

IAL: to understand how adaptation may lead to evolution

<https://www.youtube.com/watch?v=470N1pxIZbk>



Some children look a bit like their parents, like Paul Rudd and his son (left). This is because DNA has been inherited (passed down genetically) by the offspring from their parent. Eye shape, hair colour, nose shape and even the sound of your voice are some of the traits that can be inherited.

Like we learnt last week, animals can adapt to suit their environments. Evolution is where some characteristics are inherited from one generation to another but not copied identically, leading to gradual change. Whereas adaptation can happen over a relatively short space of time, evolution is a much slower process and it can take species thousands of years to evolve. It's not like Pokemon 😊

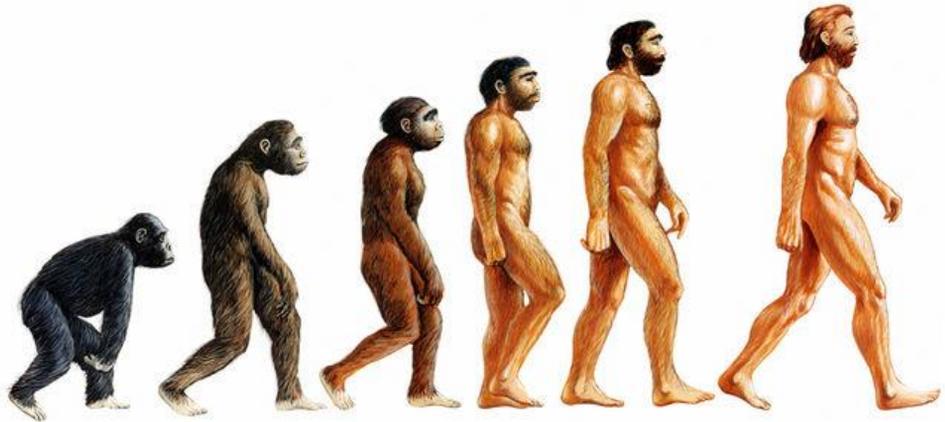
As a simple, non-biological example, have a look at this diagram, showing how Nintendo controllers have changed over time. With each new generation of games console, some traits have been kept and some have developed. The 'plus sign' arrows have remained but the controllers are now bigger, with more buttons.



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This well-known image represents how humans have evolved over time. Look carefully at the image.

Describe some of the changes over time that are part of human evolution, according to the diagram.



1. What does 'inheriting' mean?
2. "Traits are physical characteristics that you can see." Explain why this is not really correct.

3. Tick true or false:

	True	False
All offspring are the same as their parents.		
Evolution can take centuries to occur.		
Humans share similar DNA with chimpanzees.		

4. Explain how evolution is different to adaptation.

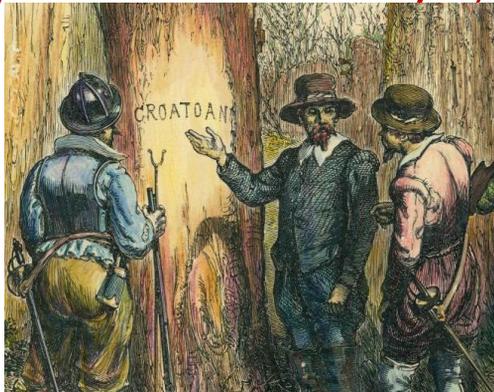
IAL: to use sources of information to deduce information about the past

<https://video.nationalgeographic.com/video/101-video-shorts/00000163-9321-d630-a16f-bbab09990000>

<https://www.youtube.com/watch?v=b6SDYZNHkXo>

https://www.ducksters.com/history/colonial_america/lost_colony_of_roanoke.php

What happened to the colony of Roanoke?



Picture it...North America...1587...

The **Roanoke Colony**, also known as the **Lost Colony**, was established on [Roanoke Island](#) in what is today's [Dare County, North Carolina](#). It was a late 16th-century attempt by [Queen Elizabeth I](#) to establish a permanent English settlement in North America. The colony was founded by [Sir Walter Raleigh](#). The colonists disappeared during the **Anglo-Spanish War**, three years after the last shipment of supplies from [England](#). Their disappearance gave rise to the nickname "The Lost Colony." There is no conclusive evidence as to what happened to the colonists.

In 1603, England established a colony called Jamestown, just over 100 miles north of Roanoke. The colonists wanted to find out what had happened at Roanoke.

Use the written and video sources of information to deduce what you think happened to the mystery colony. What information was key to your decision?

The first definitive information concerning the fate of the Lost Colony came from Captain **John Smith**, (the real person who the Pocahontas character is based on!) leader of the Jamestown Colony from 1608 to 1609. According to chronicler Samuel Purchas, Smith learned from Chief Powhatan that he had personally conducted the slaughter of the Roanoke colonists just prior to the arrival of the Jamestown settlers because they were living with the Chesepians, a tribe who were related to the Pamlico tribe in Carolina and who refused to merge with the Powhatans.



