UCL Museums & Collections

Citizenship & Identity
Loan Box

Teachers’ Pack Key Stage 4
Information Sheets & Worksheets
Includes pupils’ resources
Introduction

**The Citizenship & Identity Loan Box**
The Citizenship & Identity Loan Box is designed to support the teaching of Citizenship at Key Stages 3 and 4. The Loan Box comprises replicas, photographs and modern versions of objects from University College London's (UCL) Galton Collection.

**The Galton Collection**
The Galton Collection is one of 4 museums and 10 departmental collections at UCL. The Collection consists of the scientific instruments, papers, and personal memorabilia of one of UCL's most important scientists, Sir Francis Galton.

Sir Francis Galton, who was a cousin of Charles Darwin, lived from 1822 to 1911. After obtaining a degree in maths from Cambridge University, he embarked on a varied and highly successful scientific career. Initially, Galton's primary interests were geography, exploration and meteorology: he led an expedition to Damaraland (modern Namibia) which resulted in his being awarded a gold medal for exploration from The Royal Geographical Society; he discovered the anticyclone; and he produced the first modern weather maps.

Later in his career, however, Galton's interest was focussed on the fields of heredity, intelligence, identity and statistics. His key achievements in these areas were to apply the science of statistics to the analysis of human populations, and to prove scientifically that every individual's fingerprints are unique (paving the way for the adoption of fingerprinting by Scotland Yard as the key means of criminal identification). Galton set up an "Anthropometric Laboratory" in 1884 which was designed to obtain a detailed record of the physical identity of the British population, with a particular emphasis on measuring families, in order to increase understanding of the inheritance of physical characteristics.

The objects selected for this Loan Box are all illustrative of Galton's work on identity and fingerprinting. The objects and the accompanying worksheets are designed to introduce pupils to four enquiries:

- The Body & Identity
- What is Identity?
- Fingerprinting & Forensic Science
- Individual Identity & Human Rights

Whilst Galton's objects are used as a starting point, the worksheets and activities have been designed to give a broad and modern perspective on the theme of identity.
**Use of Replicas**

The importance of handling and investigating objects to enhance pupils' learning has been well documented. In this case, we have decided to include replicas of Galton's instruments instead of the originals, so that we have robust working instruments that pupils can actually use. Moreover, teachers, who worry about pupils breaking or damaging valuable museum pieces, often appreciate the use of replicas. However, please remember that the replicas themselves are expensive to produce and have to be used by many other schools. We therefore request you adhere to the handling guidelines outlined below. This will also instill in pupils the correct handling procedures should they handle original museum material in the future.

**Handling Guidelines**

Please tell pupils these guidelines before you start to work with the objects. If any objects are damaged, please contact the UCL Collections Education Officer as soon as possible.

- Only handle one object at a time
- Use two hands to hold an object
- Always hold objects over a desk or worktop
- Do not snatch objects from other people while they are handling them
- Work in one place with the object
- **Remember to wash your hands thoroughly after the fingerprinting activity. Be extremely careful not to get any ink over any of the objects or resources in the Loan Box**

A copy of these handling guidelines appears on the next page, which, if you wish, you can photocopy and circulate to your pupils.
Handling Guidelines
Identity & Citizenship Loan Box

- Only handle one object at a time
- Use two hands to hold an object
- Always hold objects over a desk or worktop
- Do not snatch objects from other people while they are handling them
- Work in one place with the object
- **Remember to wash your hands thoroughly after the fingerprinting activity. Be extremely careful not to get any ink over any of the objects or resources in the Loan Box**
University College London

This Loan Box has been produced by University College London and provides an excellent opportunity to introduce young people to the concept of Higher Education and to university in general.

UCL is one of the three oldest universities in England, being founded over 175 years ago. Established to admit students no matter what their race, religion or class, it was also the first to admit women students. It pioneered university-based teaching of English literature, modern languages, geography, law, medicine and engineering. UCL’s former academics helped to form the modern world; among their breakthroughs were the identification of hormones and vitamins, the discovery of the inert gases, including neon, and the invention of the thermionic valve, which made radio and modern electronics possible.

Today UCL has a student population of over 17 000 students following one of the widest range of degree programmes, from Fine art to Medicine, from Russian to Chemical engineering and from Archaeology to Law. Students come from all over the United Kingdom and from 144 countries to study at UCL.

UCL, based in central London, is now recognised as one of the top universities in Britain for teaching and research and has a worldwide reputation for excellence.

Some of the subjects you can study at UCL:


Widening Participation

...making university more accessible...

UCL recognises that some people don’t get the same chance as others to go to University. Due to too little information or too few resources, there are students who are missing out. Through outreach activities and by providing information on what university is all about, we plan to change that, to widen the participation of students from different backgrounds at UCL.
Pupils can check out the website [www.ucl.ac.uk/wp](http://www.ucl.ac.uk/wp) to find out more about going to university. The site covers ‘Why go to University?’ and gives pupils the chance to email questions to current UCL students as well as offering general careers advice, interview tips and guidance on how to find out more about Higher Education.

The ‘Citizenship and Identity Loan Box’ is one of a number of initiatives by UCL Museums and Collections. We aim to widen access to our collections by arranging group visits to UCL’s four museums and by developing Loan Boxes and running Outreach Sessions in schools. These sessions are tailor-made and aim to enrich and support the curriculum at both Primary and Secondary level. To find out more about our Widening Participation activities please contact our Education and Access Officer for UCL Museums and Collections (Tel: 020 7679-2151 or Email: educationofficer@ucl.ac.uk) or check out [http://www.ucl.ac.uk/prospective-students/widening-participation/introduction/index.shtml](http://www.ucl.ac.uk/prospective-students/widening-participation/introduction/index.shtml)

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**Sir Francis Galton and UCL**

The Galton Collection, on which this "Citizenship and Identity Loan Box" is based, is held in the Galton Laboratory, which is part of the Department of Biology at U.C.L.

Sir Francis Galton set up the Galton Laboratory in 1907. On his death in 1911, he left a significant sum of money to set up the Galton Professorship at UCL. The first Galton Professor was Karl Pearson, and a selection of eminent scientists held the Chair throughout the twentieth century. On his death, Galton also bequeathed his scientific instruments, papers, items from his travels and some of his personal objects and papers to the College: these now form the "Galton Collection".
The Loan Box & The National Curriculum at KS4

Citizenship
The key area of the curriculum to which the Loan Box relates is Citizenship, specifically by exploring the key areas of crime, human rights and identity. These subjects fall within "Knowledge & Understanding about becoming informed citizens" at Key Stage 4. Additionally, the activities in the Loan Box are also designed to tie in with "Developing skills of enquiry and communication", by encouraging pupils to think about topical, social & cultural issues by analyzing information and its sources, to justify orally and in writing a personal opinion about such issues, and to contribute to group and exploratory class discussions.

