

## **Cadette: Special Agent**

Hey Girl Scout! A special agent wears many hats-detective, scientist, psychologist, enforcer of the law. No wonder novels and shows about their work are so popular! In this badge, grab your magnifying glass and your microscope, and uncover your skills in one of the most exciting- and demanding- jobs for investigative minds. When you complete this badge, you'll know secrets from the worlds of forensic science and criminal psychology.

### **Step 1. Investigate investigation**

1. It seems nearly every drama on TV is about criminology. Nancy Drew is as popular now as when her character came to life in 1930, and these days, you can spend your summer vacation at forensic science camp. Investigate your fingerprint like you see on TV or read in the books.
2. Take prints using an ink pad. Remember to roll your finger from one side to the other. Make sure to press the finger hard to get a good print, be careful not smudge. If you don't have ink, no problem! You can use the pencil method.
3. Use a pencil to color on a piece of paper. Roll your finger from one side to the other on the pencil marks, and then stick a piece of transparent tape on your finger. Then remove the tape and see your print!
4. Take a finger print of all five of your fingers! Once you have them on paper use a magnifying glass and try and identify patterns in your fingerprints!

Supplies:

1. Ink
2. Pencil
3. Paper
4. Clear tape
5. Magnifying glass

### **Step 2: Reveal Reality**

1. Its time to search out the myths and realities about forensics by making some impressions.
2. Take the play-dough and flatten it out to be a little bigger than a shoe.
3. Pick out a few different types and sizes of shoes. Make sure you ask permission before you use someone else' shoes.
4. Press down with the shoe firmly to make an imprint.
5. Once you have done several imprints take a good look and compare the different imprints. Try and match the imprints to the correct shoe.
  - o Don't have play dough, that's fine! Walk through mud, sand or gravel, compare the imprints and try and match the shoes just like you would do with the play dough!

Supplies:

1. Shoes
2. Playdough

### **Step 3: Try the Science**

1. From the biology of insects that can determine time of death to the precise physics that determine a bullet's trajectory, forensic experts need to know all types of science. Ballistics and Blood splatter analysis are examples of forensic physics. Blood splatter analysis is used to figure out the path or direction of a bullet or other impact. You will give forensic physics a try by doing splatter analysis on water balloons. Don't have water balloons handy at you house, that's no problem use zip lock bags instead.
2. Fill up several water balloons or zip lock bags and go outside, make sure you are on a surface that will be easy for you to see the splatter.
3. Start by dropping the water balloon or zip lock bag straight down from a height of about five feet. Observe the patterns created by the water splatter.
4. Then throw the water balloon/zip lock about 6 feet. Make observations.
5. Drop the water balloon/zip lock onto a step. Make observations.
6. Repeat all 3 steps but this time have the water balloon fall on an object like a hammer or screw driver.
7. After you have done several trials, make comparisons of your observations, would you be able to figure out where the "victim" was standing based on the water splatter patterns?

#### Supplies:

1. Water balloon or Zip lock
2. Hammer or Screw Driver
3. Notebook (for observations)

### **Step 4: Key in to Body Language**

1. Detectives often need to keep their feelings and ideas under wraps while they talk to a suspect. How do these expect keep their cool in an interrogation, and how do they read the body language of others? Go on the computer and do some research on body language then apply your new knowledge by reading the body language of magazine pictures.
2. Take it a step farther and practice reading the body language of your friends and family in fake interrogations. Teach them what you have learned and take turns ready each others body language.

#### Supplies:

1. Computer

### **Step 5: Practice the Art of Detection**

1. Having a career in forensics doesn't always involve chemistry, biology, math, or physics. Your artistic talents could translate into a career as a forensics photographer, artist, or sculptor. Its your turn to give being a forensic sketch artist a try.
2. Have a friend describe someone you have never seen or met.
3. Sketch the person based only on the description you are given.
4. Show your sketch to your friend and see how close they think you got to the person they were describing!

#### Supplies

1. Pencil
2. Paper