

How we made the Wheels on the Bus Animation

The Owletts class at Ulcombe Primary School made an animation based on the 'Wheels On The Bus' song ([have a look at it here.](#)) This case study shows how they created the film along with the preparation they did beforehand. Why not have a go at making your own version!

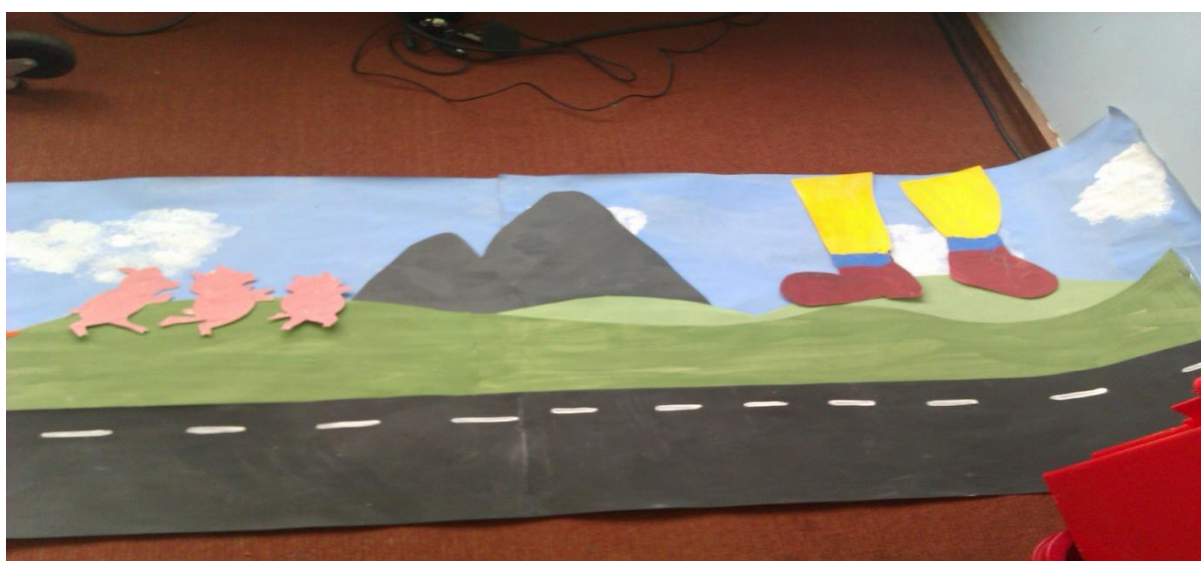
Preparation



In the lead up to the animation days, the class spent time looking at animations and learning that each movement was made in tiny steps.

The class then talked about the 'Wheels On The Bus' song and chose the verses they wanted to include. Mrs Wills recorded them singing the wheels on the bus using an Easi-Speak microphone. (Though any recording device that gives you an MP3 or WAV file will do- or just sing directly into Zu3D.)

The class then spent time painting the paper shapes needed for the animation that Mrs Wills had cut out for them. (There's a list at the end that details all the parts they used.) The Owletts used large pieces of backing paper to make the large background for the to bus ride along. They painted the sky, then they the painted hills, mountains and road on separate pieces of paper. Mrs Wills cut out the shapes and stuck it all together to get the long road background. They also added some fairy tale characters to the background to make the animation more interesting; this also created another discussion topic.



Half of the background

Getting ready to animate



The camera needed to be looking down on the set, and it was important that it was not easily moved or jugged, to avoid jumpy animations.

They found it easiest to tape a webcam to a plank of wood that was clamped to the table / step ladder, (that way it didn't get in the way and was fixed in place.) The children worked in pairs, taking it in turns to either animate, or take the pictures on the computer.

Here's how they did each verse.

Bus driving along the background



The bus has to stay below the camera for each shot, so the children moved the background to the left and took a picture, moved the background and took a picture, so giving the illusion that the bus was moving along the road.

The children worked together to ensure that 'no hands' were captured in the images.

As this is the clip that is repeated several times throughout the animation, to add interest they made the clip with a different fairy tale character in the background each time.

Verse 1. 'The wheels on the bus go round and round'



This verse was lovely and easy. The class just used a sheet of red paper and a wheel, (they painted on the school name on the wheel to personalise the film).

Then, it was just a case of taking a picture, moving the wheel around, taking a picture, moving the wheel, and so on. They only needed to shoot one rotation as they copied and pasted this clip over and over again after they had finished all the animating.

Verse 2. 'The wipers on the bus go swish swish swish'