John Smith



Chief Powhatan

William Strachey

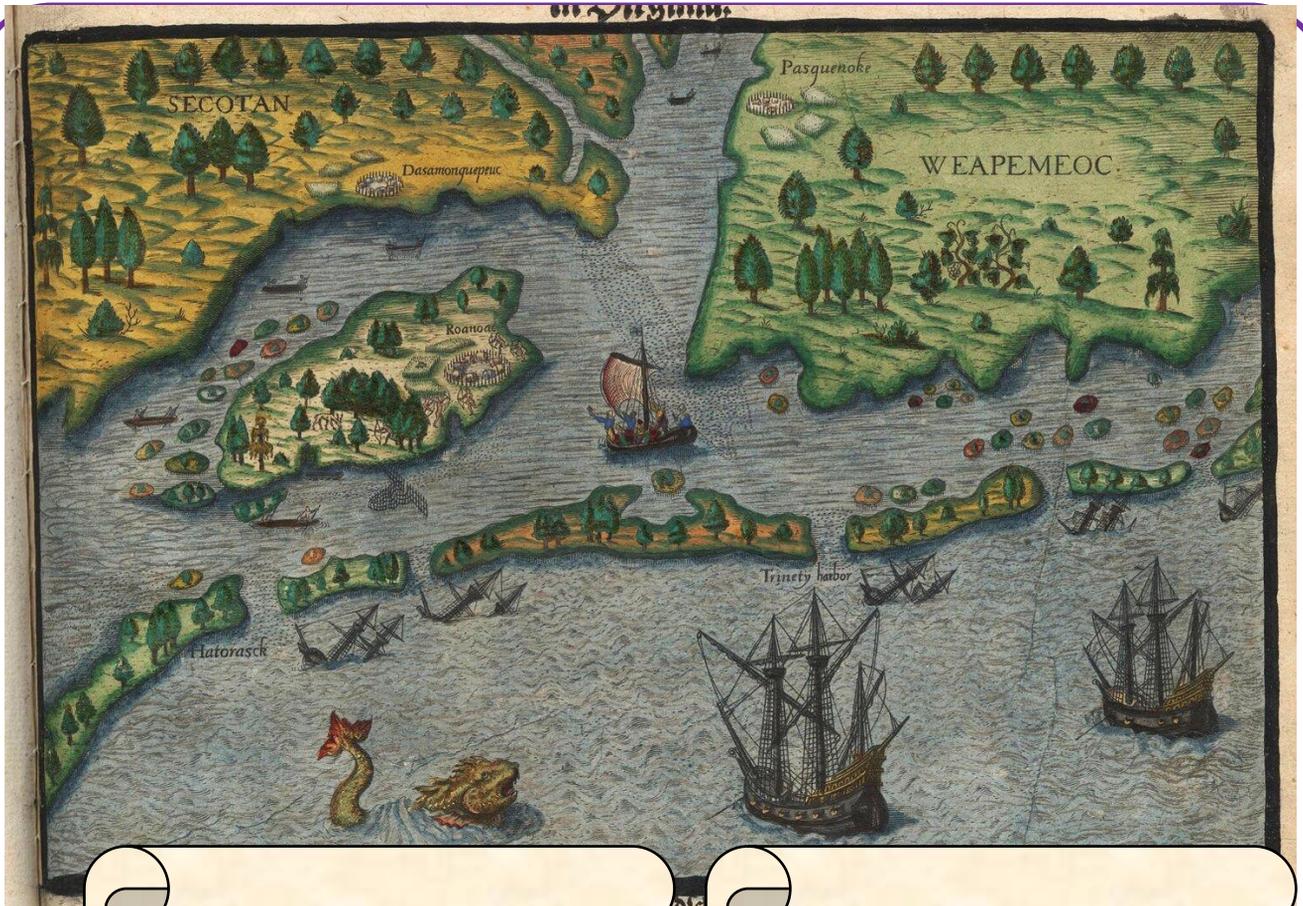


The second source of Chief Powhatan's involvement was William Strachey, Secretary of the Jamestown colony in 1610-11. Strachey's *The Historie of Travaile Into Virginia Britannia* seemed to confirm Smith's report and provided additional information: The colonists had been living peacefully among a group of natives beyond Powhatan's domain for more than twenty years when they were massacred. Furthermore, Powhatan himself seemed to have directed the slaughter because of prophecies by his priests that he would be overthrown by people from that area, and he reportedly produced several English-made iron implements to back his claim.

The information from these two sources, John Smith and William Strachey, provides the basis for the traditional view that the Lost Colony was slaughtered by Chief Powhatan, and versions of the Powhatan-Lost Colony-slaughter scenario have persisted for more than 400 years. However, no bodies were found and no archaeological evidence has been found to support this claim.

Furthermore, recent re-examination of the Smith and Strachey sources advanced by author and researcher Brandon Fullam has suggested that the massacre described by Powhatan was actually of the 15 people left behind by the first Roanoke expedition, leaving the fate of the second colony still unknown.

IAL: to identify and describe how the physical features affect the human activity within a location



The colonists spent the autumn of 1585 obtaining enough corn from neighbouring tribes to see them through the winter. By the Spring of 1585, relations with the nearby Secotan tribe and the colonists were extremely strained. This was most likely due to the colony's being overly reliant on the food provided by the Secotan.

Why did Grenville and Lane choose Roanoke? There were better sites for a colony already known - the Chesapeake Bay area, farther north, had much better soil, deep rivers and better harbours. They may have chosen Roanoke because it was inaccessible to large ships - Spanish ships. Or it may have been a simple miscalculation.

Which of these things would be desirable when creating a settlement or colony in the Elizabethan era? Circle as many as you think.

fresh water
supply

rocky ground

mosquitoes

non-hostile
neighbours

swampy
ground

trees

easy to
defend

plentiful
wildlife

Can you think of any other aspects of physical geography that might make an area attractive as a settlement?

Study the map of the area surrounding Roanoke and the descriptions.

How would the physical geography of the colony have affected the lives of the colonists?