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| **Time**A morning or an afternoon  |  | **Lesson**PHSEGeography | **Year**Year 5 to Year 8 | **Levels** All ability levels |  |
|  | **Topic:** **Visual effects (VFX)**  |
| **Activity** | **Timings** | **Resource** | **Plan** |
| Learning objective and outcome | One min | Slide two | **Lesson objective**To understand the wide variety of roles and jobs available in the VFX industry**Outcome**To create the illusion of being in a different place using green screen technology |
| Starter activity | 10 mins |  | What do you think is meant by visual effects?What roles do you think exist if you wanted to work with visual effects?What qualities do you think you would need to have to work in this industry?Write these ideas on sticky notes and put them on a flipchart. |
| Main activity |  | Slide threeSlide fourSlide fiveSlide sixSlide sevenSlide eightSlide nineSlide ten | **Understand visual effects**Explore the term ‘visual effects’. Definition of VFX: VFX is the art of combining computer-generated (CG) sequences with live-action footage to create scenes that can’t be filmed in real life. When a movie shows a hero jumping off the ground and flying into the air, it’s created using VFX.When production companies are making films and TV programmes, they employ VFX companies to make the visual effects for them. What films or TV programmes can you think of that have used VFX? What have they used VFX to do?For example, make animals come to life, in *Fantastical Beasts*, make superheroes climb walls in the *Spider Man* movies. Show children some YouTube clips showing how films with visual effects are made. For example:* [Avengers: Infinity War | VFX Breakdown | Framestore](https://www.youtube.com/watch?v=V5mS7BHmZJI)
* [Christopher Robin: Behind the VFX - BBC Click](https://www.youtube.com/watch?v=gFvZvAMiuLk)

What is green screen?Green screen is a method used to make it possible to create an image with a different background from the one that’s been filmed in real life. It’s used in films to make it look as though actors have landed on an alien planet. And it’s used on TV to make it look as though the weather presenter is standing in front of a map. It’s a commonly used technique in visual effects.It involves filming the actor or presenter against a green background. Then you use computer software to remove all the green colours from the footage. This takes the background away. You can the put the presenter onto a new background.Green is used because that colour isn’t found in human skin tones. If you put the presenter against a brown or pink background and then asked the computer to remove the brown or pink, the presenter’s face would go missing as well as the background. So for humans it’s best to put them against a green screen. For aliens it’s a different matter.**Remind the children of the outcome:** to create the illusion of being in a different place using green screen technology.Show the children a video of someone using the green screen technology to create this illusion. The best video to show will depend on what software you’re using.* [Video for those using iPad and Do Ink app](https://www.youtube.com/watch?v=QlH3h19ablI)
* [Video for those using Windows and Movavi Video Editor](https://www.youtube.com/watch?v=d2NFa9NDVkI)

Possible scenarios:* Weather reporter standing in front of a weather map
* Journalist in Australia reporting on bush fires
* Actor on a planet
* Actor transported back in history

These can be adapted depending on what is newsworthy at the time of the lesson. You could link the outcome to your geography topic – the weather reporter and journalist in Australia would work well for that. The actor on a planet could connect with science and the actor going back in time could be part of history.**Understand job roles in visual effects**There are a number of different departments you can work in visual effects.  These are some of the roles in a VFX team:* VFX producer (talks to the film or TV company to understand what VFX they need)
* Data capture technician (works on the set taking measurements)
* Environment artist (creates a different background on the computer)
* Compositor (combines the live-action footage with the computer-generated images)
* Concept artist (creates artwork to inspire the look of the VFX in a film or TV programme)

To learn more about the different job roles. You can either:* Go to [ScreenSkills VFX](https://www.screenskills.com/careers/job-profiles/visual-effects-vfx/) to see the roles online or
* Print off the ScreenSkills [VFX career map](https://www.screenskills.com/media/3392/vfx-2020-web.pdf)

 **Decide on the roles for your project****Task 1**Split the children into groups of approximately 6. For the purpose of this lesson, each group will need:* A compositor (someone who works in a VFX company)
* A VFX producer (someone who works in a VFX company)
* Environment artist (someone who works in a VFX company)
* Reporters or weather presenters (people who work for a TV company)
* Camera operator (someone who works for a TV company)
* Sound editor (someone who works for a TV company)