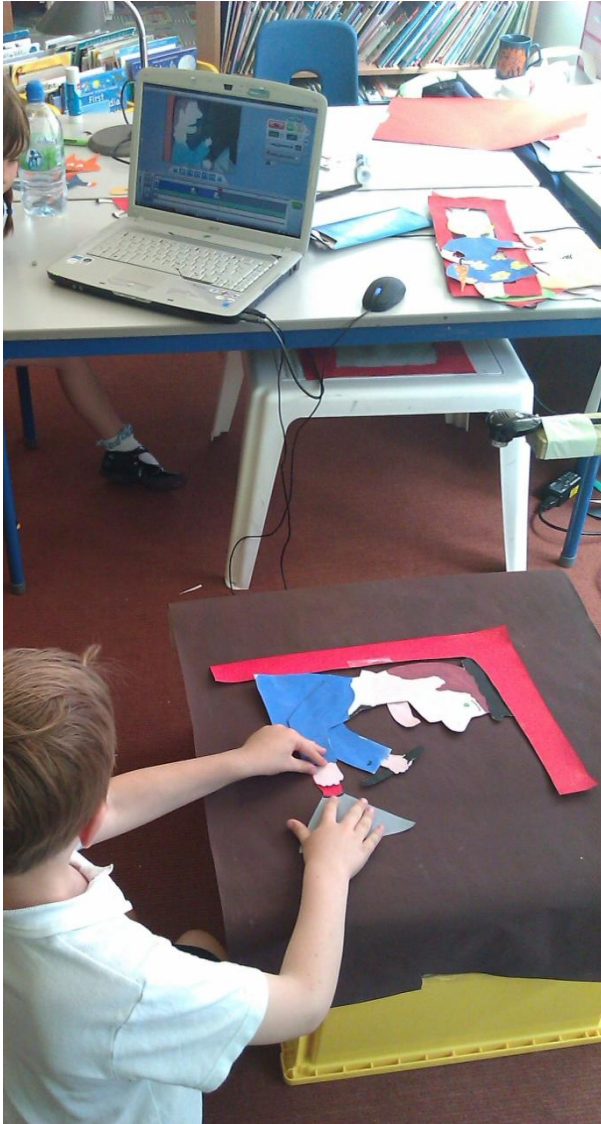
This verse uses the painted front window and black strips for wipers.

The children moved the wipers together from left to right, in small movements taking a picture each time.

When they had captured this they copied the clip and reversed it so the frames go back the other way, they then repeated these 2 clips, for the duration of the verse.



Verse 3. 'The horn on the bus goes beep beep beep'



For this verse a few different cut outs were used.

The driver with his detachable chin and arm, the driver's window frame.



the inflated horn

and

the deflated horn

The group assembled the set on a black background (see picture) with the driver's arm up and the inflated horn in place. They captured frames as the driver moves his arm down towards the inflated horn. When his hand reaches the horn they swapped the inflated horn for the deflated horn. They captured a few frames with the same picture at this point to show the horn being beeped.

Again they copied and pasted and then reversed this clip to save time with the animating.

Verse 4. 'The doors on the bus go open and close'

The class assembled their cut outs as in the picture and used a little bit of clear plastic to make the windows look more realistic. There's a couple of things going on in this clip. The lady needs to wave as the doors shut, so they needed to move her forearm and both doors before taking each picture.

The lady's forearm moves from left to right and back and the doors move to meet in the middle and back again.



Verse 5. 'The mums on the bus go chatter chatter chatter'



On a dark background, the class placed both of the Mum cut outs, with their detachable chins, facing each other.

They needed to take it in turns to talk. So they moved one chin up and down a few times and then moved the other Mum's chin up and down as she responds to the conversation.

They copied and pasted the clip enough times to last the duration of the verse.

Verse 6 'The baby on the bus goes waaah waaah waaah'



This is a fun verse. To make the baby look as if it was crying the Owlets used two sets of eyes and mouths, one set open and one set closed.

They started with the baby's head on its shoulders and its eyes open and mouth closed. They moved the head left to right, making sure to keep the head touching the shoulders. Then they changed the open eyes to closed eyes and the closed mouth to an open mouth and moved the head backwards and forwards.

This was then copy and pasted to last the length of the verse.



**Verse 7. 'The dad's on the bus go grump
grump grump'**

In this verse the children used the same window frame from the horn verse and the two Dads with their detachable chins.

This is a simple verse. The dads just needed to move their chins up and down; they didn't need to be in time, or grumbling at the same time. The group moved them as they wished and then copied the clip so that it lasted for the whole verse.



**Verse 8. 'The driver on the bus says
STOP THAT NOISE'**

The class set their scene up as in verse 3 with the driver and the horn, (though they didn't use the horn).

In this verse the driver shakes his fist and opens his mouth to shout, "Stop that noise!"

They tried to get his mouth in time with the words, "Stop that noise," and made him shake his fist for the other words of the verse.

Editing the film

The class then had at least one animated clip for each verse. The challenge was then to synchronise with the song they had recorded.

They imported the 'Wheels on the Bus' song into Zu3D and then copied and pasted each clip (reversing where necessary) so that each verse had the right animations for the duration of the verse. They then added the text to enhance the film and gave the film titles and credits. The Tutorial Video [here](#) shows how clips can be copied and pasted and text, titles and credits added.

When they had the completed film they exported it as an avi and uploaded it to the moderated Zu3D gallery for friends, family and the public to watch and review.

List of paper parts needed – You can see all of these in the pictures so you know how they should look, but any queries please let us know.

- Long background
- Bus
- Wheel
- 2 x wipers (black sticks)
- Front window
- Driver's window Frame
- Inflated horn
- DeflatedHorn
- Driver with detachable chin and arm
- 2 bus doors
- Women standing with detachable forearm
- Mum 1 with detachable chin
- Mum 2 with detachable chin
- Baby face
- Baby shoulders
- 2 baby open eyes
- 2 baby shut eyes
- Baby closed mouth
- Baby open mouth
- Dad1 with detachable chin
- Dad2 with detachable chin
- Red paper for bus sides
- Optional additional characters

Get in touch with support@zu3d.com if you have any animating queries.