Science
Variation and inheritance

English
Group discussion and interaction

History
Investigation and interpretation of artefacts
Objects in the Loan Box

1. Photocard of Hand Dynamometer (5 copies)

2. Replica Head Spanner

3. Measuring tapes (5)
   Modern

4. Photocopy of Form from Sir Francis Galton’s Anthropometric Laboratory (5 copies)

5. Box of Hair Samples
6. Box of Artificial Eyes

7. Composite photos (2 copies of each photo)

8. Fingerprint kits - ink strips, magnifying glasses, and cards of the types of fingerprints (5 magnifying glasses, 5 copies of each fingerprint card)

9. Modern police fingerprinting forms - City of London Police & FBI (5 copies of each)
10. Fingerprint examiner & sets of fingerprints to examine (5 sets of fingerprints)

11. Second World War identity card (5 copies)

12. Modern French identity card (5 copies)
How to Use the Loan Box

The objects in the Box are ideal for supporting the teaching of Citizenship at Key Stage 4. The Pack is divided into 4 enquiries:

1. The Body & Identity
2. What is Identity?
3. Fingerprinting & Forensic Science
4. Individual Privacy & Human Rights

For each enquiry, the Pack contains a range of information, worksheets, and activities. You can choose which of the resources you wish to reproduce for your class. The emphasis with the Key Stage 4 Pack is to generate as much class discussion/debate as possible.

For Enquiries 1, 2 & 4 a range of debate topics is given at the start of the Enquiry: a list of objects from the Loan Box relevant to this debate is then given. Additionally, teachers can decide which Information Sheets and Worksheets to give to pupils to help in the development of this discussion. Enquiry 3 (Fingerprinting & Forensic Science) remains essentially activity based.

The Loan Box also contains two “press-packs” of newspaper clippings, which relate to Enquiry 3 (Forensics) and Enquiry 4 (Identity Cards). These can be used to prompt discussion and debate, or as a stimulus to encourage pupils to collect their own relevant articles to build up a personal, or a class, “press-pack”.

Each of the enquiries can be studied independently; however, the topics do follow a natural progression from 1-4, working towards the group discussion at the end of Enquiry 4. You are of course under no obligation to use the resources, and are welcome to develop your own lesson plans and resources around the objects. However, if you like the resources, then please feel free to photocopy and keep them for use in the classroom, as many of the worksheets can be used once you have sent back the Loan Box. All the pupils' and teachers' sheets can be downloaded from the web (www.ucl.ac.uk/museums/galton/). By accessing the resources online, you will be able to pick and choose the worksheets you like, or to edit them to suit your class.

If you have any queries regarding the Loan Box, please contact:

UCL Museums & Collections
Tel: 020 7679 2151
Email: educationofficer@ucl.ac.uk

Finally, once you have used the Loan Box, we would be grateful if you could fill in the evaluation form, which you will find at the back of this Pack. Please photocopy, fill it out, and leave the completed form inside the Loan Box for us. Or if it is easier, post it back to us in the envelope provided.
How to Introduce All the Objects at Once

In order to engage pupils, a really good introductory activity is to get them to use the Loan Box objects to brainstorm to try to answer the question "What was Francis Galton interested in?" You can tell them that he was a scientist and that he lived from 1822 to 1911, but let them work the rest out for themselves.

This activity works best of pupils sit in small groups. Give each group a large sheet of paper and a marker pen, and ask them to put Galton's name in the middle. Then rotate the objects around the groups, giving each group 5 minutes with each object. The activity works best with the following objects:

- head spanner
- fingerprint examiner & box of fingerprints
- composite photograph
- box of eyes
- box of hair
- anthropometric laboratory form
(It is best to leave out the modern objects for now)

As they examine each object, pupils should write on their poster as many ideas as possible about what they think Galton was interested in, and what areas of science he focussed on. The finished poster should look something like this:
Enquiry 1
The Body and Identity
Teachers' Sheet

Suggested Task

- In groups of around 5, pupils compile an "Anthropometric Report"
- The group submits either an oral presentation or a written report

The report should focus on the questions & issues below:
1. Each pupil to fill in their own anthropometric profile form (see Worksheet 2)
2. Compare your own measurements with the rest of your group. What are the group's average measurements? Is there a lot of variation? Which measurements are fairly stable and which vary greatly between different members of the group? Is there any correlation between different measurements - i.e. do tall people also have a long arm span, or do those with a certain eye colour have long fingers?
3. Using these modern forms, and the copies of Galton's original Anthropometric Laboratory Forms, think about ways in which the human body has changed over the last 100-150 years - which of the measurements on the form are likely to be different, and which are likely to have stayed the same?
4. Based on the objects you have seen from the Loan Box, how do you think the scientific instruments used to take measurements have changed over the last century?
5. What are the factors behind the changes to the human physical form over the last century?
6. What measurements do you think are likely to change over the next 100-150 years, and for what reasons?
7. Do you think genetic engineering will be a factor in any changes to the human physical form in the future?

Ideas and material for the report can be obtained from the following Loan Box objects:
- Photo-card of hand dynamometer
- Head Spanner
- Measuring Tapes
- Anthropometric Laboratory Form

Additional ideas and material can be obtained from the following information and activity sheets. You can decide which sheets, or what information, to give pupils.
Pupils' Task Sheet: Enquiry 1

Compile an anthropometric report, focussing on the questions and issues below:

1. Fill in your own anthropometric profile form (see Worksheet 2)
2. Compare your own measurements with the rest of your group. What are the group's average measurements? Is there a lot of variation? Which measurements are fairly stable and which vary greatly between different members of the group? Is there any correlation between different measurements - i.e. do tall people also have a long arm span, or do those with a certain eye colour have long fingers?
3. Using these modern forms, and the copies of Galton's original Anthropometric Laboratory Forms, think about ways in which the human body has changed over the last 100-150 years - which of the measurements on the form are likely to be different, and which are likely to have stayed the same?
4. Based on the objects you have seen from the Loan Box, how do you think the scientific instruments used to take measurements have changed over the last century?
5. What are the factors behind the changes to the human physical form over the last century?
6. What measurements do you think are likely to change over the next 100-150 years, and for what reasons?
7. Do you think genetic engineering will be a factor in any changes to the human physical form in the future?
This object was used by Sir Francis Galton to measure (in pounds) the strength of a person's hand grip. It has a spring frame which is compressed by the action of a person's hand. This causes a gear to move a dial, which records the greatest pressure exerted by the hand. The hand dynamometer is made of brass and measures 13.5cm x 5.5cm.

Today, doctors and physiotherapists use hand dynamometers to evaluate hand trauma and disease. They are also used to study muscle activity, by looking at grip strength, relative strength of the left and right hand, muscle fatigue and endurance. Modern versions include electronic and hydraulic ones (see below).
Galton used head spanners like this one at his Anthropometric Laboratory to measure the head. The key measurements taken were head length, breath and height. They are also known as craniometers or head calipers. The one in the Loan Box is a replica based on the design of Galton's original - see below:

Head spanners have been used in the fields of anthropology, primatology, medicine, dentistry, anatomy, evolutionary biology, and history to look at different skull shapes, and, indeed they are still used today in some fields, though now tend to be made of metal.

Biological anthropologists use the measurements taken from the head spanner to estimate cranial volume of both living subjects and skulls. Cranial volume is an important measurement in the study of racial differences and in clinical practice for the study of abnormalities of cranial size and shape.

Victorian interest in the shape of the skull can also be seen in the, now discredited, study of phrenology. Phrenology was an extremely popular Victorian "science" which developed from the work of Franz Joseph Gall (1758-1828). Most phrenologists would run their bare finger tips (though they sometimes used calipers, measuring tapes or other instruments) over the subject's skull.

The bumps and indentations found by the phrenologist would allow them to make an analysis of the subject's personality and temperament. Sir Francis Galton was not himself a phrenologist, although he did visit one to have his own skull examined.
Enquiry 1: The Body & Identity

Information Sheet 3

How To Use a Head Spanner

Length of Head

Stage 1  Pull Rod A back until only the black cap projects in the inside of the frame. Clamp Rod A firmly in place using Screw D.

