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| **PICTURING dr JENNER**  Teacher Guidance | C:\Users\Felix\AppData\Local\Temp\Temp1_smallpox-logo(2).zip\smallpox-logo.jpg |

# NATIONAL CURRICULUM LINKS (ENGLAND)

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| **Upper KS2 (ages 9-11)** |
| **Art**  Evaluating and analysing creative works using the language of art, craft and design  **English** Considering how authors have developed characters and settings in   what pupils have read, listened to or seen performed |

# KEY LEARNING OUTCOMES

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| **By the end of this activity children should be able to:** |
| * recognise that the same historical event can be depicted very differently by different artists, and identify this as artistic licence * discuss some of the differences in artworks depicting the vaccination of James Phipps by Dr Jenner * (optional) discuss some examples of artistic licence in the JAMES film, describing how they enhance the storytelling * create original artworks depicting the experiment using historical knowledge and artistic licence |

# Lesson Activities

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| **Key questions** | **How have different artists depicted Dr Jenner’s famous experiment? What is artistic licence?** |
| **Overview** | **An art and English activity looking at famous paintings of Dr Jenner’s experiment**  Children compare a number of artworks depicting Dr Jenner vaccinating James Phipps. As an optional extension activity, they discuss the use of artistic licence in the JAMES film. They then create their own original artwork depicting the experiment. |
| **Teaching Time** | 1 hr discussion + practical art time |
| **Key words** | artistic licence |

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| **Stage/summary** | **Running Notes** |
| **Introduction** | Children look at the different artistic depictions of the moment when Edward Jenner vaccinated James Phipps. The resource has been designed as a whole class discussion activity, but you might like to take a different approach – for example, different groups of children explore different pictures and report back to the rest of the class. You might like to create a table with some of these questions for children to fill in about each picture.  There are more detailed discussion prompts for each individual picture, but some general questions for the children to consider:  **What medium has the artist used?** Is it a painting, a photograph, a film still?  **Where is your eye first drawn to in the picture?**  **What is the style and mood of the picture?** Is it naturalistic or symbolic? Dramatic and lively, or calm and subdued?  **How is James depicted?** Is he frightened and struggling, or calm? Who is holding him?  **How is Dr Jenner depicted?** Does he appear gentle and caring or rough and menacing? Does he strike you as being a thoughtful diligent doctor and scientist, or reckless and ruthless?  **Where is the painting set?** Indoors or outdoors or both? Day or night?  **Who else is present in the picture? What are their reactions?** Is Sarah Nelmes there? James’s family? Do the onlookers appear calm and relaxed, or do they appear shocked and anxious?  **What do you like about the painting? Why?**  For more ideas on how to explore paintings, take a look at this guide by the National Gallery: [**http://www.nationalgallery.org.uk/learning/inspired-by-the-collection/writing/how-to-read-a-painting/\*/viewPage/1**](http://www.nationalgallery.org.uk/learning/inspired-by-the-collection/writing/how-to-read-a-painting/*/viewPage/1) |
| **TP2** | **Jenner: Smallpox is Stemmed –** Robert A. Thom, c1950  This oil painting is by an American illustrator, Robert A. Thom. It is part of a series called *A History of Medicine*, commissioned in the 1950s by an American pharmaceutical company, Parke-Davis. Thom’s pictures became very famous in the United States appearing in doctors’ waiting rooms, pharmacies and even in calendars in people’s homes. This picture was painted at a time when there was a big drive in America to develop a safe and effective vaccine against the dreaded polio disease. It is currently on display at the University of Michigan.  Thom said of his paintings: *“You can’t fake history. You have to know how people lived, what they wore, their physical surroundings, the architecture and furniture of the time, the tools of the physicians. My responsibility is to make you forget they’re paintings and feel that you’re actually there”.*  (The other pictures on TP3 are Thom’s pictures for the same series of Louis Pasteur, Antoine van Leeuwenhoek and Hippocrates)  **Discussion**  How has the artist tried to “make you forget it’s a painting and feel that you’re actually there”? (*It is painted in a very naturalistic and lifelike style – almost like a photograph. There are lots of period details like the clothing and furniture. The colours look natural and subdued and the characters don’t look overly dramatic or posed. The picture feels still and calm)*  How has the artist portrayed Dr Jenner?  (*His clothes and hair are meticulously neat and tidy, he is* *sitting straight-backed in his chair and looks very calm, methodical and scientific*)  What about James? Does he look scared? Who is holding him? How is she holding him? (*James looks a little bit scared, and he has his eyes closed. But the lady holding him – who might be a maid or perhaps his mother – seems to be holding his head reassuringly rather than holding him down)*  Is Sarah Nelmes in this picture? *(Yes – the lady with the bandage on her hand)*  Why might a pharmaceutical company (a company that manufactures medicines and vaccines) commission an artist to paint this picture for them?  (*To celebrate one of the greatest achievements in the field of medicine. In* ***The Great Vaccine Debate*** *resource, children can learn about the big debate about vaccines that occurred immediately following Dr Jenner’s discovery. Unfortunately, vaccination continued – and continues! – to have a small but significant number of opponents. There was therefore perhaps a need to promote and celebrate vaccination among the general public, especially at a time when scientists were trying to invent a safe and effective polio vaccine)*  Do you think the fact that a pharmaceutical company commissioned the painting might have affected the way this moment was portrayed? *(They would probably want a picture that showed Dr Jenner to be a meticulous scientist and to show the experiment as calm and rational. They might have wanted a picture that seems realistic and factual rather than dramatic)* |
| **TP4** | **Dr Jenner performing the first vaccination against smallpox in 1796** – Gaston-Theodore Melingue, 1879  This oil painting currently hangs on the Staircase of Honour at the Academy of Medicine in France.  **Discussion**  How has the artist made this a **dramatic** picture?  (*The style is naturalistic but more imaginative and expressive than in the Thom picture; it is more lively and animated and the figures have dramatic poses. All the onlookers crowding round trying to see what’s happening adds a feeling of excitement and momentousness; the man with the green gloves holding the hat looks very anxious – almost appalled. There is a sense of movement in the picture – everyone has dramatic poses and the fabric of their colourful clothing is creased and rippled as if they are moving. James’ father is struggling to hold down James, who is trying to wriggle away*)  Who do you think the other people in the picture might be? What clues are there that the lady on the right is Sarah Nelmes? (*The lady on the far right is probably Sarah Nelmes – her hand is bandaged, she is wearing maid’s clothes, and there is a milk pail and yoke on the ground next to her. The other people have much finer clothes so are probably friends or relatives of Dr Jenner. Perhaps the man in the wig is another scientist who has come to witness the experiment*)  How is Dr Jenner portrayed in this picture? Do you find him menacing *Dr Jenner is standing up hunched down over James almost like an artist over a canvas or a musician over a piano, his hair and clothes more rumpled and creased than in the Thom picture. Perhaps the artist was trying to present Dr Jenner as an inspired genius, passionate and driven about his work. Dr Jenner is dressed in black and hunched over, which might portray him as a little menacing.*  Where is this picture set? *Here the experiment is happening out in the open; in Thom’s painting the experiment is happening behind closed doors in Dr Jenner’s study, a more controlled environment. Perhaps the open space, trees and plants, and soft dappled light make the experiment seem gentler and more natural. Or perhaps the contrast makes the experiment seem more unnatural and violent?* |
| **TP5** | **Edward Jenner performing his first vaccination experiments in Berkeley, Gloucestershire Boy –**  Eugène-Ernest Hillemacher, 1884  This oil painting is currently held in the Wellcome Trust Library, one of the biggest medical collections in the world.  **Discussion**  How does the artist create a sense of calm in this picture? *(The style is much more still and serene than the Melingue painting. James is younger – almost a baby – and not struggling or scared at all. The characters are softly lit in a pool of light and the setting is more homely, with the cot on the left of the picture. The scene feels familial and idyllic.*  How does Dr Jenner appear in the painting? (*He seems very gentle and caring. Also, Dr Jenner looks younger than in the other pictures. How old was he really in 1796?)*  Who might the onlookers be?  *(They appear to be James’s family. There is even another child – a sister? – watching the experiment, calm and interested, and not scared for the baby)*  Can you spot the cows in the background on the left of the picture? What do you think they might symbolise?  *(The fact that the cowpox vaccine originates from cows)*  Did you spot the cows in the JAMES film? Or any other examples of symbolism? What about the fox? What might that symbolise? *(We see**cows in the field as James walks back to Dr Jenner’s house, which symbolises that he is protected by the cowpox.*  *(Foxes appear several times in the film – James sees a dead fox in his feverish nightmare and sees a live fox just before he decides to go back to Dr Jenner’s house. We also hear foxes on the soundtrack in the forest at night. When you see the same symbol more than once it is called a* ***motif****. Perhaps the decaying fox symbolises death and disease and is an external representation of James’s fear of dying. Perhaps the real, live fox symbolises the opposite – life and health. Perhaps seeing it gives James courage to overcome his fears, or gives him the feeling and hope that he really might be protected from smallpox. People in James’s time were very religious – perhaps he thought it was a sign from God).* |
| **TP6** | **Edward Jenner’s Smallpox Discovery by Alexia Sinclair, 2015**  This photo was commissioned by the Bill and Melinda Gates Foundation as part of its **The Art of Saving a Life** project to use art to “*demonstrate how vaccines continue to positively change the course of history*”.  <http://artofsavingalife.com/artists/alexia-sinclair/>  A video of the artist discussing the picture:  <https://www.youtube.com/watch?v=wOvFyUqOaag>  **Discussion**  What is the style of this photograph?  (*James and Dr Jenner look fairly naturalistic, but the figure in the middle and the rest of the photo are very stylised and symbolic. It looks magical, fantastical, like something out of a fairy tale*)  Who do you think the woman in the middle of the picture is? What does sherepresent? (*According to the artist, “The aristocratic woman in the centre represents how smallpox did not discriminate, affecting the rich and poor alike.” – but children might come up with other interpretations!*)  Can you identify any other use of symbolism in the photo? (*According to the artist, “The many flowers throughout the piece symbolise the global impact of smallpox, and the skulls on every bottle the ephemeral nature of life and death”*)  Why do you think the Bill and Melinda Gates Foundation commissioned the work? |
| **TP7** | **Still from JAMES**, 2014  The film was commissioned by the Wellcome Trust, an independent global charitable foundation dedicated to improving health through science, research and engagement with society. The film was made on 16mm film. A film camera takes 25 photos (frames) every second! When it plays them back, your mind is tricked into thinking it sees smooth movement.  **Discussion**  Children should bear in mind that the film is just another artistic interpretation of what happened. Just because it’s a film doesn’t mean that it’s automatically more valid or truthful than the other pictures (see extension activity below).  You might have discussed Dr Jenner’s character in the JAMES film already during the **Strength of Character** activity. Is he shown as a hero or a villain or somewhere in between?  In the **Strength of Character** activity, children learn about the character goals James and John have in the film *(they want to get a job to support the family)*. Why do you think the filmmakers decided to show James’s fatherholding down James’s hand at this crucial moment?  *(It emphasises that James is scared and doesn’t want to take part in the experiment. Showing his father holding him emphasises his father’s decision to make James take part in the experiment).*  How does this help show the **character development** of James’s father in the film? What about James’s character development? *(At the end of the film James’s father realises that he loves James too much to make him take part in the final part of the experiment, even if it means losing the job and the family going hungry. Then James has to make the decision himself to overcome his fear, be brave and go back to Dr Jenner’s house)*  The JAMES short film is 15 minutes long. How many frames does it contain altogether? *(60 seconds x 15 minutes = 900 seconds 900 seconds x 25 frames = 22,500 frames!)* |
