



2016 - 2017 Academic Junior High Decathlon

## Science Super Quiz Study Guide



Science Super Quiz Study Guide  
created by Education Test Creators

Based on

*DK Eyewitness Books: Forensic Science*

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2017 Super Quiz Science: *DK Eyewitness: Forensics*  
Vocabulary List

**In Pursuit of the Criminal**

forensic science (6)

forum (6)

entomology (6)

forensic pathologist (7)

acquittal (7)

prosecution (7)

**The Birth of Forensics**

toxicology (8)

calipers (8-9)

Bertillonage (9)

mugshot (9)

**Securing the Scene**

search pattern (11)

2017 Super Quiz Science: *DK Eyewitness: Forensics*  
Vocabulary List

**Recording the Scene**

Locard's Exchange Principle (12)

static plate (13)

marker card (13)

dental stone (13)

cleansuit (12)

**Handling of Evidence**

chain of custody (15)

scalpel (15)

protractor (15)

pipette (15)

**Taking Fingerprints**

latent print (16)

patent print (16)

lifting tape (16)

magnetic wand (17)

2017 Super Quiz Science: *DK Eyewitness: Forensics*  
Vocabulary List

**Analyzing Fingerprints**

linen tester (18)

whorl (19)

loop (19)

arch (19)

Galton details (19)

super-glue fuming (19)

**Written in Blood**

Kastle-Meyer test (20)

presumptive test (20)

reagent (20)

phenolphthalein (20)

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Vocabulary List

**DNA Analysis**

DNA (22)

PCR (23)

electrophoresis machine (23)

amplify (23)

STR (23)

DNA profile (23)

**Trace Evidence**

trace evidence (24)

SEM (25)

comparison microscope (24)

**Natural Clues**

pollen (26)

FTIR (27)

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Vocabulary List

**A Good Impression**

resin (29)

**Guns and Bullets**

FDR (30)

GSR (30)

rifle (30)

rifling (30)

pistol (30)

semiautomatic (30)

trigger (30)

automatic (30)

shotgun (31)

Cartridge (31)

Dum-dum (31)

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Vocabulary List

**Firearms in the Laboratory**

Ballistics (32)

Internal ballistics (32)

Terminal ballistics (32)

Trajectory (33)

**At the Scene of the Crime**

Cadaver dogs (34)

Infrared heat detectors (34)

Decomposition (35)

GPR (35)

**A Bug's Life**

cadaverine (36)

putrescine (36)

larvae (36)

pupa (37)

maggot (37)

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Vocabulary List

**Cause of Death**

postmortem (38)

autopsy death (38)

suffocation (38)

mortuary (39)

hemorrhage (39)

**Toxic World**

toxin (40)

stimulant system (40)

mass spectrometer (41)

**The Bones of the Matter**

forensic anthropology (42)

CT (43)



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Vocabulary List

**Splitting Image**

CCTV (44)

identikit (44)

forensic phonetician (45)

voiceprint (45)

E-FIT (45)

**Behavior of the Offender**

profiler (46)

geographical profiling (46)

psychological profiling (46)

polygraph (47)

**Fire Starters**

arson (48)

flammability (48)

flashover (48)

rollover (48)

Dräger tube (48)

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Vocabulary List

**Fire Testing**

smoke density chamber (50)

cone calorimeter (50)

accelerant (50)

oxygen index apparatus (51)

**Crash Investigation**

black box (52)

CVR (52)

FDR (52)

**The Big Bang**

sniffer dog (54)

detonating device (54)

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Vocabulary List

**Computer Forensics**

cybercrime (56)

hacker (56)

relay mast (56)

MTSO (56)

smart card (57)

PIN (57)

virus (57)

**Paper Trail**

forgery (58)

ESDA (59)

holographic strip (58)

watermark (58)

**Every Picture Tells a Story**

radiocarbon dating (61)

TL (61)

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Vocabulary List

**Future Forensics**

fMRI (62)

RFID (62)

biometric measurements (62)

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Vocabulary List

**Glossary**

anthropometry (70)

chromatography (70)

comparator (70)

homicide (71)

luminol (71)

odontology (71)

paramedic (71)

pattern evidence (71)

post mortem interval (71)

precipitin test (71)

provenance (71)

rigor mortis (71)

serology (71)

suspect (71)

toolmark (71)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### In Pursuit of the Criminal

1. What is forensic science? \_\_\_\_\_  
\_\_\_\_\_ (6)
2. What is the Latin root for the word *forensic*? \_\_\_\_\_ (6)
3. What is the definition of the word *forensic*? \_\_\_\_\_  
\_\_\_\_\_ (6)
4. What areas of scientific study may be used in forensic science? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (6)
5. What is entomology? \_\_\_\_\_ (6)
6. What government agency maintains an extensive database on gun information?  
\_\_\_\_\_ (6)
7. What is the purpose of conducting an autopsy? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (7)
8. Who performs autopsies? \_\_\_\_\_ (7)
9. Who is the real-life forensic scientist, college professor, and author upon which the fictional character of Temperance Brennan is based? \_\_\_\_\_ (7)
10. What is the job of a forensic scientist when testifying at a criminal trial? \_\_\_\_\_  
\_\_\_\_\_ (7)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### The Birth of Forensics

1. When were the use of scientific knowledge and the systematic study of evidence adopted to improve criminal investigation methods? \_\_\_\_\_ (8)
2. Who invented one of the first lie detectors? \_\_\_\_\_ (8)
3. What is toxicology? \_\_\_\_\_ (8)
4. Who is considered the father of forensic toxicology? \_\_\_\_\_ (8)
5. Who wrote *The Criminal Man*, a book that showed facial types of criminals?  
\_\_\_\_\_ (8)
6. What was the Bertillon system or Bertillonage? \_\_\_\_\_  
\_\_\_\_\_ (8 – 9)
7. Who invented the Bertillonage system? \_\_\_\_\_ (9)
8. When were the first fictional detective stories published? \_\_\_\_\_ (8)
9. Photographs of crime suspects, used to identify a person by his or her physical appearance, are called \_\_\_\_\_. (9)
10. What instruments were used to take Bertillon measurements? \_\_\_\_\_ (8 – 9)
11. During what year did the Federal Bureau of Investigation (FBI) open its first forensic laboratory? \_\_\_\_\_ (9)
12. When did Sir Arthur Conan Doyle first publish his detective stories about Sherlock Holmes? \_\_\_\_\_ (9)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Securing the Scene

