

before .our time

More than 8000 years ago, the people of Jericho, in the Jordan Valley, practised facial reconstruction. Under the floor of one of their homes, an archaeologist found nine human skulls. Each had been carefully covered with numerous layers of clay, realistically depicting the original facial features it had supported. Seashells were embedded into the clay for eyes. Other similar skulls have been found in the area over the years.

In the early 1800s, European scientists started toying with the idea of reconstructing faces. They used crude tools such as pins and sewing needles to measure the thickness of the skin and muscle in the faces of cadavers. They also began cataloguing the sizes and shapes of skulls.

CLARIFY

toying with
the idea
cadavers

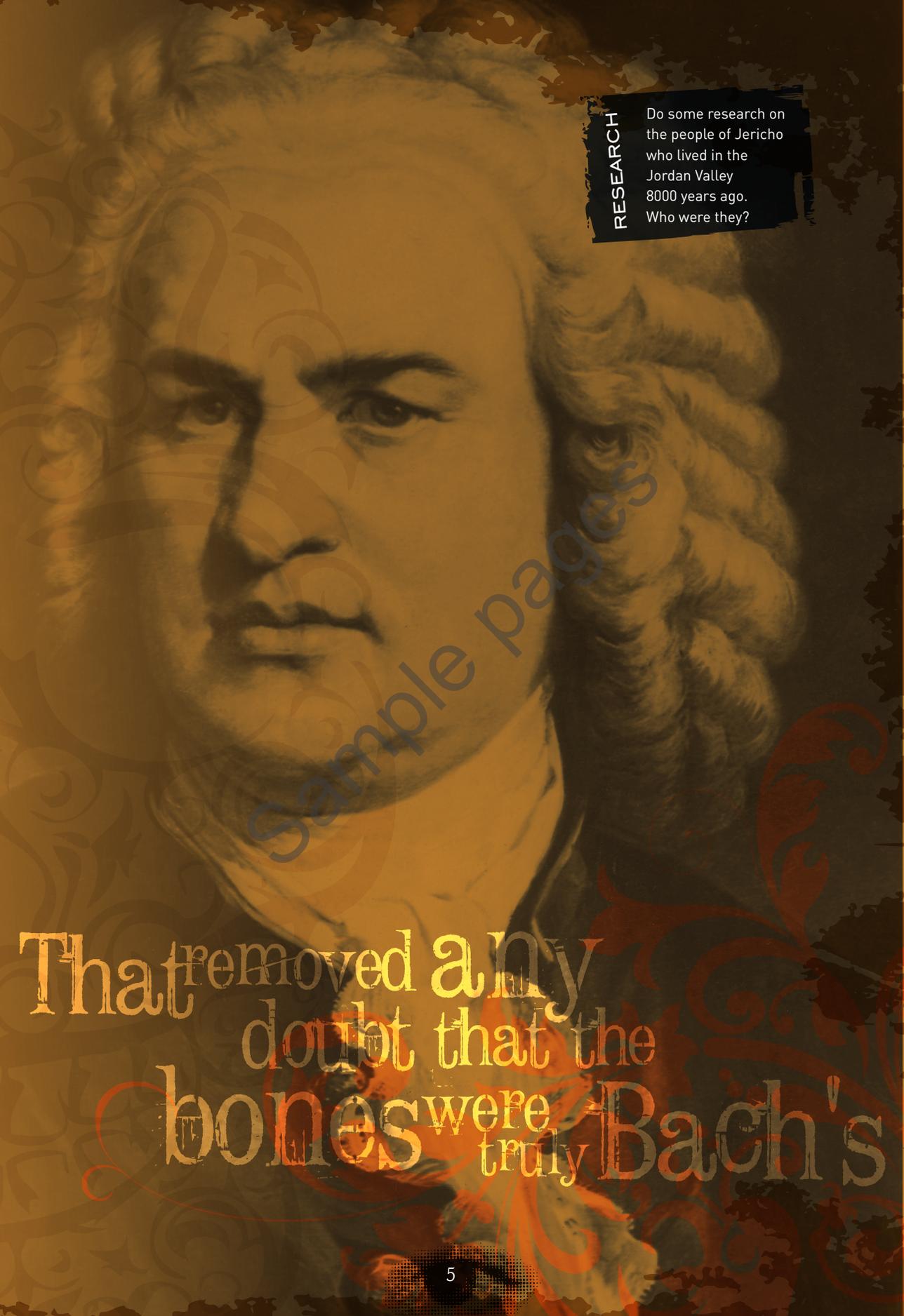
In 1895, in one of the first truly scientific uses of facial reconstruction, Professor Wilhelm His, a German anatomist (a person who studies the human body), set out to see whether the bones found in

a grave in Leipzig, Germany, really were those of composer Johann Sebastian Bach (1685-1750). His's

reconstruction turned out to bear an amazing likeness to contemporary portraits of Bach. That removed any doubt that the bones were truly Bach's. Over the next few years, other scientists followed His's lead, recreating the faces of other famous people.

ISSUES

What ethical or moral issues do you think arise from the observation and handling of human skeletons or cadavers?

A sepia-toned portrait of Johann Sebastian Bach, showing his face and curly hair. The image is overlaid with a decorative pattern of swirling lines and floral motifs in shades of brown and orange. A dark, torn-edge rectangular box is positioned in the upper right corner, containing text. A diagonal watermark reading "Sample pages" is visible across the center of the page.

RESEARCH

Do some research on the people of Jericho who lived in the Jordan Valley 8000 years ago. Who were they?

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CLARIFY

to pit anthropologists approximate science

But another **experiment** in the early 1900s didn't work out as well. Scientist Von Eggeling, also from Germany, decided to pit two artists against each other by asking them both to do a facial reconstruction of the same skull.

First, a cast or mask was made of the dead man's face, to show what he really looked like. Then two exact copies of the skull were made. Each artist was given one and asked to reconstruct his face.

When they had finished, Von Eggeling discovered, to his **astonishment**, that the two recreations looked totally different. Worse yet, neither looked at all like the dead man!

The scientific community was shaken. The whole process of facial reconstruction ground to a halt.

For years it was left to the **realm of detective fiction**.

But scientists don't discourage easily. By the late 1960s, scientists in the US, USSR and Britain were again quietly working to perfect the process.

ANALYSE

Why do you think the two artists' interpretations were different in Von Eggeling's experiment in the early 1900s?

The scientific community



QUESTION

What advantages/disadvantages can you see in scientists from different organisations sharing research?

In the 1970s, another experiment was performed. This one was arranged like a **police line-up**. With the help of the US Federal Aviation Authority, anthropologists circulated photos of two completed facial reconstructions – one of a man and one of a woman – along with photos of them before they died and photos of a handful of other people.

The pictures were shown to both police officers and ordinary citizens to see if they could match the reconstruction with the correct photo. Two-thirds of those shown the photos were able to match the photo of the man to his reconstruction correctly. With the woman, whose photo was 25 years old, only a quarter managed to get it right. But the results were still good enough to make people believe that reliable facial reconstructions were possible.

Scientists still refer to facial reconstruction as an approximate science.

Unlike a photo, it only gives investigators a **likeness** of the person – a likeness that they hope will **trigger** some sort of useful recognition.

SUPPOSITION

A supposition is an idea or opinion that is formed on the basis of limited evidence, rather than real proof. Can you find any examples?

was shaken...