| **Comparing the paintings** | Once you have looked at all of the paintings, discuss why the pictures are so different.  When was each picture made? Can you match the year to the picture? (TP8)  Did any of the artists actually see James being vaccinated? (*Even the earliest one was made almost eighty years after James was vaccinated in 1796 – so no, they would have all taken liberties and used artistic licence in how they represented this moment*)  When someone looks at a painting, they understand that the artist might have ventured beyond the known facts and given their own interpretation of events. This is known as **artistic licence.** In the **History Detective: What Really Happened?** activity, children looked at some of the historical evidence about the experiment. Dr Jenner wrote about what he did to James, but there is no evidence about how James reacted or who else was watching. Just as historians form their own **opinions** about what might have happened, artists also form their own opinions about what happened. Some artists like Robert Thom see themselves almost as historians, doing lots of research to find as much evidence as possible to build a realistic picture of what really happened. An artist like Gaston-Theodore Melingue might be more concerned with capturing a feeling or mood and creating an interesting picture than the precise historical details. An artist like Alexia Sinclair might concentrate on creating symbolic meanings and finding striking and imaginative ways to convey information and feelings. But even Robert Thom had to use his imagination to fill in the gaps in the historical knowledge, and the choices he made in his painting reflect the way he was trying to portray Dr Jenner and his experiment.  Pick at least two of the pictures and ask children to compare how Dr Jenner and James are depicted, drawing on their discussion work. You might like to do this as a writing exercise.  Why do you think lots of artists have depicted this scene over the years?  (*Because it is such an important moment in the history of science and of mankind. People have wanted to celebrate Dr Jenner as a hero for inventing vaccination. Notice how lots of the artworks are now owned by medical institutions)*  Which painting do you like best and why?  Have any of the paintings made you think about Dr Jenner or James in a different way? Which one best represents what you think really happened? Which one best captures what you **feel** about Dr Jenner and James? |
| **Artistic licence in the JAMES film** | **Optional Extension**  Many films are based on historical events or people. The filmmakers have to act as historians and do lots of research. They have to use inference along with their imaginations to fill in the gaps where the information is not available.  Some of their choices they make are for **artistic** **reasons –** i.e. to tell a better story. For example, to simplify things, to fit all the events into the length of film, and to make the story more exciting and dramatic. The filmmakers are using **artistic licence** (also called **dramatic licence**).  (Sometimes historians argue that filmmakers have strayed too far from what is known or what was likely for the time in order to beef up the story. One famous example is the film **U-571**, which then Prime Minister Tony Blair called an “affront to British sailors” due to the inaccuracies in the film.  <https://en.wikipedia.org/wiki/U-571_%28film%29> )  The filmmakers who made JAMES did a lot of research to find out about Edward Jenner and the period of history in general. But as the children have seen in the **History Detective: What Really Happened?** activity, there’s not a great deal of evidence to go on about James Phipps and the exact circumstances of his participation in the experiment – especially about what he was thinking and feeling.  So the filmmakers had to use the available evidence to make inferences and form their own opinions about what they think might have happened and what was plausible for the period in history. They combined this with **artistic licence** in order to tell a **fictionalised** version of the story.  Below are some events in the film. Pick **one or two** to discuss as a class, or something else that has come out of your discussions.  Did the filmmakers really think it happened this way, or have they used **artistic licence?** If so, how does their choice help tell a good story?   * **James and his father start work for Dr Jenner on the day of the experiment.** *It’s possible that James’s father worked for Jenner at least occasionally, and possible that James came along with him because children of his age were expected to start earning money for the family. But it’s* ***not*** *very likely that they started working for him on the exact day Sarah Nelmes caught cowpox! However, it makes the story tighter and more dramatic that it all happens on the same day.* * **James’s father makes him take part in the experiment.**   *The film implies that it is to safeguard their job as Dr Jenner’s gardeners.