

Learning Objectives

1

Apply the concepts and techniques taught in the “Introduction to Forensic Science” course

King Richard III

Richard III

1452 – 1485

King of England
from 1483 – 1485

Historically significant



King Richard III

Battle of Bosworth

Richard III killed



22 August 1485

Henry Tudor



King Henry VII



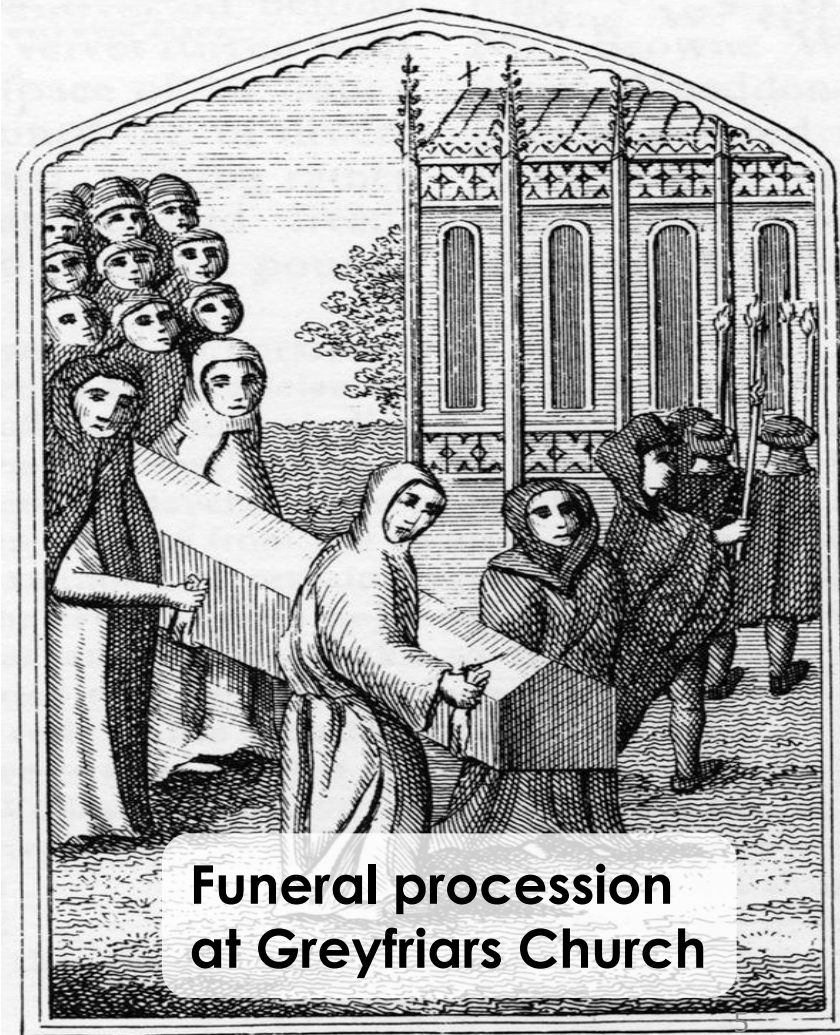
Battle of Bosworth

Battle of Bosworth

Richard III buried



Greyfriars Monastery
Church, Leicester



**Funeral procession
at Greyfriars Church**

William Shakespeare

Worked for the Tudors

Wrote a play about Richard III



Shaped image of Richard III



Biased?



Richard III a hunchback?

Richard III

What happened to Richard III's grave?



Lost



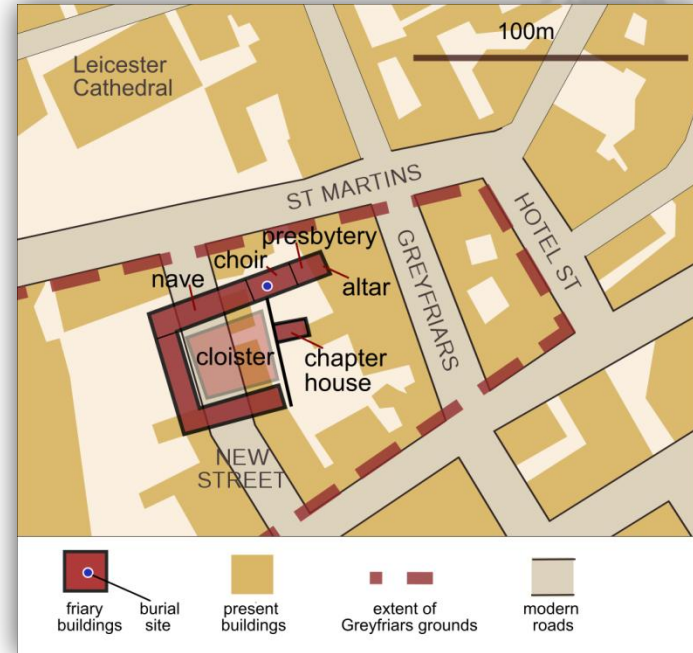
Church was demolished in the 1530s

University of Leicester

Greyfriars Church
site was identified



Comparison of old
and new city maps



Site of Greyfriars Church

Excavation

Found the church remains



Found a skeleton

Is it the skeleton of King Richard III?