1. What do forensic investigators use to record evidence at a crime scene? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (10)
2. Why is speed important in crime scene investigations? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (10)
3. The window of time during which a crime scene remains preserved is called the  
\_\_\_\_\_. (10)
4. What are the priorities of the police when called to the scene of a crime? (10)
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
5. Who may cross a police line? \_\_\_\_\_  
\_\_\_\_\_ (10)
6. Who must certify that the victim is dead before a body may be removed from a crime scene? \_\_\_\_\_ (11)



## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Recording the Scene

1. When investigating a crime scene, what do forensic investigators wear to prevent trace evidence from contaminating the crime scene? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (12 - 13)
2. Why do forensic investigators wear protective gear? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (12)
3. How are footprints preserved as evidence? \_\_\_\_\_  
\_\_\_\_\_ (13)
4. Why do forensic investigators take measurements and draw sketches of the crime scene? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (12)
5. Who first coined the phrase "Every contact leaves a trace"? \_\_\_\_\_ (12)
6. What is written on the soles of the overshoes investigators wear at a crime scene?  
\_\_\_\_\_ (12)
7. What does a forensic photographer often include in photographs of a crime scene?  
\_\_\_\_\_  
\_\_\_\_\_ (13)

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**Review Questions**

8. Before a body may be removed from a crime scene, what must investigators do?

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(13)

9. What do forensic investigators use to avoid disturbing the ground at a crime scene?

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(13)

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### Review Questions

#### Handling the Evidence

1. List some of the items found in a typical evidence case or toolkit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (14 – 15)
2. What items in an evidence case are used to collect fingerprint evidence? \_\_\_\_\_  
\_\_\_\_\_ (14 – 15)
3. Why is evidence recorded with digital photography sometimes challenged in court?  
\_\_\_\_\_  
\_\_\_\_\_ (14)
4. What type of cameras are used to record crime scenes? \_\_\_\_\_  
\_\_\_\_\_ (14)
5. What is a progress-of-custody label? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (14 - 15)

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**Review Questions**

6. Why is evidence placed in evidence bags before it is removed from a crime scene?

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(15)

7. Are all evidence bags made out of plastic bags? \_\_\_\_\_

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(15)

8. What does a protractor measure? \_\_\_\_\_

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(15)

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### Review Questions

#### Taking Fingerprints

1. The police force of what country was the first to collect and store fingerprints to identify criminals? \_\_\_\_\_ (16)
2. A fingerprint that is visible to the naked eye is called a \_\_\_\_\_. (16)
3. A fingerprint that is not visible to the naked eye is called a \_\_\_\_\_. (16)
4. Why do investigators take fingerprints from every individual present at a crime scene?  
\_\_\_\_\_  
\_\_\_\_\_ (16)
5. What basic tool is used to get a better view of small evidence? \_\_\_\_\_  
\_\_\_\_\_ (16)
6. What factors determine the type of brush used for lifting fingerprints? \_\_\_\_\_  
\_\_\_\_\_ (16)
7. Dark fingerprint powder is usually composed of \_\_\_\_\_. (16 – 17)
8. Light powder is usually composed of \_\_\_\_\_. (16)
9. What tool is used to smooth lifting tape onto a dusted print to remove air bubbles and optimize contact of the tape with the fingerprint dust? \_\_\_\_\_ (17)
10. When magnetic powder is used for fingerprinting, what type of tool is used to dust the fingerprint? \_\_\_\_\_ (17)

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### Review Questions

#### Analyzing Fingerprints

1. A linen tester is a type of \_\_\_\_\_. (18)
2. Who first published a study on fingerprints, showing that everyone has unique fingerprints and fingerprints do not change? \_\_\_\_\_ (18)
3. Who was the first official in India to require a fingerprint to be affixed to contracts?  
\_\_\_\_\_ (18)
4. What are the three most common fingerprint patterns? \_\_\_\_\_  
\_\_\_\_\_ (19)
5. What is the most common type of fingerprint pattern? \_\_\_\_\_ (19)
6. What are Galton details? \_\_\_\_\_  
\_\_\_\_\_ (19)
7. What are some of the different Galton details that are used in comparing fingerprints? \_\_\_\_\_  
\_\_\_\_\_ (19)
8. What is used in a forensic lab to make fingerprints more visible on an object?  
\_\_\_\_\_ (19)
9. What machine is used to compare fingerprints side-by-side? \_\_\_\_\_  
\_\_\_\_\_ (19)

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### Review Questions

#### Written in Blood

1. What test shows if a stain at a crime scene is blood? \_\_\_\_\_ (20)
2. Who invented a chemical laboratory test to determine whether blood evidence is human or animal? \_\_\_\_\_ (20)
3. Who determined that humans have different blood types? \_\_\_\_\_ (20)
4. What are the four main blood groups of humans? \_\_\_\_\_ (20)
5. Who was the first person to develop a classification system for bloodstains based on their shape? \_\_\_\_\_ (20)
6. What are the six different bloodstain categories? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (21)
7. What clues may the shape of bloodstains give to investigators? \_\_\_\_\_ (21)
8. In a Kastle-Meyer test, what color does the paper turn if the stain being tested is blood? \_\_\_\_\_ (21)
9. A bloodstain shows impact splatter when \_\_\_\_\_. (21)

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### Review Questions

#### DNA Analysis

1. DNA is an acronym for \_\_\_\_\_. (22)
2. What is carried in DNA? \_\_\_\_\_ (22)
3. What is another name for DNA typing? \_\_\_\_\_ (22)
4. Who were the two scientists who discovered the double-helix structure of DNA?  
\_\_\_\_\_ (22)
5. Who invented DNA typing? \_\_\_\_\_ (22)
6. What lab process increases the amount of DNA from evidence available for testing?  
\_\_\_\_\_ (23)
7. How can two individuals possess the same DNA fingerprint? \_\_\_\_\_  
\_\_\_\_\_ (23)
8. PCR is an acronym for \_\_\_\_\_. (23)
9. STR is an acronym for \_\_\_\_\_. (23)
10. How is DNA fingerprinting used to prosecute crimes involving the illegal smuggling of protected animals? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (23)



