Investigation Discovery

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 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? ________________________________________________________________________________________________

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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

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 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**

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