Stage 2  Pull Rod B back until only the black cap projects in the inside of the frame. It is not required for this measurement.

Stage 3  Pull Rod C back into a similar position

Stage 4  Place the black cap of Rod A against the centre of the subject's forehead. Shift Rod C inwards until it touches the most projecting part of the back of the head.

Stage 5  Clamp Screw F tightly. Remove the spanner and read off the scale at C for the measurement of head length.

Breadth of Head

Stage 1-3  Repeat as before

Stage 4  Place the black cap of Rod A just above the subject's ear. Shift Rod C inwards until it reaches the corresponding position just above the subject's other ear

Stage 5  Clamp Screw F tightly. Remove the spanner and read off the scale at C (as before) for the measurement of head breadth.

Height of head

Stage 1  Unclamp both screws at D and F.

Stage 2  Rods C and A must now be used as earplugs - take care not to push the rods too firmly into the ears.

Stage 3  Clamp Screws D and F tightly.

Stage 4  Unclamp Screw E and gently lower Rod B onto the top of the subject's head.

Stage 5  Clamp Screw E tightly, and read off the scale at B for measurement of head height.
Sir Francis Galton's Anthropometric Laboratory

The Loan Box contains (colour photocopies of) five forms completed at Sir Francis Galton's Anthropometric Laboratory. Anthropometry means the measurement of human characteristics.

The Laboratory was designed to obtain a detailed record of the physical identity of the British population, with a particular emphasis on measuring families, in order to increase understanding of the inheritance of physical characteristics. Galton first established his Anthropometric Laboratory at the International Health Exhibition in 1884. This event was held in the Gardens of the Royal Horticultural Society in South Kensington. Attendees at the Exhibition paid three pence to be admitted and took away a certificate of their vital statistics. The Anthropometric Laboratory was a very popular part of the International Health Exhibition - by the time it closed in 1885, Galton had compiled data on 9,337 individuals. The Anthropometric Laboratory then moved to the Science Galleries of the South Kensington Museum, with statistics collected on 3,678 people during its first 3 years. Repeated measurements were performed on a number of individuals: enthusiastic visitors included the Prime Minister, William Gladstone. The data collected by Galton contributed greatly to his, and the scientific community’s, understandings of statistics and heredity.

As can be see from the form, the bulk of the measurements taken were physical. The exception is the measurement of reaction time, which Galton believed was indicative of intelligence. The argument was that a fast reaction time indicated neurological efficiency, which in turn indicated intelligence. In doing this test, Galton devised the first scientific mental measurements, and thereby founded psychometrics.
Have a look at the photo-card of the following instrument:

This object was used by Sir Francis Galton to measure strength.

In your group, decide:
- How you think the object was used
- What sort of strength did it measure
- Similar objects are used today to measure strength: who might use such an object and for what purpose might such an object be used

Take notes below if you wish.

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______________________________________________________________________________________
You are going to be Sir Francis Galton. Use the head spanner (and operating instructions) and measuring tapes to fill in your Anthropometric Laboratory Form. **Use the head spanner to take the starred measurements**, and the measuring tapes to take the others. (It helps to work in pairs when taking measurements).

### Anthroponmetric Laboratory

<table>
<thead>
<tr>
<th>Date of Measurement</th>
<th>Initials</th>
<th>Birthday</th>
<th>Eye Colour</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td>Month</td>
<td>Year</td>
<td>Day</td>
<td>Month</td>
</tr>
<tr>
<td>Head Length*</td>
<td>Head Breadth*</td>
<td>Head Height*</td>
<td>Height Standing</td>
<td>Arm Span</td>
</tr>
<tr>
<td>Millimetres</td>
<td>Millimetres</td>
<td>Millimetres</td>
<td>Millimetres</td>
<td>Millimetres</td>
</tr>
<tr>
<td>Height sitting above seat of chair</td>
<td>Length from elbow to fingertip</td>
<td>Length of middle finger of left hand (from base of knuckle)</td>
<td>Span of right hand fully extended</td>
<td></td>
</tr>
<tr>
<td>Left Arm</td>
<td>Right Arm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millimetres</td>
<td>Millimetres</td>
<td>Millimetres</td>
<td>Millimetres</td>
<td></td>
</tr>
</tbody>
</table>
Enquiry 2
What is Identity?
Teachers' Sheet

Suggested Task

• In groups of around 5, pupils have a group discussion on either
  Physical appearance versus personality
Or: Public versus private identity
• The group submits either an oral presentation or a written report

Physical Appearance Vs Personality
The discussion should focus on the questions & issues below:
1. Is physical appearance or personality more important?
2. In your group, make a list of the 10 things you first notice when you meet someone. Are they physical or personality related?
3. If you are attracted to someone, what do you like about them - is it looks or personality?
4. How important is what you wear?
5. What about school uniform - does it suppress your personality?
6. Think about how you dress - in what ways does it reflect your personality?
7. What other aspects of our physical appearance reflect our personality?
8. How do we use clothes, haircuts, makeup etc to say something about who we are?
9. Do we stereotype people based on what they look like or what they wear?

Public Vs Private Identity
The discussion should focus on the questions & issues below:
1. Think about the notion of multiple identities. (See Worksheet 5b)
2. Do you always behave the same with different people - parents, teachers, friends etc?
3. Do you behave the same on your own and in company?
4. If you saw an accident or someone in trouble in the street, would you be more likely to help if you are alone or when you are with others?
5. Think of 5 situations in which you would behave differently on your own than when you are with others.
6. Which is the real "you" - the public or private?
7. Think about the public persona of a celebrity. Do you think that is the "real" person? Do you think celebrities behave the same in private as they do in public?

Ideas and material for the discussion can be obtained from the following Loan Box objects:
1. Eye Samples
2. Hair Samples
3. Composite Photographs

Additional ideas and material can be obtained from the following information and activity sheets. You can decide which sheets, or what information, to give pupils.
Discuss the topic:

**Physical Appearance Vs Personality**

Your discussion should focus on the following questions and issues:

1. Is physical appearance or personality more important?
2. In your group, make a list of the 10 things you first notice when you meet someone. Are they physical or personality related?
3. If you are attracted to someone, what do you like about them - is it looks or personality?
4. How important is what you wear?
5. What about school uniform - does it suppress your personality?
6. Think about how you dress - in what ways does it reflect your personality?
7. What other aspects of our physical appearance reflect our personality?
8. How do we use clothes, haircuts, makeup etc to say something about who we are?
9. Do we stereotype people based on what they look like or what they wear?
Pupils' Task Sheet (b): Enquiry 2

Discuss the topic:

Public Vs Private Identity

Your discussion should focus on the following questions and issues:

1. Think about the notion of multiple identities. (See Worksheet 5b)
2. Do you always behave the same with different people - parents, teachers, friends etc?
3. Do you behave the same on your own and in company?
4. If you saw an accident or someone in trouble in the street, would you be more likely to help if you are alone or when you are with others?
5. Think of 5 situations in which you would behave differently on your own than when you are with others.
6. Which is the real "you"- the public or private?
7. Think about the public persona of a celebrity. Do you think that is the "real" person? Do you think celebrities behave the same in private as they do in public?
Eyes

The eye samples in the Loan Box are modern, prosthetic eyes. The picture below shows Galton's original display of glass eyes:

In fact, The Galton Collection has two of these displays of eyes. One is in the Collection at UCL, the other is on loan to the *Who Am I?* exhibition at The Science Museum.