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**Review Questions**

11. Can DNA fingerprinting determine if two individuals are related? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (23)

12. DNA fingerprinting can produce graphs that are unique to a specific individual. The process used to produce DNA profile graphs is called \_\_\_\_\_.  
(23)

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### Review Questions

#### Trace Evidence

1. What is the exchange principle? \_\_\_\_\_ (24)
2. What technology is used to compare trace evidence? \_\_\_\_\_  
\_\_\_\_\_ (24)
3. What is an electron? \_\_\_\_\_  
\_\_\_\_\_ (24)
4. What is an SEM? \_\_\_\_\_ (25)
5. What are the advantages in using an SEM instead of an optical microscope for analyzing forensic evidence? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (24-25)
6. What is formed in an SEM when the electrons are electrically charged and separate from their atoms? \_\_\_\_\_  
\_\_\_\_\_ (25)
7. What must be done to a piece of evidence before it may be viewed with a scanning electron microscope? \_\_\_\_\_ (25)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Natural Clues

1. What is often found in dust? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (26)
2. How does the study of fibers contribute to solving crimes? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (26)
3. What are some features of hair that forensic scientists consider when comparing samples? \_\_\_\_\_  
\_\_\_\_\_ (26)
4. What does the presence of pollen on the clothing of a victim or suspect tell a forensic scientist? \_\_\_\_\_  
\_\_\_\_\_ (26)
5. What 1942 murder case was solved with information from grass seeds found on the suspect? \_\_\_\_\_  
\_\_\_\_\_ (27)
6. What is typically used to collect loose fibers from the scene of a crime? \_\_\_\_\_  
\_\_\_\_\_ (27)
7. Who wrote *Treatise on Criminalistics*? \_\_\_\_\_ (27)
8. What is an FTIR? \_\_\_\_\_ (27)
9. What may be determined from an FTIR graph? \_\_\_\_\_  
\_\_\_\_\_ (27)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### A Good Impression

1. What are some types of impressions that may serve as evidence? \_\_\_\_\_  
\_\_\_\_\_ (28)
2. How may a forensic scientist determine the model and make of a shoe from a footprint?  
\_\_\_\_\_  
\_\_\_\_\_ (28)
3. How may a forensic scientist determine if a tire tread comes from a specific car?  
\_\_\_\_\_  
\_\_\_\_\_ (28)
4. What clues do tools leave that may aid in the investigation of a crime? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (28)
5. How does an investigator make a record of a footprint in dust? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (28)
6. What type of image is made when the impression of a footprint or tire tread is filled with resin? \_\_\_\_\_ (29)
7. What is made from the first cast made of an impression? \_\_\_\_\_  
\_\_\_\_\_ (29)
8. What is measured and recorded for footprints? \_\_\_\_\_  
\_\_\_\_\_ (29)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Guns and Bullets

1. When a gun is discovered at the scene of a crime, what is the first priority of the investigating officers? \_\_\_\_\_  
\_\_\_\_\_ (30)
2. What information about the gun do investigators record at the crime scene?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (30)
3. What is a bullet trajectory? \_\_\_\_\_  
\_\_\_\_\_ (30)
4. What is FDR and GSR? \_\_\_\_\_  
\_\_\_\_\_ (30)
5. What was Operation Trident? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (30)
6. Who shot and killed President John F. Kennedy? \_\_\_\_\_ (31)
7. What is a semiautomatic handgun? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (30)

**2017 Super Quiz Science - *DK Eyewitness Forensic Science***  
**Review Questions**

8. Fill in the chart comparing different types of guns: (30-31)

Type of gun	Parts of gun	Type of ammunition	Accuracy
shotgun			
rifle			
Handgun or pistol			

9. What is a fully automatic gun? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (30)

10. What is the official sidearm of the U.S. military? \_\_\_\_\_ (30)

11. What is another name for a modified bullet? \_\_\_\_\_ (31)

**2017 Super Quiz Science - *DK Eyewitness Forensic Science***  
**Review Questions**

12. What does the hammer of the gun strike to ignite the gunpowder in the bullet cartridge? \_\_\_\_\_ (31)

13. What is the difference between a shotgun shell and a rifle cartridge? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (31)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Firearms in the Laboratory

1. What is the word for the study of gun use? \_\_\_\_\_ (32)
2. What is the term for the study of the processes involved as a bullet is fired and travels down the barrel of the gun? \_\_\_\_\_ (32)
3. What is the term for the study of what happens when a bullet strikes a target?  
\_\_\_\_\_ (32)
4. What elements are found in firearm discharge residue? \_\_\_\_\_  
\_\_\_\_\_ (32)
5. In a forensic lab, how is a gun fired safely? \_\_\_\_\_  
\_\_\_\_\_ (32)
6. How do investigators determine if a specific gun was used at a crime scene?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (33)
7. What parts of the gun leave markings on a fired bullet? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (33)
8. What do investigators use to trace the trajectory of a bullet? \_\_\_\_\_  
\_\_\_\_\_ (33)



## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### At the Scene of the Crime

1. What type of crime employs the use of sniffer dogs? \_\_\_\_\_  
\_\_\_\_\_ (34)
2. Dogs that are specially trained to find dead bodies are called \_\_\_\_\_. (34)
3. Why are helicopters not used more often in searches? \_\_\_\_\_  
\_\_\_\_\_ (34)
4. In what circumstances would a police search include a helicopter search? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (34)
5. What type of equipment aids divers in underwater searches?  
\_\_\_\_\_ (35)
6. The United States maintains a research facility that studies the decomposition of bodies.  
What is the name of the research center? \_\_\_\_\_ (35)
7. What information is gained from research into the decomposition of bodies?  
\_\_\_\_\_ (35)
8. What is GPR? \_\_\_\_\_ (35)
9. How does GPR create images of objects buried underground? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (35)
10. Who was convicted of a crime based upon research conducted at the Body Farm?  
\_\_\_\_\_ (35)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### A Bug's Life