Circumstantial Evidence

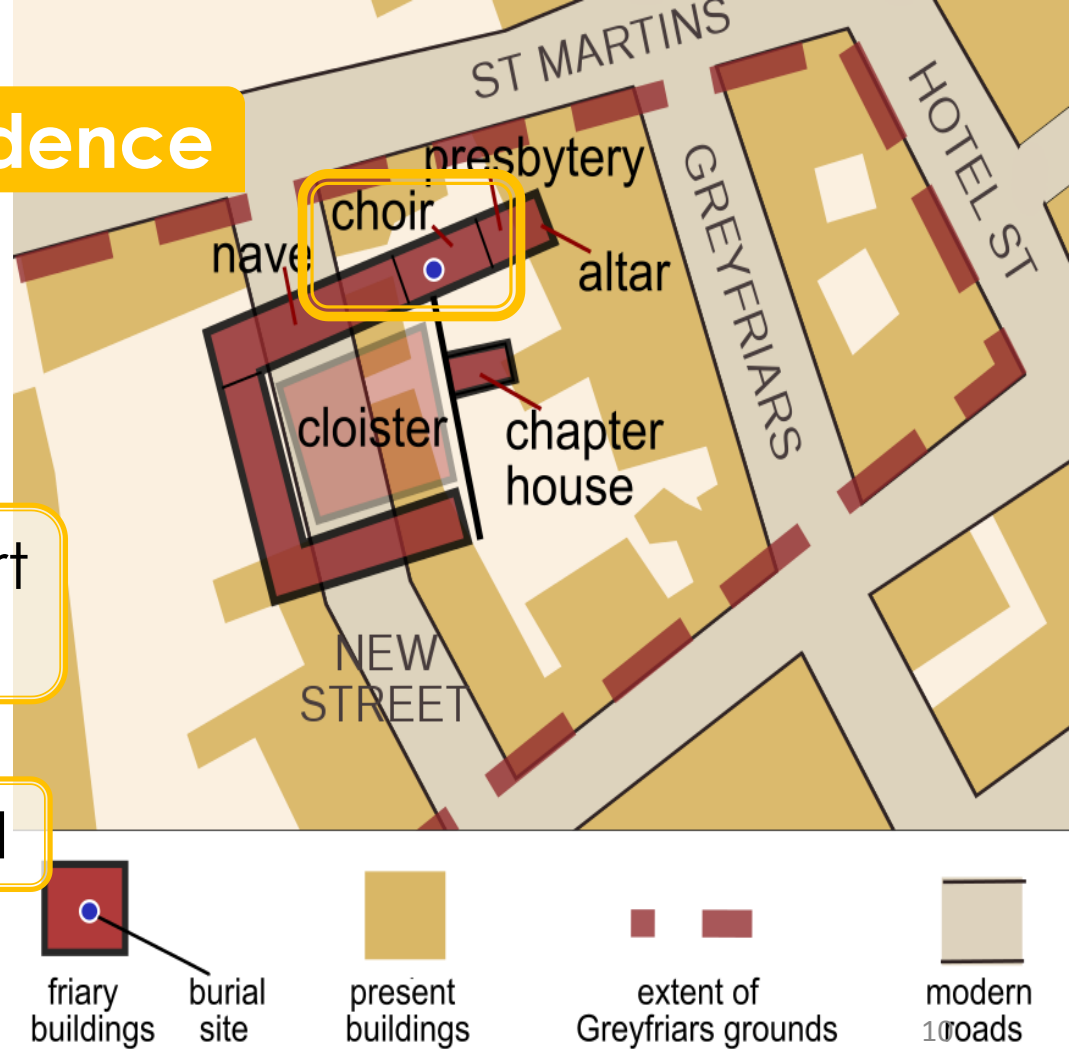
Buried in the choir



Respectable part
of the church



Carelessly buried



Circumstantial Evidence

Grave was not big enough for him

No shroud or coffin



Quick burial

Scientific Evidence

Carbon-14 dating of the skeleton



Dated between 1456 and 1530



Battle of Bosworth was 22 August 1485

Skeleton

Skeleton of adult male



Not easy to get accurate estimate of age

Inspection



Late 20s to late 30s



Richard III was in his 30s

Skeleton

Richard III portrayed as a hunchback

Skeleton had a distinct curvature of the spine



Scoliosis



Hunchback?



