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| KS3 Programme of Study: Shadow Puppets Play | |
| **Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users.** | |
| Whole unit | * Use the following applications as appropriate to research, create resources, and produce a collaborative version of a Shadow puppet play:  1. Browser / Search engine (research) 2. E-mail (collaboration) 3. Word processor / DTP program (script and storyboards) 4. Graphics software (static and animated images) 5. Audio software (creating and editing sound) 6. Presentation software (creating the play)  * Use e-mail to assist collaboration on producing the play by:  1. Using cc or a distribution group to send the same e-mail to more than one person 2. Attaching a file, or a compressed folder, to an e-mail |
| Tutorial 1 | * Work with at least one other person to create a play, by:  1. Agreeing on a story on which to base the play 2. Writing the script 3. Designing the storyboards 4. Deciding who is to produce which scenes in the play 5. Sharing resources (graphics, animations) to use in the play  * Carry out research in order to find:  1. Information about traditional Shadow Puppet Theatre, where it originated, how the characters are ‘animated’, and the kinds of stories used in plays. 2. Suitable stories which can be used as the basis of a play 3. Suitable clipart images which can be edited to make the characters and background images used in the play 4. Sounds which can be used for necessary effects in the play, in suitable sound formats (WAV, MP3, or MIDI) |
| Tutorial 2 | * Use word-processing and DTP software to produce these documents to plan the play:  1. A time plan of the tasks required to produce the play, and the deadlines for these tasks 2. A section of the script of the play 3. Storyboards for a section of the play, identifying what happens on each slide of the play, and the resources needed to achieve this  * Use e-mail to :  1. send sections of the script to each of the other people who are collaborating on the play 2. send sections of the storyboard to each of the other people who are collaborating on the play |
| Tutorial 3 | * Use image editing software to prepare static and animated images for the play * Use e-mail to send static and animated images to other people who are collaborating on the play |
| Tutorial 4 | * Use audio recording and editing software to record, edit, and mix sounds for the play into a single track * Compare three different audio software programs to see the similarity and differences of the functions they offer * Understand the differences between different types of microphone, and the advantages or disadvantages of each type * Use e-mail to send sound files to other people who are collaborating on the play |
| Tutorial 5 | * Use presentation software to create the Shadow Puppet play |
| Tutorial 6 | * Use e-mail to:  1. send sections of the play, as separate PowerPoint presentations, to other people who are collaborating on the play 2. assess how well the group performed to produce the play by the required deadline  * Use presentation software to merge separate sections of the play to form the completed whole |
| **Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.** | |
| Tutorial 1 | * Create a presentation which shows the origins of Shadow Puppet Theatre, how the puppets were constructed, and displayed on a screen |
| Tutorial 2 | * Organise the planning of the puppet play, as follows:  1. Create a time-planner document (from a template) to identify the length of time available for the unit 2. Identify the images, animations, and sounds needed for the play, decide which lesson will be used to perform each task, and add this information to the planning document 3. Update the planning document regularly, as the details of each task can be identified  * Write the script for the play, collaboratively, using the script template document, as follows:  1. Identify who is speaking at each stage of the script 2. Identify the narration or dialogue which has to be spoken 3. Identify the sound files which are to be created for each section of the script, or for sound effects which occur at each section  * Prepare storyboards for the puppet play, using the template storyboard document as follows:  1. Create sketches by hand, or on a computer, for each section of the play (corresponding to a slide in the final presentation) 2. Identify the order of the sketches by numbering them consecutively 3. Provide a brief description of the action required for each slide 4. List the sound files required for each slide 5. List the images and animations required for each slide |
| Tutorial 3 | Create images for the play, by performing the following tasks:   * Understand the difference between image files types which support transparency, and those which do not * Create static, silhouette images from clipart, as follows:  1. Remove solid backgrounds to images to make them transparent 2. Use inverse selection to select the image foreground 3. Colour the foreground using brush, or fill effects 4. Save the image as a GIF type, preserving transparency  * Adapt clipart images, as follows:  1. Remove parts of the image 2. Draw additional parts on to the image 3. Crop the image to use a part of the image 4. Rescale the image to use as a close up 5. Add details to the image (eyes, mouth)  * Create background images by using several clipart images, and adding floors, sky, rocks etc as required * Understand how frame by frame animation