Galton's interest in eyes was two-fold. First, he recognized that the iris has thousands of varieties of different markings, and hence has a use as a marker of individual identity, and, secondly, studying the inheritance of eye colour cast light on his investigation into heredity.

Eye Colour & Inheritance

The colour of our eyes is produced by the pigment formation in the iris - the circle of tissue around the circular black pupil. Our genes determine our eye colour.

A baby inherits two eye colour genes - one from its father and one from its mother. It is the particular combination of these two genes that determines which colour is formed. The gene for brown eyes is what is known as dominant - this means that you only need one of the two eye colour genes to be brown for the eyes to be brown. Green may be dominant too, although there are different degrees of dominance, even for brown eyes. The gene for blue eyes tends to be what is known as recessive - i.e. it is weaker or overshadowed by the brown eye gene. In general, a child will only have blue eyes if both of its eye colour genes are blue. Many brown-eyed babies are actually born with blue eyes. In the first few months of life, pigment is deposited in the iris, stimulated by exposure to light, and the eye colour changes. This process is usually complete by 6 months of age.
Enquiry 2: What is Identity? Information Sheet 1b

Eye Colour and Identification
A contemporary of Galton's, Alphonse Bertillon, (Chief of Criminal Identification for the Paris police from 1880) was also interested in the use of anthropometric information, especially eye colour, as a means of criminal identification. Prior to using fingerprinting as a means of criminal identification, police used the Bertillon System, which used eye colour and measurements of the body to record identity.

In recognizing the potential of the iris as a means of identification, these two nineteenth century figures were well ahead of their day. Iris scanning is now at the forefront of modern identification techniques. The success of iris scanning rests on the fact that no two people's irises are the same - in fact no two irises are the same, as people's left and right eyes are different - that each iris contains at least 260 independent characteristics on which comparisons can be based, and that they are impossible to forge. Indeed, iridologists can read all sorts of information about your health in your iris - whether you have been drinking or taking drugs, whether you are pregnant, and a number of medical conditions.
Hair

The hair in the Loan Box is modern, wig-makers' hair. The photo below shows Galton's original hair sample:

Hair Colour & Inheritance

Hair colour is influenced by the hair colour gene. If there is more than one possible version of a gene, they are known as alleles of that gene. For example, there are several possible alleles of the "hair colour" gene: one for brown hair, one for black hair, blonde hair, etc. The allele for black hair is dominant while red is recessive.

Hair Colour and Identification

A DNA sample can be taken from hair as a means of identification. DNA stands for deoxyribonucleic acid. DNA is in every cell of your body. It contains the information needed to construct and operate a human body.
Composite Photographs

These photographs are composed of more than one photographic image superimposed on top of each other. This type of photograph was a new technique developed by Galton. The camera, which he used to take these photos, is part of the Galton Collection, and is currently on loan to the Science Museum. The photos in the Loan Box were produced by scanning Galton's original photos.

Galton produced these composite photos in order to find dominant physical characteristics shared by a group of people. Thus he would photograph a group of, say, criminals, naval officers, or public schoolboys to see if there were any dominant facial features which came through, and which therefore must be shared by the members of the group. Galton was unsuccessful in this quest for a "criminal type" or "public schoolboy type" - where he was more successful was in photographing members of the same family together to find dominant physical characteristics inherited between generations. Photo A comprises the photos of 6 members of the same family - a man and his two sons, and the man's brother and his two sons; and Photo B contains the photos of a woman and her two daughters. It is not known how many individuals were photographed to produce photos C & D.
Enquiry 2: What is Identity? Worksheet 1

Have a look at the following object from the Loan Box:

This is a replica of a **box of artificial eyes** used by Sir Francis Galton to identify different eye colours.

In your group, decide:
- Whether the box contains all the eye colours of your group
- Whether the box contains the full range of eye colours that exist
- Who might find eye colour information important, and why

Take notes below if you wish__________________________________________

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Every person's **iris** is unique. Scientists are now experimenting with iris scanning. Iris scanning can be used to identify someone. **Do you think this is a good idea, or not? Why?**

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Enquiry 2: What is Identity?

Have a look at the following object from the Loan Box:

This is a replica of a box of hair samples used by Sir Francis Galton to identify different hair colours.

In your groups, decide:

- Whether the hair in the box contains all the hair colours of your group
- How useful hair colour is for identifying someone
- What other information about hair might be useful to identify someone
- How you could change your physical appearance if you wanted to disguise your identity

Take notes below if you wish

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______________________________________________________________________________________
Enquiry 2: What is Identity?                             Worksheet 3

Have a look at the following objects from the Loan Box. These are called composite photographs. This means that the photos of several people are laid on top of each other to produce a single image of a "new person"

Galton made composite photographs using the photographs of:

- Members of the same family
- Criminals
- Army officers
- Public school boys

What was Galton looking for? Why do you think he might have done this?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Photo A is composed of the pictures of 6 members of the same family - a man and his two sons, and the man's brother and his two sons. Photo B contains the photos of a woman and her two daughters. By looking at composite photographs of different generations, Galton hoped to learn more about heredity, looking at the physical features which are inherited by the next generation.

If your were to make one image using photographs of each member of your family, what obvious features would you see (e.g. small face, brown eyes, long nose etc)?

_________________________________________________________________
_________________________________________________________________

When looking for a criminal, police ask witnesses to describe the suspect(s). What do the police sometimes do with this information to help them find the suspect?

_________________________________________________________________
_________________________________________________________________
Think about physical appearance. Some aspects of our appearance are inborn characteristics, dictated by our genes. Other aspects are affected by our environment and experiences - by diet, environment, lifestyle, events and fashion. In your groups, fill out the table below. You will find that some of our physical characteristics (e.g. height) are dictated partly by our genes and partly by environment, lifestyle and diet.

<table>
<thead>
<tr>
<th>Genes</th>
<th>Environment &amp; Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye colour</td>
<td>Weight</td>
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<td></td>
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</tbody>
</table>
A "Type" of Person?....

In your group, choose a "category" of person from the following list:

- sportsman
- sportswoman
- soap star
- chef
- librarian
- secretary

Once the group has chosen their category, each member of the group draws a picture of a person who belongs to this category. Do not look at each others' pictures until everyone has finished. When you have completed your pictures, compare with the rest of the group.

Category: ________________
Enquiry 2: What is Identity? Worksheet 5b

Once you have completed your pictures, discuss the following:

**Do the people you have drawn share any physical characteristics?**

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

**How far do certain groups of people share physical characteristics, or are we just imposing stereotypes?**

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

**Think about how you behave in different situations, and with different people. Do you think you have just one identity, or "multiple identities"?**

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

**Think about what you were like 5 years ago, and about what you might be doing in 5 years’ time. Is your identity static or changing?**

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________
Enquiry 3
Fingerprinting & Forensic Science
Suggested Task

- This enquiry is primarily activity based, rather than discussion based. The enquiry includes 8 pupils' sheets of information and activities (Worksheets 1a-c, 2a-b, 3 & 4a-b). There are also 5 sheets of teachers' notes to accompany the worksheets.

