first to show that it has moved.



- 11. Repeat this until you have completed all your frames, drawing the circle so that it is following the same line as the previous circle.
- 12. Your animation frames should now look something like this. When you run the animation, it should look like the ball is travelling through the air.

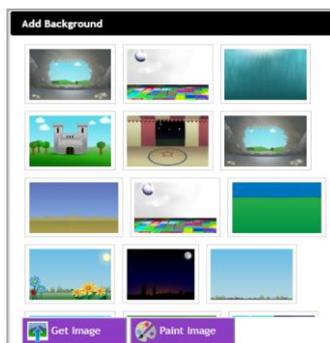


- 13. Now you can really start to have some fun with your animations by adding backgrounds and sounds.

Backgrounds



- 14. Click on the Background icon to choose from a selection of background images to add to your frames.
- 15. You can also paint your own background and upload your own image.





16. The background will be added to all the frames.

Sounds



17. You can add a sound to an individual frame by selecting the frame you want to add the sound to then choosing the sound you want to add to it. A Play icon will appear on the frame in question.



18. You can also upload a sound and create your own sound too.



Be creative!

19. Using the Onion Skin tool, backgrounds and sounds, try creating your own ideas which start to show an animated picture.

20. The example below shows a cannon being fired out of a pirate ship.

The ball appears to hit a glass window and the sound of glass breaking is played.



21. Can the children create the same idea?

22. Can the children come up with some new ideas too?

23. Make sure that the children save any work they have created to their work folder to be able to access it and continue later.



Lesson 3 – Cracking Contraptions

Aims

- Introducing 'stop motion' animation.
- To share animation on the class display board and by blogging.

Success criteria

- Children know what 'stop motion' animation is and how it is created.
- Children have used some of the ideas from existing 'stop motion' films to recreate their own animation.
- Children have shared their animations and commented on each other's work using display boards and blogs in Purple Mash.

Resources

- Access to the following link – Wallace and Gromit website:
<http://www.wallaceandgromit.com/films/cracking-contraptions>
The video clips 'Cracking Contraptions' are used in this lesson and these links are on YouTube. You will therefore need access to YouTube.
- Set up a class display board. [A user guide](#) showing you how to do this quickly can be found in the [Teacher's Guides and Resources section](#).
- Set up a class blog using 2Blog and give the children the ability to post and comment on this blog. [A user guide](#) that can show you how to do this quickly can be found in the [Teacher's Guides and Resources section](#).

Activities

1. Show the children the Soccamatic video from the following link:
<http://www.wallaceandgromit.com/films/cracking-contraptions>



2. Ask the children if they know how the Wallace and Gromit animations were created and talk about the differences and similarities between creating animations by using pictures and objects.
3. Animation created using cameras to shoot small changes one frame at a time is called 'stop motion' animation. The Wallace and Gromit cartoons are a great example of this type of animation.
4. Tell the children they are going to create their own Cracking Contraptions animations in 2Animate.
5. They are going to watch the video clips for ideas to create themselves. If you can't get access the video clips on YouTube, let the children watch a short clip from one of the videos.



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Purple Mash Computing Scheme of Work Unit 4.6 – Animation – Lesson 3

6. Let the children create their own animation in 2Animate and if times and resources are available, they could create their own model of their contraption.
7. Having finished their animation, ask the children to add their Cracking Contraptions animation to a class display board for everyone to be able to see.
8. Let the children comment on each other's animations through the class Cracking Contraptions blog.





Assessment Guidance

The unit overview for year 4 contains details of national curricula mapped to the Purple Mash Units. The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Assessment Guidance	
Emerging	<p>With support throughout, children will use a pencil and paper flip book to understand the basics of stop motion animation (Unit 4.6 Lesson 1. Point 6). Children begin to transfer this knowledge and create their own basic animation using 2Animate (Unit 4.6 Lesson 3. Point 4).</p> <p>This animation may lack detail and lack smoothness of transition. Children share their learning by displaying their animation on a display board (Unit 4.6 Lesson 3. Point 8).</p>
Expected	<p>Initially children will use a pencil and paper flip book to understand the basics of stop motion animation (Unit 4.6 Lesson 1. Point 6). Children transfer this knowledge and create their own animation using 2Animate (Unit 4.6 Lesson 3. Point 4).</p> <p>Children know, understand and use the onion skin animation tool within 2Animate to show movement across the screen (Unit 4.6 Lesson 2. Point 3). Furthermore, they select backgrounds and sounds to make their animation more immersive (Unit 4.6 Lesson 2. Point 6).</p> <p>Children share their learning by displaying their animation on a display board (Unit 4.6 Lesson 3. Point 8).</p>
Exceeding	<p>Children demonstrating greater depth create their own detailed animation using 2Animate (Unit 4.6 Lesson 3. Point 4) utilizing all the features of the software e.g. onion skin animation tool (Unit 4.6 Lesson 2. Point 3) select backgrounds and sounds (Unit 4.6 Lesson 2. Point 6).</p> <p>Children share their learning by displaying their animation on a display board (Unit 4.6 Lesson 3. Point 8).</p> <p>Children will demonstrate greater depth understanding when they suggest novel ways to solve difficulties that other children are having in making their animations effective.</p>