1. What attract flies to a dead body? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (36)
2. What bug is the first to find a dead body? \_\_\_\_\_ (36 – 37)
3. Most insects lay their eggs on dead bodies and open wounds to \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (36)
4. What is the name of young insects when they emerge from the egg?  
\_\_\_\_\_ (36)
5. What does a forensic entomologist study? \_\_\_\_\_  
\_\_\_\_\_ (36)
6. Why are ants often found around dead bodies? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (36)
7. What insect may mislead forensic scientists because it arrives at a corpse soon after blowflies to eat eggs and maggots? \_\_\_\_\_ (36)
8. What do wasps feed on that attracts them to corpses? \_\_\_\_\_  
\_\_\_\_\_ (36)

**2017 Super Quiz Science - *DK Eyewitness Forensic Science***  
**Review Questions**

9. How long does it take for blowfly eggs to develop into maggots? \_\_\_\_\_  
\_\_\_\_\_ (37)

10. How long after the eggs are laid does the maggot stage of a blowfly life cycle end?  
\_\_\_\_\_  
\_\_\_\_\_ (37)

11. During what phase does the maggot turn into an adult fly? \_\_\_\_\_  
\_\_\_\_\_ (37)

12. How much time elapses between the laying of eggs to the development of the adult  
blowfly? \_\_\_\_\_ (37)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Cause of Death

1. What is the meaning of post-mortem? \_\_\_\_\_ (38)
2. What is another name for a postmortem examination? \_\_\_\_\_ (38)
3. Who conducts autopsies? \_\_\_\_\_ (38)
4. Why does a forensic pathologist weigh the organs of a corpse? \_\_\_\_\_  
\_\_\_\_\_ (38)
5. What type of incision is made on the chest of a corpse during an autopsy?  
\_\_\_\_\_ (38)
6. What does the pathologist document before opening up the body cavity during an autopsy? \_\_\_\_\_  
\_\_\_\_\_ (39)
7. What is a hemorrhage? \_\_\_\_\_ (39)
8. What is used to find hemorrhages without opening up the skull? \_\_\_\_\_ (39)
9. What is one of the most important tissue tests performed on a corpse? \_\_\_\_\_ (39)
10. Where are dead bodies kept before an autopsy is performed? \_\_\_\_\_ (39)
11. What may be revealed in tests run on a corpse hair sample? \_\_\_\_\_  
\_\_\_\_\_ (39)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Toxic World

1. What is a toxin? \_\_\_\_\_ (40)
2. What is the active drug in tobacco? \_\_\_\_\_ (40)
3. What is the skull and crossbones logo used to symbolize today? \_\_\_\_\_  
\_\_\_\_\_ (40)
4. What poisonous substance was mailed to news companies and two senators as part of a terrorist attack during September of 2001? \_\_\_\_\_ (40)
5. How did Dr. Hawley Crippen kill his wife? \_\_\_\_\_ (40)
6. What machine is used to detect toxins in samples taken from a crime scene or a body? \_\_\_\_\_ (40)
7. What does a mass spectrometer do? \_\_\_\_\_ (41)
8. What is the name for an electrically charged element? \_\_\_\_\_ (41)
9. What poison killed Georgi Markov? \_\_\_\_\_ (41)
10. Why was Georgi Markov murdered? \_\_\_\_\_ (41)
11. What is the most commonly used illegal drug? \_\_\_\_\_ (41)
12. What are the symptoms of antimony poisoning? \_\_\_\_\_ (41)
13. What poison was used to kill the Roman emperor Claudius? \_\_\_\_\_ (41)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### The Bones of the Matter

1. What is forensic anthropology? \_\_\_\_\_  
\_\_\_\_\_ (42)
2. What part of the body do forensic anthropologists study? \_\_\_\_\_ (42)
3. What clues are found in studying a skeleton? \_\_\_\_\_  
\_\_\_\_\_ (42)
4. What part of the skeleton reveals the most information about a person?  
\_\_\_\_\_ (42)
5. What parts of the skull give clues to the ethnic origin of a skeleton? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (42)
6. How do investigators reconstruct a facial image of a victim from a skull?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (43)
7. What is the difference between traditional x-rays and computer tomography?  
\_\_\_\_\_  
\_\_\_\_\_ (43)
8. The points at which a CT scan of a face is fitted on a scan of a skull are called  
\_\_\_\_\_ (43)
9. What is added to the final 3-D facial reconstruction to make the model of a face look realistic? \_\_\_\_\_ (43)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Spitting Image

1. What are CCTV cameras? \_\_\_\_\_ (44)
2. CCTV cameras are normally used for \_\_\_\_\_  
\_\_\_\_\_. (44)
3. Investigators will look at CCTV footage in the area of a crime scene in order to \_\_\_\_\_  
\_\_\_\_\_. (44)
4. Why do police use a series of facial components to build a likeness from a witness' description of a suspect or victim? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (44)
5. What is an identikit? \_\_\_\_\_  
\_\_\_\_\_ (44)
6. Who invented the photofit or identikit? \_\_\_\_\_ (44)
7. Once a facial composite has been developed, what is the next step investigators take to identify the person? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (44)
8. What is the name of the computerized version of the identikit? \_\_\_\_\_ (45)
9. What does a forensic phonetician study? \_\_\_\_\_ (45)
10. Variations in the sound of a person's voice can be used to produce a graphic representation called a \_\_\_\_\_. (45)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Behavior of the Offender

1. What is geographical profiling? \_\_\_\_\_  
\_\_\_\_\_ (46)
2. What can be determined through geographical profiling? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (46)
3. What is the job of a psychological profiler? \_\_\_\_\_  
\_\_\_\_\_ (46)
4. Polygraphs are based on the premise that a person who is lying will display physiological changes, such as \_\_\_\_\_  
\_\_\_\_\_ (46)
5. How often are polygraph tests accepted as evidence in court cases? \_\_\_\_\_ (46)
6. What does a polygraph technician ask a person taking a polygraph in order to establish base readings on their physiological responses? \_\_\_\_\_  
\_\_\_\_\_ (47)
7. What is measured during a polygraph? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (47)
8. Who killed Lee Harvey Oswald? \_\_\_\_\_ (47)
9. Is psychological profiling accurate all the time? \_\_\_\_\_ (47)



## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Fire Starters

1. Deliberately setting a fire in order to destroy property is called \_\_\_\_\_. (48)
2. What are the two main questions investigators want to answer in an arson case?  
\_\_\_\_\_  
\_\_\_\_\_ (48)
3. A material that easily catches on fire is \_\_\_\_\_. (48)
4. What type of machine is used to determine if an accelerant was used in an arson fire?  
\_\_\_\_\_ (48)
5. What are the most common accelerants used in arson fires? \_\_\_\_\_  
\_\_\_\_\_ (48)
6. What is rollover? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (48)
7. What is flashover? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (48)
8. Is there any real evidence of spontaneous human combustion? \_\_\_\_\_ (48)
9. What is the location of the biggest peacetime fire in Europe? \_\_\_\_\_ (49)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Fire Testing

1. What are some of the lethal invisible gases that may be produced when materials burn?  
\_\_\_\_\_ (50)
2. What kills people during a fire? \_\_\_\_\_ (50)
3. What is tested in a smoke density chamber? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (50)
4. What does a cone calorimeter test? \_\_\_\_\_  
\_\_\_\_\_ (50)
5. What is measured by an oxygen index apparatus? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (51)
6. On the oxygen index, a lower index number indicates that a material \_\_\_\_\_  
\_\_\_\_\_ (51)
7. What percentage of normal air is composed of oxygen? \_\_\_\_\_ (51)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Crash Investigation

1. What are the two black boxes that store data aboard commercial airplanes?  
\_\_\_\_\_  
\_\_\_\_\_ (52)
2. What can be used to determine the speed of a vehicle before it crashed? \_\_\_\_\_  
\_\_\_\_\_ (52)
3. During major crashes, what do the investigating officers try to discover? \_\_\_\_\_  
\_\_\_\_\_ (52)
4. How many people were killed in the Lockerbie airline bombing on December 22, 1988?  
\_\_\_\_\_ (53)
5. How many people died in the German Intercity Express train crash on June 3, 1998?  
\_\_\_\_\_ (53)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### The Big Bang

1. How does a bomb work? \_\_\_\_\_  
\_\_\_\_\_ (54)
2. What is an example of a low-grade explosive? \_\_\_\_\_ (54)
3. What is an example of a high-grade explosive? \_\_\_\_\_ (54)
4. How many types of explosives are used in a typical bomb? \_\_\_\_\_ (54)
5. What is an incendiary device? \_\_\_\_\_ (55)
6. What is the most difficult type of bombing to guard against or neutralize?  
\_\_\_\_\_ (55)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Computer Forensics

1. What does it mean to hack? \_\_\_\_\_  
\_\_\_\_\_ (56)
2. In 2005, who was charged with hacking into the Pentagon computer system?  
\_\_\_\_\_ (56)
3. How are the police able to trace the location of a caller who makes a call from a cell phone? \_\_\_\_\_  
\_\_\_\_\_ (56)
4. What is an MTSO? \_\_\_\_\_  
\_\_\_\_\_ (56)
5. What is cyberspace? \_\_\_\_\_ (56)
6. What is spam? \_\_\_\_\_  
\_\_\_\_\_ (56)
7. What is a smart card? \_\_\_\_\_  
\_\_\_\_\_ (57)
8. What does the microchip on a smart card do? \_\_\_\_\_  
\_\_\_\_\_ (57)

**2017 Super Quiz Science - *DK Eyewitness Forensic Science***  
**Review Questions**

9. What is a PIN number? \_\_\_\_\_  
\_\_\_\_\_ (57)

10. Why do forensic investigators remove the hard drives of computers instead of just switching on and using a computer that has been confiscated as evidence? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (57)

11. What is a virus? \_\_\_\_\_  
\_\_\_\_\_ (57)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Paper Trail

1. What are some examples of papers that forensic scientists examine for clues to crimes?  
\_\_\_\_\_  
\_\_\_\_\_ (58)
2. What is used to identify if a document was printed on a specific copier or printer?  
\_\_\_\_\_ (58)
3. What do some computer printers print on documents that police may use to identify the printer? \_\_\_\_\_  
\_\_\_\_\_ (58)
4. What color will ink from a counterfeit-detecting pen turn if the currency is a counterfeit copy? \_\_\_\_\_ (58)
5. What type of safeguards are used to protect currency from being counterfeited?  
\_\_\_\_\_  
\_\_\_\_\_ (58)
6. What machine is used to detect impressions from writing on a notepad?  
\_\_\_\_\_ (59)
7. What does an ESDA use to make the impressions made on a notepad appear?  
\_\_\_\_\_  
\_\_\_\_\_ (59)
8. What method was used to determine the age of the Dead Sea Scrolls?  
\_\_\_\_\_ (59)
9. How did forensic scientists determine that the diaries of Adolf Hitler were forgeries?  
\_\_\_\_\_ (59)

## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Every Picture Tells a Story

1. Who are two of the most notorious art forgers in recent years? \_\_\_\_\_  
\_\_\_\_\_ (60)
2. How many paintings did Tom Keating claim he forged? \_\_\_\_\_ (60)
3. Why did Han Van Meegeren admit to forging paintings? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (60)
4. What type of light will show corrections or alterations made to a painting?  
\_\_\_\_\_ (60)
5. What type of light wave will show if cracking occurs throughout the layers of a painting or only on the surface? \_\_\_\_\_ (60)
6. What test may be used to determine the age of clay figures? \_\_\_\_\_  
\_\_\_\_\_ (61)
7. What is thermoluminescence? \_\_\_\_\_  
\_\_\_\_\_ (61)
8. What famous artifact related to the death of Jesus has been tested to determine their possible age? \_\_\_\_\_ (61)



## 2017 Super Quiz Science - *DK Eyewitness Forensic Science*

### Review Questions

#### Future Forensics

1. What is an RFID? \_\_\_\_\_  
\_\_\_\_\_ (62)
2. What part of the body may be used as identification instead of a finger print?  
\_\_\_\_\_ (62)
3. Are the patterns of irises consistent throughout a person's lifetime? \_\_\_\_\_ (62)
4. Is it possible to "forge" the patterns detected during an iris scan? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (62)
5. In the future, what balance must be maintained in methods used to investigate crimes?  
\_\_\_\_\_  
\_\_\_\_\_ (62)
6. How does facial recognition work? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (63)
7. What are some of the biometric measurements used in facial recognition software?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (63)
8. What information is provided to police through traffic and toll CCTV cameras?  
\_\_\_\_\_ (63)
9. What type of evidence do some consider to be infallible? \_\_\_\_\_ (63)

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #1 – pages 6 -15**

Circle the correct answer.