- The following objects from the Loan Box are needed for these activities:
  1. Fingerprint kits (ink strips, cards of 3 fingerprint types & magnifying glasses)
  2. Police fingerprint form (UK & FBI)
  3. Fingerprint examiner
  4. Set of fingerprints to identify

- In the Loan Box, you will also find a **Forensics Press Pack**, which contains newspaper articles about crime cases where forensic techniques have played a key part in convicting or freeing a suspect. This pack can be used to show pupils how the forensic techniques in this enquiry are actually used in practice. It is also a useful preliminary to show pupils prior to asking them to bring in newspaper articles on forensic science to build up their own press pack.
Take a fingerprint kit from the Loan Box: make sure you have:

- ink strips
- cards of the three main fingerprint types
- a magnifying glass

How to take a fingerprint

1. Cover your desk in newspaper
2. Open up an ink strip
3. Roll a fingertip from left to right in the ink. Make sure you cover the whole of your finger, from A to B and right down to C.

4. Gently roll your finger in the box on the next worksheet. Roll slowly (just once, not back and forth) from A to B and right down to C.
5. This is how your print should look:

6. Repeat for the rest of your fingers and thumbs

Note: you will find it easier to take your prints if you fold your worksheet over the edge of your desk. Fold along the lines marked.
Enquiry 3: Fingerprinting & Forensics  
Pupils' Sheet 1b

Recorded On: ........................................

The Fingerprints Of: .................................................................

<table>
<thead>
<tr>
<th>Right Hand</th>
<th>Thumb</th>
<th>Fore</th>
<th>Middle</th>
<th>Ring</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fingerprint</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fold</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left Hand</th>
<th>Thumb</th>
<th>Fore</th>
<th>Middle</th>
<th>Ring</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fold</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
The three main types of fingerprint are called \textit{whorls, loops} and \textit{arches}. Study very carefully the cards which illustrate these three types of fingerprint.

Now, using the magnifying glass, examine your prints on the previous sheet. Try to label each print with either "whorl", "loop" or "arch".

- You are likely to have a combination of whorls, loops and arches
- Your prints will probably not be all the same type, though it is possible

Compare your prints with the rest of your group. Which is the most common type of print?
Key fingerprint facts:

- Every individual's fingerprints are unique
- Your fingerprints are permanent - they do not change throughout your life
- Even identical twins have different fingerprints
- For over 100 years fingerprinting has been the key method used by police to identify criminals or eliminate innocent suspects from their enquiries

Read the information on the next sheet about "Sir Francis Galton and the Development of Fingerprinting", and answer the following questions:

What were the key points made by Sir Francis Galton in his book "Fingerprints"?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

When and where was the UK's first fingerprint bureau established? And why?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

_________________________________________________________________
Sir Francis Galton & The Development of Fingerprinting

The potential of fingerprinting as an indicator of individual identity and as a possible aid in solving crime has been recognised for thousands of years. It has been claimed that the first case to be solved using fingerprinting was in Ancient Rome, when a murderer was caught on the basis of a bloody handprint left at the scene of the crime.

Sir Francis Galton was a pioneer in the development of the modern fingerprinting system. He began his work on fingerprinting in around 1850. In 1892 he published a book called "Fingerprints", which set out for the first time on a scientific basis that no two fingerprints are exactly the same, and that an individual's fingerprints do not change over their lifetime. According to Galton’s calculations, the odds of two fingerprints being exactly the same are one in 64 billion.

Galton’s work also set down the characteristics by which fingerprints can be identified – these are the same characteristics (minutia) which are fundamentally still used today, and they are often referred to as ‘Galton’s details’. Galton’s system classified fingerprints by grouping the patterns into arches, loops and whorls.

Galton’s system served as a foundation for the classification system developed by Sir Edward R. Henry (1850-1931), who later became the Commissioner of Scotland Yard. In June 1900 the ‘Galton-Henry’ system of fingerprint classification was published and in 1901, when the first fingerprint bureau in the UK was established at Scotland Yard, the ‘Galton-Henry’ system was adopted and soon became the basis for the Yard’s criminal identification records. The fingerprint bureau was used to store the fingerprints of criminals charged with offences.

Have a look at the Fingerprint Forms from the Loan Box. They are used to take suspects’ fingerprints as soon as they arrive at the police station. The one with black print is used by City of London Police's Specialist Crime Department. The other one is an FBI Fingerprint Form.
Take the following object from the Loan Box: it is a replica of Sir Francis Galton's homemade fingerprint examiner.

Use the replica to examine the set of fingerprints contained in the Loan Box. When using the print examiner, place the fingerprint on the surface under the lens. Lower your eye right down to the lens. If necessary, move the fingerprint up slightly towards the lens until the print comes into focus.

On the back of the prints you will find a letter A-I.

- In the table below, fill in either **whorl**, **loop** or **arch** for each print
- Two of the prints belong to the same individual. Circle the letters of the two you think are the same.

<table>
<thead>
<tr>
<th>Fingerprint</th>
<th>Whorl, Loop or Arch?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
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<td>E</td>
<td></td>
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<tr>
<td>F</td>
<td></td>
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<tr>
<td>G</td>
<td></td>
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<tr>
<td>H</td>
<td></td>
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<tr>
<td>I</td>
<td></td>
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</tbody>
</table>
Enquiry 3: Fingerprinting & Forensics  Pupils' Sheet 4a

There are a number of physical features which give evidence about individual identity:
- Measurements - head, hands etc
- Eye colour
- Hair colour

There are also several types of evidence which give information about identity:
- Photographs
- Fingerprints

Fill in the table below. How good are they as sources of information about individual identity? Are they unique to every individual? Are they easy to alter?

<table>
<thead>
<tr>
<th>Evidence</th>
<th>How useful?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body measurements</td>
<td></td>
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<tr>
<td>Eye colour</td>
<td></td>
</tr>
<tr>
<td>Hair colour</td>
<td></td>
</tr>
<tr>
<td>Fingerprints</td>
<td></td>
</tr>
<tr>
<td>Photographs</td>
<td></td>
</tr>
</tbody>
</table>

Think about the following 5 situations. They are all situations where detectives might want to establish someone's identity.

1. To identify a criminal
2. To eliminate innocent suspects from an investigation
3. To find a missing person
4. To identify a dead body
5. To identify someone who is unconscious or suffering from amnesia
With these situations in mind, think of other physical features which the police could use to identify someone. Next to each, comment on how reliable you feel it is as a source of evidence.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Reliability?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teeth</td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tbody>
</table>

In addition to fingerprinting, what other types of evidence or scientific techniques are used by police to identity someone? Again, next to each, comment on how reliable you feel it is as a source of evidence.

<table>
<thead>
<tr>
<th>Evidence</th>
<th>Reliability?</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTV footage</td>
<td></td>
</tr>
<tr>
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</tbody>
</table>
Enquiry 3: Fingerprinting & Forensics

**Teachers' Sheet 1**

**Pupils' Sheets 1a-c: Fingerprinting**

- Cover desks with newspaper before beginning activity
- After fingerprinting, **clean hands before touching any objects or resources**
- Have babywipes on hand, but please get pupils to wash their hands with soap and hot water before touching anything
- Hand out the ink strips, one between two. The strips then open up to give 2 strips, giving pupils one strip each
- The fingerprinting worksheets are designed to be self explanatory
- If you want to do the fingerprinting activity after you have returned the Loan Box, ink strips can be obtained from **K9 Scene of Crime Equipment Ltd** (Tel: 0604 24651. Web: [http://www.k9sceneofcrime.co.uk/](http://www.k9sceneofcrime.co.uk/))

The fingerprint cards provided in the Loan Box show the three main types of fingerprint - the **loop, arch & whorl**. However, this can be expanded to 7 main types: if pupils are having difficulty identifying their print-type, then these images may help:
Enquiry 3: Fingerprinting & Forensics  Teachers' Sheet 2

Remember - each of your fingers will not necessarily be the same: you will probably have a mixture of loops, whorls and arches. No two individuals have the same finger, palm or foot prints: These areas are covered by minute ridges which are frequently interrupted by endings and forks. These interruptions are known as **characteristics**. Each person has a uniquely different distribution of characteristics. The characteristics develop in the womb and stay the same throughout life. The ridges generally form well-defined patterns.

