

## Computing - Autumn Term – Year 4

This unit teaches children the basic principles and techniques of simple animation. They will use Pivot animator to make a short stick figure animation. Then plan and produce a stop-motion animation.

### In this unit children will:

- Explain what is meant by animation.
- Create a series of linked frames that can be played as a short animation.
- Insert images to create a simple stop-motion animation short film clip.
- Edit and refine images in a stop-motion animation short film clip.
- Make slight changes to an image using onion skinning, understanding the term.
- Use an Ipad to create their own images for a stop-motion animation short film clip.
- Recognise limitations of animation software and suggest improvements.
- Change the content of a picture by the correct amount between frames.
- I can order or sequence frames to create the effect of smooth movement.

### Prior Learning

**eSafety is taught in every year group.**

**Year 3** – Simple programming techniques

### Cross Curricular Links

**Art** – design of clay products.

**DT** –the art of movement in photographs.

### Key Vocabulary

**onion skinning** – the technique of seeing the previous position in the background.

**frame** – contains the image to be displayed at a unique time in the animation .

**animation** – process of creating motion through individual frames.

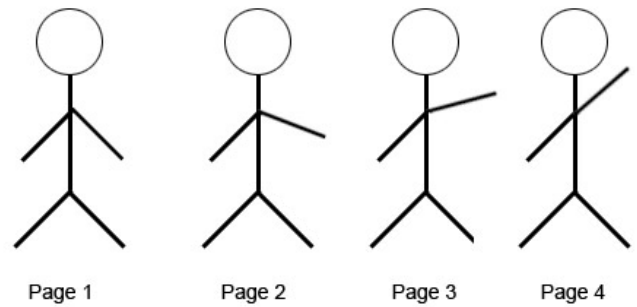
**Stop-motion** – technique whereby the camera is stopped and started to suggest movement.

**Claymation** – animation of models constructed from clay

**tweening** - The 'automatic process' mentioned above is called 'tweening'. Tweening is the process where the content of the frames between the keyframes are created automatically by the animation software so that the animation glides smoothly from one keyframe to the next.

## Key Knowledge

- **Animation** is the art of creating the optical illusion of moving pictures.
- When a set of related images are shown rapidly one after another, people sense them as one continuous motion picture.
- A **frame** is a single image within the complete **animation** sequence. You work on each frame to create the overall animation. For example, each image in the sequence below would be on a single **frame**.
- This is the speed at which each **frame** is presented to the viewer. The film industry uses a standard 24 **frames** per second (fps). Computer games try and get as high a frame rate as possible such as 120 fps, this makes the action smoother.
- With **stop-motion animation**, you set up a **clay** model or some other kind of model, then take a photograph and store the image. Then alter the model slightly such as moving an arm, leg, face and so on, then take another image.



## Key Questions

- What is animation?
- Can you name an animation you have seen?
- What does an animation consist of?
- How does a computer game work?
- Why can we use clay for ICT?