1. *Forensic* is derived from what Latin word?
  - A. *formula*
  - B. *forum*
  - C. *factum*
  - D. *forte*
  - E. *forma*
  
2. What is entomology?
  - A. the study of blood types
  - B. the study of genetic materials
  - C. the study of insects
  - D. the study of ballistics
  - E. the study of fingerprints
  
3. Who performs autopsies?
  - A. forensic profiler
  - B. forensic pathologist
  - C. forensic anthropologist
  - D. forensic entomologist
  - E. forensic paramedic
  
4. What is toxicology?
  - A. the study of poisons
  - B. the study of plant pollens and spores
  - C. the study of insects
  - D. the study of fingerprints
  - E. the study of ballistics
  
5. What is Bertillonage?
  - A. an early scientific system used to identify people by their physical appearance
  - B. an early system used to identify blood types
  - C. a method of lifting fingerprints from objects
  - D. a type of DNA test
  - E. a system used to search a crime scene for trace evidence

6. Who said, "Every contact leaves a trace"?
- A. Sherlock Holmes
  - B. Sir Francis Galton
  - C. Sir William Herschel
  - D. Karl Landsteiner
  - E. Edmond Locard
7. Why is evidence recorded with digital photography often challenged in court?
- A. Digital photography does not produce a clear enough image of evidence.
  - B. Digital photography is not approved for use in court cases.
  - C. Digital photography is easily altered.
  - D. Digital photography is too difficult to track during the chain of custody.
  - E. None of the above

Match the person with an item in the list that is most related to him or her. Write the letter of the item on the blank next to the person's name.

- |       |                    |           |   |
|-------|--------------------|-----------|---|
| _____ | Kathy Reichs       | <b>A.</b> | An early scientific system for identifying people by their physical appearance            |
| _____ | Mathieu Orfila     | <b>B.</b> | The real-life scientist upon which the fictional character of Temperance Brennan is based |
| _____ | Alphonse Bertillon | <b>C.</b> | Founder of the first FBI forensic laboratory  |
| _____ | J. Edgar Hoover    | <b>D.</b> | Father of toxicology  |
| _____ | Cesare Lombroso    | <b>E.</b> | Invention of an early form of lie detector that measured heart rate                       |

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #2 – pages 16 – 21**

Circle the correct answer.

1. What is a patent print?
  - A. a footprint that is visible to the naked eye
  - B. a footprint that is invisible to the naked eye, but visible with a magnifying glass
  - C. a fingerprint that is invisible to the naked eye, but can be made visible
  - D. a fingerprint that is visible to the naked eye
  - E. a master copy of a digital evidence photograph
  
2. What is a linen tester?
  - A. a chemical compound used to lift fingerprints from cloth
  - B. a type of compact magnification device
  - C. a machine used to test fibers
  - D. a machine used to determine different types of paper
  - E. a machine used to detect counterfeit money
  
3. What type of fingerprint pattern is the most common?
  - A. whorl
  - B. loop
  - C. arch
  - D. spur
  - E. bifurcation
  
4. What type of fingerprint pattern has ridges that form closed curves in the center?
  - A. whorl
  - B. loop
  - C. arch
  - D. spur
  - E. bifurcation
  
5. What test is used to determine if a stain at a crime scene is blood?
  - A. DNA profiling
  - B. computer tomography
  - C. electrostatic detection
  - D. ballistics
  - E. Kastle-Meyer test

6. What are the four main blood types in humans?
- A. A, B, AB, and C
  - B. A, B, O and C
  - C. A, B, O and P
  - D. A, B, AB, and O
  - E. AB, B, O, and U
7. Who developed a method of classifying blood stains according to their shape?
- A. Karl Landsteiner
  - B. John Glaister
  - C. Paul Uhlenhuth
  - D. Sir William Herschel
  - E. Sir Alec Jeffreys
8. What color does a test paper turn if blood is present when a Kastle-Meyer test is administered?
- A. pink
  - B. blue
  - C. purple
  - D. green
  - E. yellow

Short-answer questions:

9. To determine the blood type of a blood sample, a forensic scientist adds an anti-A reagent to the sample. If the blood sample does not clot, what are the possible blood types of the sample? \_\_\_\_\_
10. What are the six main types of bloodstain shapes used in the classification system John Glaister developed? \_\_\_\_\_  
\_\_\_\_\_

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #2 – pages 22 – 29**

Circle the correct answer.

1. What is another name for DNA typing?
  - A. DNA tracking
  - B. genetic fingerprinting
  - C. profiling
  - D. molecular analysis
  - E. None of the above
  
2. What is another name for DNA typing?
  - A. DNA tracking
  - B. genetic fingerprinting
  - C. profiling
  - D. molecular analysis
  - E. None of the above
  
3. What is a SEM?
  - A. spectrographic element microscope
  - B. sniffing equipment management
  - C. scanning electron microscope
  - D. scanning electrostatic microscope
  - E. secondary evidence maintenance
  
4. Which of the following is found in dust?
  - A. pollen
  - B. animal skin
  - C. fibers
  - D. dust mites
  - E. All of the above
  
5. Who confessed to murdering Louise Almodovar after grass seeds recovered from clothing connected him to the scene of the crime?
  - A. Anibal Almodovar
  - B. Nicola Sacco
  - C. Bartolomeo Vanzetti
  - D. Mike Rubenstein
  - E. Dr. Hawley Harvey Crippen

Match the person with an item in the list that is most related to him. Write the letter of the item on the blank next to the person's name.