**Pupils' Sheets 2a & 2b: Fingerprinting Continued**

The sweat and moisture of your skin leave a faint image of your fingerprints on everything you touch. At a crime scene, the most usual method of retrieving prints involves "dusting" a surface with fingerprint powder and lifting any marks which may develop with adhesive tape. Finger, palm and foot marks may also be left at the crime scenes in soft or malleable surfaces (for example, paint or putty), in which case the prints may be photographed rather than dusted. Marks deposited on paper and other porous surfaces can also be developed by a range of chemical methods each of which reacts with a different element in the sweat content of the mark.

The fingerprints of suspects are then taken upon arrest using ink and paper, in exactly the same way as in this activity. The **Fingerprint Forms** in the Loan Box include an example of those used by City of London Police's Specialist Crime Department and an FBI form. The City of London form is the one with black print; the blue print form is the FBI one.

When the Fingerprint Bureau was founded at Scotland Yard in 1901, the comparison of fingerprints was carried out manually. Now the Bureau has a database of 1.5 million fingerprints of people charged with offences and a collection of over 70,000 unidentified marks left at scenes of crimes. Computers are now used for searching through these fingerprint records.
Enquiry 3: Fingerprinting & Forensics

Pupils' Sheet 3: Fingerprinting Continued

The Fingerprint Viewer in the Loan Box is a modern replica of Galton's original homemade viewer, which dates from the 1850s. This viewer, pictured below, would have been used by Galton in his early fingerprint studies, when he first devised the fingerprint classification system still used today.

Although it is preferable to use the replica viewer for this activity, if it is easier some pupils can use magnifying glasses.

The answers to the activity are:

A=whorl  D=arch  G=loop
B=whorl  E=loop  H=arch
C=loop  F=whorl  I=loop

The prints which are the same are: B & F
**Guide to Forensic Science**

<table>
<thead>
<tr>
<th>Pathology</th>
<th>Forensic pathologists determine the time and cause of death in cases of suspected murder or suicide. They can also analyse wounds to determine what caused them, or trace blood splatters to discover the mode of attack.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serology and Genetics</td>
<td>Forensic serology is the study of blood groups, blood, and other bodily fluids for identification purposes following a crime. Forensic serologists also carry out DNA (deoxyribonucleic acid) fingerprinting, which offers the possibility of positive identification of an individual from samples of blood or semen.</td>
</tr>
<tr>
<td>Dentistry and Odontology</td>
<td>Forensic dentists or odontologists examine the teeth of corpses for identification purposes.</td>
</tr>
<tr>
<td>Fingerprinting</td>
<td>The scientific study of fingerprints.</td>
</tr>
<tr>
<td>Ballistics</td>
<td>Ballistics began as the study of the flight paths of projectiles, but modern ballistics now includes the study of everything to do with firearms.</td>
</tr>
<tr>
<td>Chemistry, Microscopy and Toxicology</td>
<td>Many useful facts can be determined from the analysis of minuscule amounts of drugs, dyes, papers, fibres and other chemicals and random unidentified particles by forensic chemists.</td>
</tr>
<tr>
<td>Anthropology and Archaeology</td>
<td>Forensic anthropology is the use of physical anthropology to identify skeletons, and badly decomposed, or otherwise unidentified, human remains.</td>
</tr>
<tr>
<td>Psychology and Psychiatry</td>
<td>Forensic psychologists or psychiatrists may be called on to evaluate a murder scene to suggest a possible psychological profile of the killer.</td>
</tr>
<tr>
<td>Linguistics</td>
<td>Forensic linguists analyse the content of written or aural communication to identify who is speaking and indicate the speaker's intent, and can determine whether two communications are from the same person.</td>
</tr>
<tr>
<td>Photography</td>
<td>A crime scene must be photographed from every angle clearly to show detail, with the emphasis on accurately recording the size and distance of objects.</td>
</tr>
<tr>
<td>Art and Sculpture</td>
<td>Forensic artists can draw a likeness of a person based solely on eyewitness accounts. Computer animation and sculpture are also used to reconstruct faces.</td>
</tr>
<tr>
<td>Geology</td>
<td>Forensic geologists can determine such things as where the suspect or victim walked by examining soil samples taken from their shoes or feet.</td>
</tr>
</tbody>
</table>
Enquiry 3: Fingerprinting & Forensics  Teachers' Sheet 5

The table above is a brief overview of all the different aspects of forensic science. In this enquiry, however, we are looking primarily at the forensic techniques used by police to establish identity.

Here are some possible answers which can be used to fill in the tables on Sheet 6b. There are more which you may be able to think of!

**Physical features** which the police could use to identify someone:
- Body measurements
- Eyes/ iris
- Hair colour
- Scars
- Skin colour
- Build
- Teeth
- Tattoos
- Piercings

This type of information is called **BIOMETRIC INFORMATION**. A biometric is a measure of identity based on a body part or behaviour of an individual. Biometrics are an extremely secure and reliable way of identifying someone.

**Types of evidence or scientific techniques** which the police could use to identify someone:
- Photographs
- Fingerprints
- Eyewitness accounts
- DNA analysis
- CCTV footage
- Face profiling by artists or computer
- Hand writing/signature analysis
- Voice recording/speech patterns
- Dental records

**DNA samples** can be taken from hair, blood, saliva, skin and bone. Identical twins share DNA coding, but they are the only people who do.
Enquiry 4
Individual Privacy & Human Rights
Teachers' Sheet

Suggested Task

In groups of around 5, pupils have a group discussion on one or more of the following topics:

- **The role of CCTV.** How far should CCTV be used to prevent crime or capture criminals? In what places is it acceptable/unacceptable to place cameras?

- **Government intrusion.** Do the government and police know too much about us or not enough? What about employers? Should they be allowed to read their employees' emails?

- **Media intrusion versus public interest.** Do newspapers and TV infringe upon celebrities' right to privacy? Think about recent media reports about the Royal Family and the Beckhams: is it the public right to know this sort of information?

- **Identity card debate.** How useful do you think ID cards would be for: countering the threat of terrorism, reducing benefit fraud, and reducing the number of illegal immigrants? Are ID cards a cost effective answer to tackling crime? How easy would it be to fake a card? What if a card were lost, stolen or damaged? Are ID cards against Article 8 of the Human Rights Act, or are they a necessary intrusion to improve policing of the country? If the cards were issued, should they be compulsory or voluntary, what should they be used for, at what age should a young person get their first card, and what information would you put on them? Would you have to carry the card at all times? Would the police be able to stop you at anytime and demand to see the card? Would you support free movement within the European Community, using ID cards instead of passports? Would the card scheme mean the creation of a "Big Brother" government database on all its citizens?