Each child needs to label themselves with their specific role. (Teacher can delegate this if needed) Children to explain to the rest of the group what their role involves. **Pre-production****Task 2**Decide on what the exact outcome is going to be - a weather report or a journalist report. The **producer** has the ultimate say on this.What background are you going to need for this? Will it be a weather map? Picture of a jungle etc? Children to source the background images either by drawing them or finding photographs on the internet. This is the role of the **environment artist**.A **sound designer** might want to might want to add sound effects.**Create the green screen effect****Task 3**Children to source the materials that is needed to create a green screen. This will depend on what is available in school. It can be done with green card or paper against a backdrop or by using a blanket. Children also need to familiarise themselves with whatever software is being used.**Film** **Task 4**Give each group time to discuss what is going to be said by the **weather reporter** or the **journalist**. The **camera operator** films them talking in front of the green screen.**Create your film****Task 5**Children to use the software to put the presenter onto a different background. This is the role of the **compositor**.**Present your film****Task 6**Show your piece to the rest of the class. Discuss what VFX have been used in each piece. |
| Evaluation | 10 mins | Slide eleven | **Review the outcome**How did you feel about your finished product?Did you understand more about the wide variety of job roles in VFX?Did anything unexpected happen?Are there any changes or improvements you could make in the future? |
| Plenary | 10 mins | Slide twelve | **What did you learn?**Remind the children of the learning objective, to understand the wide variety of roles and jobs available in visual effects.Ask* How important was your role to the final product?
* Did you enjoy your role in the project?
* Was there a role you would rather have been doing and why?
* Was there a role that would suit your teammate(s) better and why?
* Were there any roles missing from your sticky notes?
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| Extension activities |  |  | **Science extension**Explore the green screen affect in more detail. Link to light objectives in science.Children to explore does this work with a blue screen? What happens if the journalist or reporter is wearing green?Why does it only seem to work if it is a green screen?**Assembly**Create a whole school assembly reporting on a school event using green screen to give the impression you were at the event. |

**Resources**

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| **For the introduction*** White boards
* Sticky notes.

**Green screening resources****One of the following:*** Big pieces of green card or paper
* Green piece of material
* Ready-made green backdrop
 | **From the ScreenSkills website*** [VFX career map](https://www.screenskills.com/media/3392/vfx-2020-web.pdf) (not essential)
* [VFX slides](https://www.screenskills.com/media/3349/animation-slides-230120.pdf)
* [Evaluation sheet](https://www.screenskills.com/media/3659/evaluation-sheet-vfx.pdf)

**Camera and software. This can be either:*** iPads with software such as [iMovie](https://www.apple.com/uk/imovie/) or [Do Ink](http://www.doink.com/description)
* Digital cameras, Windows computers and software such as such as [Movavi Video Editor](https://www.movavi.com/videoeditor/)
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**Lesson objectives**

**PSHE objectives**

Pupils should have the opportunity to learn:

* + the qualities and behaviours they should expect and exhibit in a wide variety of positive relationships (including teams, class, friendships etc.)
	+ to further develop and rehearse the skills of team working including objective setting, outcome planning, cooperation, negotiation, managing setbacks and compromise
	+ to further develop the communication skills of active listening, negotiation, offering and receiving constructive feedback and assertiveness
	+ to explore the range of positive qualities people bring to relationships
	+ to identify own strengths, interests, skills and qualities as part of the personal review and planning process, including their value to future employability and strategies for further developing them
	+ different types of work, including employment, self-employment and voluntary work; that everyone has a career, which is their pathway through life, education and work
	+ about different work roles and career pathways, including clarifying their own early aspirations

 **Geography objectives**

 Key stage two

 Pupils should be taught to:

* locate the world’s countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities

 Key stage three

 Pupils should be taught to:

* extend their locational knowledge and deepen their spatial awareness of the world’s countries, using maps of the world to focus on Africa, Russia, Asia (including China and India), and the Middle East, focusing on their environmental regions, including polar and hot deserts, key physical and human characteristics, countries and major cities

**Assessment**

* All pupils must be able to explain their role within the lesson
* Most pupils would have progressed and should be able to explain the roles of others within the lesson
* Some pupils will have progressed further and could explain the role of the others in the lesson and be able to identify which role would suit their best qualities

**Differentiation**

* Consider the roles you give to the children
* Work in mixed ability groupings
* Ensure there are leaders within the group
* Differentiate the questioning you give to the children
* Place any adults appropriately

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