- |       |                   |   |
|-------|-------------------|---|
| _____ | Edmond Locard     | <b>A.</b> Author of <i>Treatise on Criminalistics</i>             |
| _____ | Sir Alec Jeffreys | <b>B.</b> One of the discoverers of double-helix structure of DNA |
| _____ | Francis Crick     | <b>C.</b> Inventor of DNA typing                                  |
| _____ | Karl Landsteiner  | <b>D.</b> System of classifying bloodstains by shape              |
| _____ | John Glaister     | <b>E.</b> Discoverer of blood groups for human blood              |

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #4 – pages 30 – 35**

Circle the correct answer.

1. GSR is an acronym for \_\_\_\_\_.
  - A. general scene reconstruction
  - B. gunshot residue
  - C. genetic spectroscopy
  - D. genetic sampling range
  - E. general smoke rating
  
2. What are the spiral grooves inside the barrel of a rifle called?
  - A. sight lines
  - B. rifling
  - C. sightings
  - D. firing pins
  - E. cartridges
  
3. Which of the following firearms has the most accuracy in hitting a target?
  - A. sawed-off shotgun
  - B. double-barreled shotgun
  - C. single-barreled shotgun
  - D. rifle with scope
  - E. semi-automatic pistol
  
4. What part of a gun strikes and ignites the end of a bullet casing to fire the bullet?
  - A. firing pin
  - B. slide
  - C. clip
  - D. magazine
  - E. stock
  
5. What equipment is used in ballistics tests?
  - A. comparison microscope
  - B. scanning electron microscope
  - C. shooting tub
  - D. All of the above
  - E. A & C only



6. What type of search are cadaver dogs trained to perform?
- A. search and rescue
  - B. bomb detection
  - C. drug search
  - D. search for dead bodies
  - E. tracking of fugitives
7. Terminal ballistics is the study of \_\_\_\_\_.
- A. the trajectory of fired bullets
  - B. gunshot residue
  - C. what happens when a bullet strikes a target
  - D. the process involved as a fired bullet travels down a gun barrel
  - E. the make-up of different types of bullets
8. What can forensic investigators determine from the striations on bullets?
- A. the type of gun used to fire the bullet
  - B. the distance from the target the bullet was fired
  - C. if two bullets were fired from the same gun
  - D. All of the above
  - E. None of the above
9. What do search divers use to detect objects in extremely low-visibility water searches?
- A. GPR
  - B. sonar equipment
  - C. infrared cameras
  - D. helicopters
  - E. None of the above
10. What is GPR?
- A. ground pattern recognizance
  - B. ground print recorder
  - C. gunshot pattern recorder
  - D. gunshot pattern residue
  - E. ground-penetrating radar

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #5 – pages 36 – 41**

Circle the correct answer.

1. What is the definition of *putrescence*?
  - A. corpse
  - B. remains
  - C. decomposition
  - D. smell
  - E. death
2. Which of the following are typically the first insects to arrive at a dead body?
  - A. springtail beetles
  - B. ants
  - C. blowflies
  - D. rove beetles
  - E. clothes moths
3. What is one of the last insects to arrive at a corpse?
  - A. mite
  - B. ants
  - C. wasps
  - D. blowflies
  - E. springtail beetle
4. What is the name of the juvenile form of an insect, especially one that differs greatly from the adult and forms the stage between egg and pupa?
  - A. mite
  - B. larva
  - C. flea
  - D. beetle
  - E. bole
5. To access internal organs during an autopsy, a forensic pathologist makes this type of incision on the body.
  - A. medial-line incision
  - B. superficial incision
  - C. Y-incision
  - D. V-incision
  - E. orthoscopic incision

6. What poison, that causes death by heart failure, is difficult to disguise because of its distinctive metal taste?
- A. strychnine
  - B. antimony
  - C. ricin
  - D. death cap mushroom
  - E. arsenic
7. What is another name for marijuana?
- A. heroin
  - B. cannabis
  - C. ricin
  - D. antimony
  - E. strychnine

Fill in the blank.

8. Dead bodies are kept in storage in a room called a \_\_\_\_\_.
9. The name given to a postmortem medical examination is \_\_\_\_\_.
10. The muscular tube that runs from the mouth to the stomach is the \_\_\_\_\_.

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #6 – pages 42 – 51**

Circle the correct answer.

1. What branch of forensic science aids in the identification and examination of skeletal remains?
  - A. pathology
  - B. entomology
  - C. psychiatry
  - D. engineering
  - E. anthropology
2. A forensic anthropologist examines a long, broad skull with rounded eye sockets and shovel-shaped incisors. What is the likely ethnicity of the victim?
  - A. East European
  - B. Sub-Saharan African
  - C. East Asian
  - D. Anglo-Saxon
  - E. Middle Eastern
3. What is an identikit?
  - A. a fingerprinting kit
  - B. a photo identification kit of facial features
  - C. a type of closed-circuit security system
  - D. a blood-typing kit
  - E. a kit used by forensic investigators to gather evidence at a crime scene
4. What is CCTV?
  - A. cross-circuit television
  - B. cross-circuit television
  - C. closed-circuit television
  - D. cross-current television
  - E. closed-current television
5. Speech experts who study voice recordings are called \_\_\_\_\_.
  - A. pathologists
  - B. phoneticians
  - C. entomologists
  - D. profilers
  - E. anthropologist

6. What physical change(s) does a polygraph measure?
- A. blood pressure
  - B. heart rate
  - C. breathing rate
  - D. amount of sweat
  - E. All of the above
7. What is another name for a polygraph?
- A. psychological profile
  - B. voiceprint
  - C. fingerprint comparison test
  - D. lie-detector test
  - E. toxin test
8. Who was arrested and convicted for bombings attributed to the “Mad Bomber”?
- A. John Allen Muhammad
  - B. Lee Boyd Malvo
  - C. James Buchanan
  - D. James Martin
  - E. Dr. James A. Brussel
9. The crime of deliberately setting a fire is called \_\_\_\_\_.
- A. torching
  - B. combustion
  - C. accelerant
  - D. pyromania
  - E. arson
10. What instrument is used to measure the amount of heat energy a material gives off when burned?
- A. calorimeter
  - B. oxygen index apparatus
  - C. mass spectrometer
  - D. precipitin
  - E. Dräger tube

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #7 – pages 52 – 63**

Circle the correct answer.