**Does your group support the introduction of Identity Cards to the UK?**

Ideas and material for the discussion can be obtained from the following Loan Box objects:

1. Second World War Identity Card
2. Modern European Identity Card

Additional ideas and material can be obtained from the following information and activity sheets. It is up to teachers to decide which sheets, or what information, to give pupils.

In the Loan Box, you will also find an **Identity Press Pack**, which contains newspaper articles for and against the introduction of ID cards. This pack can be used to show pupils to give them ideas for the above debate on identity cards. It is also a useful preliminary to show pupils prior to asking them to bring in newspaper articles on identity cards to build up their own press pack.
In 1948 the 28 member countries of the **United Nations** passed **The Universal Declaration of Human Rights**. This was a list of 30 basic human rights for everyone. This was followed, in 1950, by the **European Convention of Human Rights**. This resulted in the **Human Rights Court** being set up in Strasbourg, France. Anybody who felt that their human rights had been violated could take their case there, and the decision reached by the court was legally binding in the home state.

The Universal Declaration of Human Rights and The European Convention on Human Rights were created to protect human rights against violations such as those experienced by inhabitants of Nazi occupied Europe. The UK ratified the European Convention on Human Rights in 1951, but it was never incorporated into British law: this meant that British courts had no obligation to uphold rights set out by it.

It was not until 1965 that the Labour Government allowed individuals to take cases to the European Court of Human Rights. An example of a successful action against the UK is that involving the two boys found guilty of the murder of Jamie Bulger, on the grounds that both the mode of trial and the sentence were inappropriate.

The European Convention of Human Rights has now been adopted in the UK, so there is no longer any need to appeal to Strasbourg. The 1998 **Human Rights Act** is considered an important milestone in the UK's legal and political history, as, for the first time, every citizen's rights are a central part of the country's law.
Under the Human Rights Act, a claim may be brought against a public authority where the individual believes that their rights under the European Convention on Human Rights have been infringed. This may include Government departments, local authorities, police, prisons, hospitals, courts, and any other body that exercises a public function.

**Human Right Act 1998**

The Act proclaims 16 fundamental rights for UK citizens. Here are 12 of them:

- Right to life (Article 2)
- Prohibition of torture (Article 3)
- Prohibition of slavery and forced labour (Article 4)
- Right to liberty and security (Article 5)
- Right to a fair trial (Article 6)
- No punishment without law (Article 7)
- Right to respect for private and family life (Article 8)
- Freedom of thought, conscience and religion (Article 9)
- Freedom of expression (Article 10)
- Freedom of assembly and association (Article 11)
- Right to marry (Article 12)
- Prohibition of discrimination (Article 14)

**Now look closely at Article 8 of the Human Rights Act:**

"Everyone has the right to respect for their private and family life, home and correspondence"

"There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others."

This act is intended to guard against intrusion into someone's privacy or family by the police or government unless there is a very good reason. As a result of this new Human Rights Act, many UK policies are now being altered:

- Prison authorities cannot interfere with a prisoner's private mail
- Police cannot tap an individual's telephone without legal authority
- People cannot be secretly filmed
Identity Cards

The wartime identity card belonged to a baby born in 1944, towards the end of the war. Wartime identity cards were introduced in January 1940, at the same time as ration books. It was obligatory to carry the card at all times, and the police could demand to see the card. The scheme was withdrawn in 1952.

The modern French card is a copy of a real ID card currently used in France. New cards are issued every 10 years. In France, identity cards are voluntary: they give access to health, education and voting rights, and are needed for bank and post office transactions. The carrying of the card is near universal.

Identity Card Facts

- The government has announced that it is considering the introduction of a form of identity card for UK citizens
- The card would be called an "Entitlement" Card
- The government launched a consultation exercise on 3rd July 2002, with the publication of its consultation paper on "Entitlement Cards & Identity Fraud". The exercise ran until 10th January 2003.
- Based on the reaction to the consultation paper and on further analyses of risks, costs and benefits, the government will make a decision on the introduction of the "Entitlement Card".
- The card's purpose would be to:
  - fight terrorism
  - reduce benefit fraud by checking rights to receive NHS treatment, education and state benefits
  - reduce illegal immigration
The information stored on the card would include a photograph and personal information.

The card might also contain **biometric** information: DNA profiles, fingerprints, hand or facial characteristics and speech patterns.

This scheme would be the first ID scheme in the UK since the Second World War.

Basic plastic cards would cost £1.3 billion, while cards able to hold data like fingerprints and iris patterns would cost £3.1 billion.

According to current proposals, card ownership would be compulsory, but there would be no legal requirement to carry it at all times.

According to the government, the following are the **benefits of the proposed scheme**:

- Providing better services
- Reducing identity fraud
- Tackling illegal immigration and illegal working
- Providing a convenient travel document
- Providing young people with a simple means of proving their age
- Reducing administrative burdens on police
- Supporting electoral registration and new ways of voting
- Holding medical information which might be useful in an emergency.

The card has a great deal of public **opposition, which focuses on**:

- The cost (critics quote £3bn start-up, plus £1.3bn annual running costs)
- The infringement of our right to privacy
- The inconvenience and hassle of applying for the card
- The possible creation of a "Big Brother" style database with an enormous amount of information on individuals
- The risk that the card might single out foreign residents and citizens from black and minority ethnic communities

Above all, they doubt that the card will make any difference in combating terrorism, identity fraud and illegal immigration, and they believe the scheme is an unnecessary intrusion into people's private lives. They also believe the phrase "Entitlement Card" - instead of "identity card" - is merely 'spin' designed to disguise the card's true function.
What about other countries?

**EU countries with compulsory scheme:**
- Belgium
- Germany
- Greece
- Spain

**EU countries with voluntary scheme:**
- Austria
- Finland
- France
- Italy
- Luxembourg
- Netherlands
- Portugal
- Sweden

**EU countries with no scheme:**
- UK
- Denmark
- Ireland

There are no ID cards in the US, Canada, Australia, New Zealand or Japan.
The Role of the Media

Think about the media attention that celebrities, footballers, and the Royal Family receive. The media and newspapers have been accused of going too far in their search for headlines and a story. Do you think that this attention is an infringement of their right to privacy under Article 8 of the Human Rights Act? The media defends its actions by saying it is in the public interest.

What do you think? Look at these newspaper headlines below. In groups, decide which ones you think are in the public interest and ought to be reported in the press, and which ones you think are a media intrusion.

Cute photos of singer's kids in park!

MPs enjoy luxury holidays at taxpayers’ expense...

Premiership footballer is regular wifebeater

Joe Bloggs earns £300,000 a year. His house is worth £1 million. Where did his money come from? We investigate...

Nude pictures of radio star on beach!

WE EXPOSE OLYMPIC ATHLETE’S DRUGS SHAME

Singer’s mum in cancer scare shocker
Read the following arguments. Mark next to each whether you think it is an argument in favour (F) of the introduction of identity cards, or against (A):

"The innocent have nothing to hide"

Spokeswoman for the democracy campaign group Charter 88 "We should not need to carry a card and have our privacy infringed in order to affirm our right as citizens to have use of public services like education and healthcare".

"The entitlement card would be used to clamp down on fraud by checking rights to receive NHS treatment, education and state benefits".

"The UK, perhaps, in comparison to other countries, is a relatively unpoliced society". Home Office

"Terrorists are unlikely to be deterred by forging a piece of plastic"

John Wadham, director of civil rights organization Liberty: "ID cards make us suspects not citizens, that's why all innocent citizens should oppose them."