Asymmetrical shoulders

Skeleton

Injuries



Injuries are consistent with being hacked by a sword



10 wounds



8 to the skull

Facial Reconstruction

<https://www.le.ac.uk/richardiii/science/facevoice.html>

No forensic use



No idea what he really looked like

DNA Evidence

Skeleton over 500 years old



Cannot use nuclear DNA



Use mitochondrial DNA

DNA Evidence

Mitochondrial DNA extracted from remains



Require comparison to an authentic sample

DNA Evidence

Mitochondrial DNA



Not unique to individual



Passed down the maternal line

DNA Evidence

Need uninterrupted female line



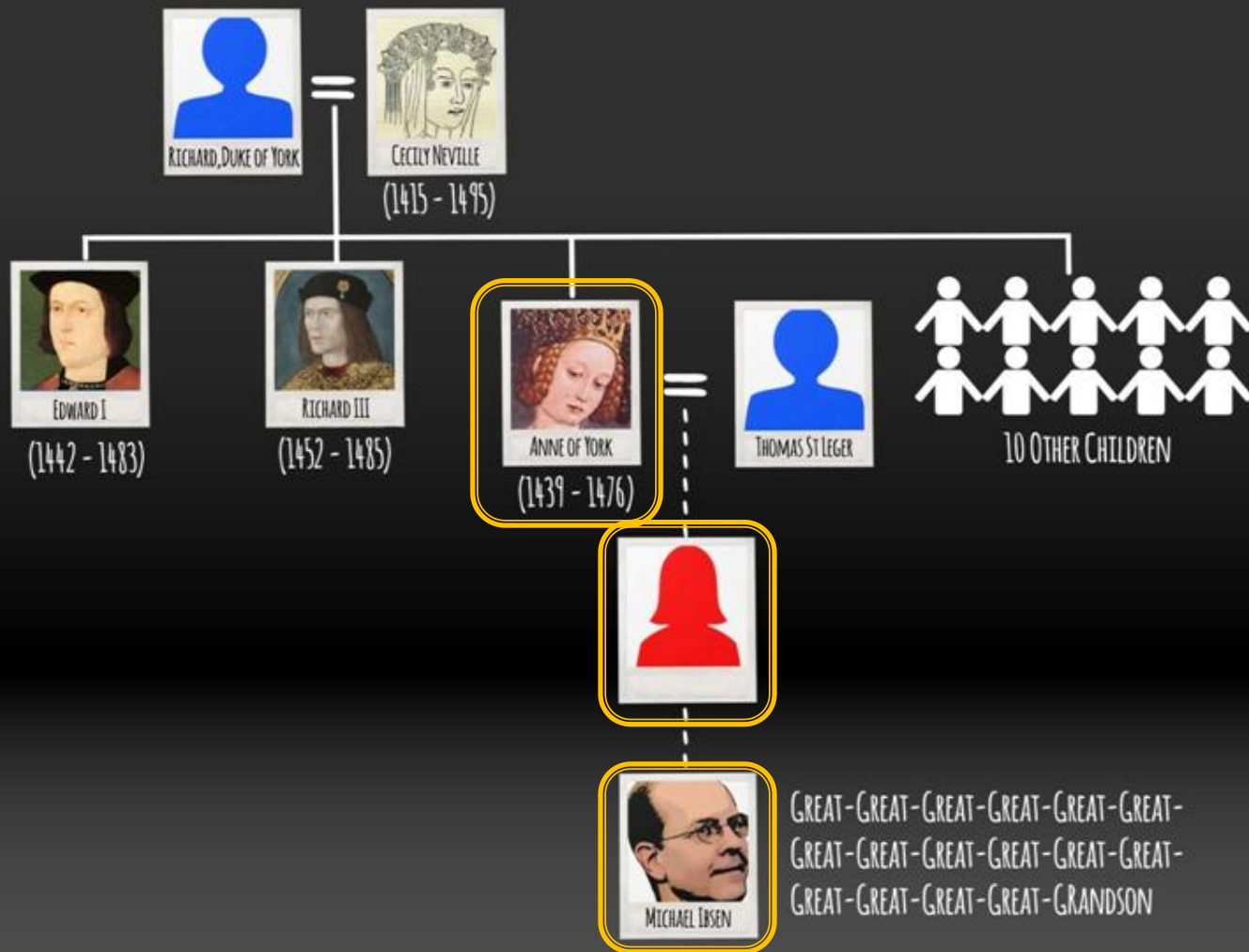
Richard III is a man



Look for descendants
of Cecily Neville



Cecily Neville



DNA Evidence

Uninterrupted female line
to the present generation



Michael Ibsen

Second descendent



Anonymous

DNA Evidence

Two descendants gave DNA samples



Mitochondrial DNA matched those extracted from the skeleton

Evidence

Evidence
from skeleton



Evidence
from grave



Evidence
from DNA



Skeleton belongs to King Richard III

King Richard III Case

Application of techniques of forensic science

DNA

Fingerprints

Fibre Analysis

Poison

Blood