1. What does a CVR record?
  - A. the last two hours of conversations among flight crew members
  - B. the voice of the forensic pathologist during an autopsy
  - C. the testimony of an expert witness during a deposition
  - D. the testimony of witnesses in court
  - E. the gases released from the site of an arson fire
  
2. What caused the airplane crash of Pan Am Flight 103 over Lockerbie, Scotland, in 1988?
  - A. mechanical failure
  - B. a crash landing
  - C. bad weather
  - D. a bomb
  - E. hijackers
  
3. Which of the following is NOT an explosive?
  - A. gasoline
  - B. semtex
  - C. dynamite
  - D. gunpowder
  - E. sodium chloride
  
4. What is an MTSO?
  - A. multiple transfer service operation
  - B. mobile transfer safety operation
  - C. mobile television service office
  - D. mobile telephone switching office
  - E. multiple telephone service organizations
  
5. In 2005, who was accused of hacking the computer system of the Pentagon?
  - A. Gary McKinnon
  - B. Dr. Harold Shipman
  - C. Frank Abagnale
  - D. Bruno Hauptmann
  - E. Georgi Markov

6. What is a PIN?
  - A. primary investigation notes
  - B. personal identification number
  - C. printing identification number
  - D. postmortem interval number
  - E. provenance identification notes
7. Who are the most notorious art forgers in recent years?
  - A. Tom Keating and Han Van Meegeren
  - B. Francis Crick and James Watson
  - C. Francis Griffiths and Elsie Wright
  - D. John Allen Muhammad and Lee Boyd Malvo
  - E. Robbie Coltrane and Robert Pastorelli
8. What is an RFID?
  - A. radio frequency identification device
  - B. rifle filings identification database
  - C. remote frequency independent detection
  - D. residue findings identification database
  - E. remote flying instructions database
9. What part of the brain is most active when a person is lying?
  - A. frontal lobe
  - B. hippocampus
  - C. meninges
  - D. occipital lobe
  - E. thalamus
10. What measurements are used in facial recognition software to compare facial features?
  - A. the distance between the center of the eyes
  - B. the distance between the ends of the mouth
  - C. the length of the nose
  - D. the distance between the nose and the chin
  - E. All of the above

**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #8 – pages 64 - 67**

Write the letter of the book on the blank next to the author's name.

- |                                   |   |
|-----------------------------------|---|
| _____ 1. Sir Arthur Conan Doyle   | A. <i>The Washing Away of Wrongs</i>              |
| _____ 2. Agatha Christie          | B. <i>Adventures of Sherlock Holmes</i>           |
| _____ 3. Sung Tzuh                | C. <i>Classification and Uses of Fingerprints</i> |
| _____ 4. Sir Edward Richard Henry | D. <i>Treatise of Toxicology</i>                  |
| _____ 5. Mathieu Orfila           | E. <i>The Mysterious Affair at Styles</i>         |
| _____ 6. Albert Osborn            | F. <i>Fingerprints</i>                            |
| _____ 7. Hans Gross               | G. <i>Questioned Documents</i>                    |
| _____ 8. Francis Galton           | H. <i>Criminal Investigations</i>                 |



**2017 Super Quiz Science – Forensic Science**  
**Chapter Review Quiz #9 – pages 66-71**

Match the scientist to his invention. Write the letter of the invention on the blank next to the scientist's name.

- |   |                                |
|---|--------------------------------|
| _____ 1. William Nicol                      | A. voice spectographer         |
| _____ 2. Philip Gravelle and Calvin Goddard | B. comparison microscope       |
| _____ 3. John Larson                        | C. polarizing light microscope |
| _____ 4. John Fisher                        | D. DNA fingerprinting          |
| _____ 5. Paul Uhlenhuth                     | E. Polymerase Chain Reaction   |
| _____ 6. Bell Laboratories                  | F. lie detector test           |
| _____ 7. Jacques Penry                      | G. super-glue fuming           |
| _____ 8. Kary Mullis                        | H. precipitin test             |
| _____ 9. Masato Soba                        | I. Photo-Fit ID System         |
| _____ 10. Sir Alec Jeffreys                 | J. helixometer                 |
| _____ 11. William Conrad Rontgen            | K. X-rays                      |

**2017 Super Quiz Science – DK Eyewitness: Forensic Science**  
**Famous Forensic Contributors Matching Sheet**

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**Famous Contributors to Forensics**  
**Matching Sheet**

Draw a line connecting each person  
with his discovery or work:

Victor Balthazard	Fraud and forgery criminal who later worked with the FBI
Alexandre Lacassagne	Wrote <i>Questioned Documents</i> , a book on analyzing forged documents
Frank Abagnale	First person to prosecute a criminal based on fingerprint evidence
Calvin Goddard	First forensic scientist to attempt to match a bullet to a weapon
James Marsh	Founder and first director of the FBI
Albert Sherman Osborn	First to study bloodstain patterns; Founder of forensic science
Juan Vucetich	Wrote <i>A Voice for the Dead</i>
James Starr	Inventor of comparison microscope
J. Edgar Hoover	Developed test for detecting arsenic

**2017 Super Quiz Science – DK Eyewitness: Forensic Science**  
**Forensic Scientists Matching Sheet**

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**Scientists - Matching Sheet**

Draw a line connecting each person  
with his discovery or work:

Mathieu Orfila

Study and classification of  
fingerprints

Francis Galton

Classification system for  
bloodstains

Alphonse Bertillon

Human ABO blood types

John Glaister

Father of forensic toxicology

Paul Uhlenhuth

DNA typing or genetic  
fingerprinting

Karl Landsteiner

DNA helix structure

Alec Jeffreys

Laboratory test to determine if  
blood is human

Francis Crick and James Watson

Early system for identifying people  
by measuring physical  
characteristics

Edmond Locard

Exchange principle