John Abbot, director general of the National Criminal Intelligence Service: "An entitlement card could have a major impact in the prevention of certain areas of organised crime - e.g. widespread benefits fraud."

"An investigation by the Sunday Mirror revealed an array of fake European passports and IDs for sale".

"The scheme's running costs would be hundreds of millions of pounds per year."

"Identity theft and fraud cost the economy at least £1.3 billion per year."

"In the European Union, identity card schemes can be used for cross-border travel to other states within the Union"

"Identity Cards will regulate citizens' access to government services."

"Any form of identity card scheme would require a national database storing vast amounts of information on everyone."

"The scheme will help people gain entitlement to products and services provided by both the public and private services."
Further Activities for Key Stage 4

• Investigate further Sir Francis Galton, and produce a presentation on his life

• Investigate further the life of Charles Darwin, Francis Galton's cousin

• Visit the *Who Am I?* exhibition at the Science Museum's Wellcome Wing
  Science Museum
  Exhibition Road
  South Kensington
  London
  SW7 2DD
  General Enquiries - +44 (0)870 870 4771
  Educational Visits - +44 (0)20 7942 4777

• Build a "press-pack" about "Forensic Science", as discussed in Enquiry 3

• Build a "press-pack" about "Identity Cards", as discussed in Enquiry 4

• Arrange a visit to (or from) the police to (or from) their fingerprinting or forensics section
Further Information

Websites

Sir Francis Galton

- The Galton Collection at UCL
  http://collections.ucl.ac.uk/galton
- Galton.Org
  www.galton.org

Charles Darwin (Galton's Cousin)

- BBC site about Darwin & Evolution
  http://www.bbc.co.uk/education/darwin/index.shtml
- About Darwin.Com
  http://www.aboutdarwin.com/

Genetics

- The Genetics Society
  http://www.genetics.org.uk/
- The Human Genetics Commission Website
  http://www.hgc.gov.uk/

Fingerprinting

- The Metropolitan Police Fingerprint Bureau
  http://www.met.police.uk/so/fingerprints.htm
- The Metropolitan Police Fingerprint Centenary Pages
  http://www.met.police.uk/so/100years/history.htm
- History of Fingerprints from ONIN
  http://onin.com/fp/fphistory.html
- Fingerprint Information from New South Wales Police, Australia
  http://www.policensw.com/~policens/fingerprints/indexfinger.html

Forensics

- The Forensic Science Service
  http://www.forensic.gov.uk/ (read case studies of UK crimes solved with forensic techniques).
- Website of the Forensic Science Society
  http://www.forensic-science-society.org.uk/ (includes loads of info & contacts about careers in forensic science)
The Police
- The Met
  http://www.met.police.uk/
- Police Forces of the UK
  http://www.police.uk/

The Criminal Justice System
- The Criminal Justice System Online
  http://www.cjsonline.org/

Human Rights
- Human Rights Act 1998
- Liberty Human Rights Organisation
  http://www.liberty-human-rights.org.uk/

Identity Cards
- Home Office Site: Entitlement Cards
  www.homeoffice.gov.uk/dob/ecu.htm
- Government Information & Services Online
  http://www.ukonline.gov.uk/
- Liberty Human Rights Organisation
  http://www.liberty-human-rights.org.uk/
- Privacy International
  http://www.privacy.org/pi/activities/idcard/

Citizenship Resources
- Online Citizenship Lessons from learn.co.uk
  http://www.learn.co.uk/citizenship/onlinelessons/
- Education for Citizenship from CSV (Community Service Volunteers)
  http://www.csv.org.uk/csv/Education/education.htm
- The Citizenship Foundation
  www.citfou.org.uk

University Courses: Genetics
Offered at the following London Universities:
- King's College, University of London
  http://www.kcl.ac.uk
- Queen Mary, University of London
  http://www.qmul.ac.uk
- University College London, University of London
  www.ucl.ac.uk
• University of Westminster  [http://www.wmin.ac.uk](http://www.wmin.ac.uk)

Plus courses in Biology & Biochemistry at a range of London Universities

**University Courses: Forensic Science**

Offered at the following London Universities:

• University of East London  [http://www.uel.ac.uk](http://www.uel.ac.uk)
• University of Greenwich  [http://www.gre.ac.uk](http://www.gre.ac.uk)
• University of North London  [http://www.unl.ac.uk](http://www.unl.ac.uk)
• South Bank University  [http://www.sbu.ac.uk](http://www.sbu.ac.uk)

**University Courses: Criminology**

Offered at the following London Universities:

• University of Greenwich  [http://www.gre.ac.uk](http://www.gre.ac.uk)
• Kingston University  [http://www.kingston.ac.uk](http://www.kingston.ac.uk)
• University of East London  [http://www.uel.ac.uk](http://www.uel.ac.uk)
• London Guildhall University  [http://www.lgu.ac.uk](http://www.lgu.ac.uk)
• Middlesex University  [http://www.mdx.ac.uk](http://www.mdx.ac.uk)
• University of North London  [http://www.unl.ac.uk](http://www.unl.ac.uk)
• Roehampton University of Surrey  [http://www.roehampton.ac.uk](http://www.roehampton.ac.uk)
• South Bank University  [http://www.sbu.ac.uk](http://www.sbu.ac.uk)
• Thames Valley University  [http://www.tvu.ac.uk](http://www.tvu.ac.uk)
• University of Westminster  [http://www.wmin.ac.uk](http://www.wmin.ac.uk)

**Books**

• *Forensic Science Casebook* John Sanders

• *Encyclopaedia of Forensic Science* Brian Lane
  Headline 1993. ISBN 0747239045

• *A Life of Sir Francis Galton* by Nicholas Wright Gillham

• *Teaching Citizenship in the Secondary School* James Arthur & Daniel Wright

**Museums**

• The Wellcome Wing at The Science Museum

Films

- Enemy of the State (Certificate 15) 1998
- The Net (Certificate 12) 1995
- Minority Report (Certificate 12) 2002
Feedback Form
The Citizenship and Identity Loan Box

About the School
Name of School ______________________________________________________
Address
LEA  _________________________________________________________
Name of Teacher  ___________________________________________________

About the pupils who used the Loan Box
Age of pupils   _________________________________
Ability of pupils   _________________________________
Total Number of pupils  _________________________________

About the Lessons
What subject(s)/ curriculum area(s) was the Loan Box used to support?
___________________________________________________________________
How many lessons was the Loan Box used to support? _______________________

About the Loan Box
Which activities or enquiries did you find the most useful or appropriate for your pupils? Please say why, if you can.
___________________________________________________________________
___________________________________________________________________
___________________________________________________________________
What skills and knowledge did the Loan Box help pupils to develop/acquire?
___________________________________________________________________
(e.g. knowledge about what Identity is, or about Francis Galton, or about Forensic Science, about crime and the role of fingerprinting, self-reflection on their identity, observation or debating skills, team work, mathematical skills, increased confidence or motivation, etc)

What kind of follow-up work did the pupils do based on themes/activities from the Loan Box?

Would you be interested in visiting UCL with a class and/or borrowing one of our other Loan Boxes (Geology, Archaeology, Bio-Diversity)?

Have you made or do you plan to make any visits elsewhere to support the themes in the Citizenship and Identity Loan Box? If yes, please say where

Did you find the Loan Box a useful and worthwhile resource? Please say why or why not and make any additional comments you can that will help us to improve the service

Many thanks for taking the time to fill in this form