

Investigation Discovery

Name _____

Use the **Investigation Discovery** website on the Forensic Science page of the Kid Zone at <http://sciencespot.net/> to complete this worksheet.

1st Section: Crime Scene Tour

Choose "Crime Scene Tour" and read the information to answer questions #1 & 2.

1. Complete this statement about Locard's Principle:

Every _____ that a person makes with another person, _____ or object creates some sort of _____ evidence.

2. What two things do investigators do to make sure the crime scene is preserved? _____

Click "Continue" to go to the crime scene and then click the red circles to answer the questions.

3. What abbreviation is used for gunshot residue? _____

4. Give an example of two pieces of evidence that might be sources of DNA. _____ & _____

5. What is soil? _____

6. What can the width, thickness, and depth of stab wounds on a victim tell investigators? _____

7. What can the location of a wound tell an investigator? _____

8. What test do we need to do on blood to find out who it belongs to? _____

9. Fingerprints can be helpful in a investigating a crime. _____ prints and bare _____ can also help investigators.

2nd Section: Forensics Lab Tour

Return to the "Under the Microscope" section and choose "Go Inside a Forensics Lab" and read the information to answer question #1.

1. What do forensic experts do with the gack, gunk and goo from a crime scene? _____

Click "Continue" to go to the lab and then click the red circles to answer the questions.

2. Why do the investigators wear masks and gloves? _____

3. What would be examined for questioned documents? _____

4. What are four kinds of trace evidence? _____

5. What is the name for the most common fingerprint database? _____

6. What is the name for the database used to identify firearms? _____

7. What tool might be used to detect the composition of a sample? _____

8. What tool might be used to separate chemicals in a complex sample? _____

9. What tool is used to separate a mixture based on its mass? _____
10. What unit in a forensic lab might be used to identify and analyze bloodstains and other bodily fluids and to conduct DNA sequencing? _____
11. What tool is used to collect small amounts of a liquid and transfer it to another location? _____

Challenge: On the Run Game

WARNING: Pay attention to details! You will have to answer questions after you explore the crime scenes! Click MORE whenever possible to learn more details about the evidence.

Case #0001 – In a Dark Alley

1. Who is the victim? _____
2. Who is the suspect? _____
3. Click PLAY and search the scene for clues. Read the information provided to help you solve the case.
4. Who committed the crime? What evidence was found? _____

Case #0002 – Blood Red Car

1. What was found at the crime scene? _____
2. Who is the victim? _____
3. Who are the suspects? _____
4. Click PLAY and search the scene for clues. Read the information provided to help you solve the case.
5. Who committed the crime? _____

Case #0003 – The Empty Office

1. Who found the body? _____
2. Who is the victim? _____
3. Who is the suspect? _____
4. Click PLAY and search the scene for clues. Read the information provided to help you solve the case.
5. How was the suspect caught? _____

Case #0004 –Fire

1. Who died in the fire? _____
2. Who is the suspected victim? _____
3. Who is the suspect? _____
4. Click PLAY and search the scene for clues. Read the information provided to help you solve the case.
5. Who committed the crime? Why? _____

Done? Turn in your worksheet and then visit any of the sites listed on the Forensic Science page.

Investigation Discovery

ANSWER KEY

1st Section: Crime Scene Tour

Choose “*Crime Scene Tour*” and read the information to answer questions #1 & 2.

1. Complete this statement about Locard’s Principle:

Every **CONTACT** that a person makes with another person, **PLACE**, or object creates some sort of **PHYSICAL** evidence.

2. What two things do investigators do to make sure the crime scene is preserved? **THE POLICE SEAL OFF A CRIME SCENE AND KEEP A LOG OF WHO IS ALLOWED TO ENTER.**

Click “Continue” to go to the crime scene and then click the red circles to answer the questions.

3. What abbreviation is used for gunshot residue? **GSR**

4. Give an example of two pieces of evidence that might be sources of DNA.
NEED TWO: SALIVA, SEMEN, SKIN, BLOOD, HAIRS, TEETH, ETC.