works by using a sequence of static images to create the idea of movement * Create animated GIF images, as follows:  1. Cut the parts of the image which need to move, and paste these on to a different layer in the image 2. Share the moving parts across layers 3. Add frames to the animation 4. Transform the moving parts by using the scale, transform, skew, rotate tools as required on each of the additional frames 5. Duplicate frames as required to improve the sequence of the movement 6. Save the image as an animated GIF, ensuring that transparency is preserved  * Create animated GIF images, using tweening, as follows:  1. Understand how the centre of rotation may need to be moved to animate a part of an image (e.g. an arm, leg) 2. Cut the parts of the image which need to move (e.g. limbs), and paste these on to different layers 3. Use the brush tool to restore parts of the limb as required 4. Turn the limb into a symbol, recolouring the limb initially so that its movement can be observed more easily 5. Tween the limb, moving the centre of rotation as required, so that it moves backwards and forwards to create the idea of motion 6. Use onion skinning to show the differences between the frames created by the tween 7. Restore the symbols to their original colours 8. Save the image as an animated GIF, preserving transparency |
| Tutorial 4 | Create the sound files required for the play by performing the following tasks:   * Record the script for each character (and narrator), and save these as separate sound files according to the storyboard plan * Prepare the basic sound files by:  1. Increasing the volume 2. Trimming the waveform to remove silences 3. Shifting the time so that the sound starts playing immediately it is loaded  * Add effects to voices to represent different characters in the play, by:  1. Changing the pitch of the sound 2. Changing the tempo of the sound 3. Adding echo and reverb effects to the sound  * Edit music and sound effects by:  1. Using fade out and fade in 2. Repeating sections of the music 3. Combining several sound effects by using multiple tracks |
| Tutorial 5 | Create the play by using presentation software to perform the following tasks:   * Prevent compression of animated GIFs in PowerPoint to ensure they work * Set up the puppet show in PowerPoint as follows:  1. Change the layout of the slides to Blank 2. Create an ‘oil lamp’ glow background by using a radial gradient fill 3. Set the slides to advance automatically 4. Duplicate the required number of slides  * Create custom animation effects on titles, as follows:  1. Configure the effect to Start With Previous or After Previous, as required 2. Set the timing of the effect to the required number of seconds 3. Delay the effect, when two or more effects have to occur simultaneously  * Create custom animation effects to move the images, as follows:  1. Understand the difference between different types of motion paths (straight, custom, built in) 2. Apply an effect simultaneously to a group of images 3. Set the start and end points as is appropriate 4. Use Smooth start / Smooth end as is appropriate 5. Set the timing of the effect 6. Use the motion path tool to draw the path followed by an effect 7. Loop effects so that they continue to play 8. Copy (and edit) effects from one image to another 9. Apply multiple effects to an image (motion, scale) 10. Hide / Show images (e.g. when a character enters as an animated GIF, and then stops walking, as a static image)  * Add sounds to the play, and synchronise with the movement, as follows:  1. Insert a sound into a slide, and set it to play automatically 2. Configure the sound to stop playing when the slide changes 3. Adjust the volume of the sound 4. Delay sounds, so that they can play in the correct sequence 5. Repeat sounds, so that they continue throughout the slide 6. Synchronise sounds to play with animations, by setting their delay and timing settings appropriately 7. Re-order sounds and animations to play in the correct sequence 8. Create a timeline chart (in Excel) to show the timings of more complex sequences 9. Add a sound to an effect |
| Tutorial 6 | Complete the play by carrying out the following tasks:   1. Merge slides from separate presentations to make a final version of the play, by using the Re-use slides function 2. Use Slide sorter view to check that the slides have been inserted in the correct order, and re-order if necessary 3. Insert Slide transitions as required to fine tune the presentation 4. Check the sound balance between each slide, and between ‘background’ and ‘foreground’ sounds 5. Check the timings of the slides in the final version, and adjust if necessary 6. Save the presentation in different versions, so that it will open immediately as a show |
| **Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits.** | |
| Tutorial 4 | * Understand the differences between common sound file types (WMA, WAV, MP3) and save files in appropriate formats for use in presentation software |
| **Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.** | |
| Tutorial 1 | * Understand the following issues regarding the use of assets to create the play:  1. How copyright laws affect the way in which images, text, sound and video can be used, and how these laws protect the rights of the people who created the artefacts 2. What is meant by the Public Domain, and how this affects the use of artefacts 3. How artefacts can be used for personal or educational use, but not for commercial use |