* ***Nobody knows*** *what the terms were for James’s taking part in the experiment – as the children have seen, Dr Jenner left no record of how he persuaded James’s father to let James be experimented on. But it is possible that James’s father would have feared the consequences of turning down this request from his boss and social superior, especially at a time when unemployment was high and work in the countryside was scarce due to mechanisation and the Enclosure Acts. The scenario reflects the gulf in social status between Dr Jenner and John, gentleman and peasant. Dramatically, it gives James and John a really interesting and difficult decision to make – to risk James’s life, or go hungry! However, it is also possible that James was perfectly happy to take part in the experiment because he trusted Dr Jenner that it was safe and believed him when he said it would protect him from the dreaded smallpox.*   * **Thomas died of smallpox.** *In the film, James’s father says that James had a brother called Thomas who died of smallpox. It is not known whether any of James’s real siblings actually died of smallpox. But lots of children would have experienced the traumatising death of a brother or sister from the horrible disease. Dramatically, James would be even more scared of catching smallpox if he’d seen his little brother die of it.* * **Dr Jenner’s maid has smallpox scars.**   *We don’t know if this is true, but it* ***is*** *known that rich households often employed maids who they knew had already had the disease so that they**wouldn’t bring it into the household in times of epidemic. Dramatically, it shows us the severe scarring that smallpox caused and makes James feel a bit frightened!*   * **James sees a girl being carried away with smallpox.**   *Again, we don’t know if this happened, but it is possible there was a smallpox epidemic in James’s local area in his lifetime. It makes the story more dramatic because James – and the* ***audience*** *– see the horror of smallpox first hand.*   * **Timeframe.**   *As the children know from Dr Jenner’s publication, it took over a week for James to get ill from the cowpox. There was also a gap of about six weeks between James being vaccinated with cowpox and being tested with smallpox.*   * **James runs away from Dr Jenner.** *There is no evidence that James ran away. But it represents how he might have been feeling and adds to the tension between him and his father.* * **James goes back to Dr Jenner all by himself.** *Again, it probably didn’t happen this way. But it helps show how James was very brave in taking part of the experiment and makes him the hero of the story.* * **James risked his life by taking part in the experiment.** *Well, here’s a* ***big*** *example of dramatic licence! It’s true that if the experiment didn’t work there was a* ***very small*** *chance that James would die. However, the procedure of putting smallpox puss into someone’s arm – called variolation – was actually a standard medical practice at the time because it worked like vaccination and made you immune to smallpox. It made you* ***very*** *ill for a time and was extremely unpleasant, but it* ***very rarely*** *proved fatal. Dr Jenner had actually variolated his own son when he was little, because at the time it was the only way to protect someone from smallpox.   But variolation did make you very infectious for a few weeks – so if the experiment hadn’t worked, James probably wouldn’t have caught smallpox himself but he might well have passed it on to his family or someone else in the village. This is why variolation was banned in the UK shortly after the discovery of vaccination with cowpox – because it was often the source of outbreaks of smallpox. Cowpox, on the other hand, produced very mild side effects and was not at all contagious, and never fatal. This is why Dr Jenner’s discovery was so monumental.* ***Note that children are not expected to be familiar with the term variolation.*** |
| **Children produce their own artwork** | **An artistic commission!**  The Wellcome Trust has commissioned you to make an artwork to commemorate Dr Jenner’s world-changing experiment on James Phipps.  You might like to run this as a competition and offer the best artwork a small prize. You might like to give children a choice of medium, or choose one of painting, photograph, sculpture, etc.  **Some things to think about before you start…**  What do you want your picture to “say”, what are you trying to communicate to the viewer? For example, do you want to celebrate James as a hero, or Dr Jenner as a hero, or both? Or do you want to show Dr Jenner as a villain?  How will your decision affect the way you portray Dr Jenner and James?  Are you going to draw what you really think happened, or are you going to use artistic licence and create a dramatic and exciting picture?  What **style** will your picture be? Is it going to be naturalistic and realistic or more symbolic?  What kind of atmosphere do you want to convey? Is it going to be calm or lively and dramatic?  Who else will be in the picture?  What will be the focus of your picture? Where do you want the viewer to look first and foremost?  Do you need to do any extra research before you start, for example to find out what clothes people wore in Dr Jenner’s time? |