5. What is soil? **SOIL IS A COMPLEX MIXTURE OF MINERALS OFTEN IS CONTAMINATED WITH TINY BITS OF MAN-MADE MATERIALS SUCH AS GLASS OR ASPHALT.**

6. What can the width, thickness, and depth of stab wounds on a victim tell investigators? **THEY CAN REVEAL WHAT SORT OF KNIFE OR SHARP INSTRUMENT WAS USED.**

7. What can the location of a wound tell an investigator? **THE LOCATION MAY INDICATE THE PERPETRATOR’S HEIGHT AND WHETHER HE IS RIGHT-HANDED OR LEFT-HANDED.**

8. What test do we need to do on blood to find out who it belongs to? **BLOOD TYPING AND DNA**

9. Fingerprints can be helpful in a investigating a crime. **PALM** prints and bare **FOOTPRINTS** can also help investigators.

2nd Section: Forensics Lab Tour

Return to the “*Under the Microscope*” section and choose “*Go Inside a Forensics Lab*” and read the information to answer question #1.

1. What do forensic experts do with the gack, gunk and goo from a crime scene? **THEY CAN TURN IT INTO KEY DATA THAT CAN PUT CRIMINALS BEHIND BARS AND FREE THOSE WHO HAVE BEEN WRONGLY CONVICTED.**

Click “Continue” to go to the lab and then click the red circles to answer the questions.

2. Why do the investigators wear masks and gloves? **TO PROTECT EVIDENCE & PROTECT THEMSELVES**

3. What would be examined for questioned documents? **HANDWRITING ANALYSIS, INKS, PAPERS**

4. What are four kinds of trace evidence? **HAIRS, FABRICS, DUST, BLOOD**

5. What is the name for the most common fingerprint database? **AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (AFIS)**

6. What is the name for the database used to identify firearms? **INTEGRATED BALLISTICS IDENTIFICATION SYSTEM (IBIS)**

7. What tool might be used to detect the composition of a sample? **MASS SPECTROMETERS**
8. What tool might be used to separate chemicals in a complex sample? **GAS CHROMATOGRAPHS**
9. What tool is used to separate a mixture based on its mass? **CENTRIFUGE**
10. What unit in a forensic lab might be used to identify and analyze bloodstains and other bodily fluids and to conduct DNA sequencing? **SEROLOGY**
11. What tool is used to collect small amounts of a liquid and transfer it to another location? **MICROPIPETTES**

Challenge: On the Run Game

WARNING: Pay attention to details! You will have to answer questions after you explore the crime scenes! Click MORE whenever possible to learn more details about the evidence.

Case #0001 – In a Dark Alley

5. Who is the victim? **CAUCASION MALE, 30 YEARS OLD**
6. Who is the suspect? **GANG LEADER**
7. Click **PLAY** and search the scene for clues. Read the information provided to help you solve the case.
8. Who committed the crime? What evidence was found? **THE GANG LEADER SHOT THE MAN. HE WAS FOUND WITH A JACKET WITH BLOOD ON IT.**

Case #0002 – Blood Red Car

6. What was found at the crime scene? **A CAR WITH A DEAD BODY IN IT**
7. Who is the victim? **54 YEAR OLD BUSINESS MAN**
8. Who are the suspects? **HIS WIFE AND BUSINESS PARTNER**
9. Click **PLAY** and search the scene for clues. Read the information provided to help you solve the case.
10. Who committed the crime? **THE BUSINESS PARTNER POISONED THE COFFEE**

Case #0003 – The Empty Office

6. Who found the body? **A PERSON FROM THE CLEANING STAFF**
7. Who is the victim? **30 YEAR OLD CAUCASION WOMAN**
8. Who is the suspect? **ANGRY LOVER OR SHE WAS A RANDOM VICTIM OF A SERIAL KILLER**
9. Click **PLAY** and search the scene for clues. Read the information provided to help you solve the case.
10. How was the suspect caught? **HE WAS STOPPED FOR A TRAFFIC VIOLATION AND POLICE FOUND THAT HIS FINGERPRINTS MATCHED THOSE FROM THE CRIME SCENE.**

Case #0004 –Fire

6. Who died in the fire? **A LAB TECHNICIAN**
7. Who is the suspected victim? **50 YEAR OLD MAN**
8. Who is the suspect? **WIFE**
9. Click **PLAY** and search the scene for clues. Read the information provided to help you solve the case.
10. Who committed the crime? Why? **THE WIFE AND HER HUSBAND; COLLECT INSURANCE MONEY**