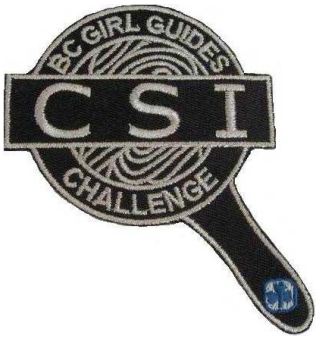
Girl Guides of Canada Guides du Canada
BRITISH COLUMBIA COUNCIL

FORENSIC FUN (CSI CHALLENGE)

AN INSTANT MEETING FOR GUIDES
FROM THE BC PROGRAM COMMITTEE

The CSI Challenge is designed to introduce forensic science to girls and Guiders. There are a wide variety of activities available in the CSI Challenge booklet, so if you want to change up an activity, please check it out for ideas. We have only selected a few for this meeting plan. If you think your girls would be interested in doing more forensic science, there are several activities in the booklet including the plan for an entire mystery to be solved (great for a sleepover or camp). Doing all the activities in this Instant Meeting will earn Guides the CSI Challenge crest.



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Meeting Plan

5-10 min:	Gathering: Super Sleuth Maze
5 min:	Guide Opening
5-10 min:	Opening Discussion
10-15 min:	Fingerprint Art Bookmark
20-30 min:	What's That? Round Robin Activities
5-10 min:	What's That Noise?
5-10 min:	What's That Smell?
5-10 min:	What's That Texture?
20 min:	Fingerprints
20 min:	Guest Speaker
5-10 min:	Forensic Science in Real Life
if time:	Girl-led Active Campfire/Sing-Song *or choose an additional forensic science activity from the CSI Challenge booklet.*
5 min:	Guide Closing

120 minute meeting. Approximate activity times shown.

Program Connections

Beyond You: Try New Things
4. Try experiments relating to STEM; 6. Complete an activity of your choice trying something new

Body Works Interest Badge
6. Take your own fingerprints and compare to others.

Discovering You: Discovering What's Important to You
4. Hold a Career Night - invite someone to speak at your meeting

Science Interest Badge
1. Explore three fields of science and find out what people do in those areas. (one or more field explored) 2. Investigate an area of science that has improved through technology.
6. Participate in a science program or event.

CSI Challenge

Meeting Supplies

- ❑ printed mazes
- ❑ pencils, crayons, markers
- ❑ cardstock
- ❑ yarn
- ❑ non-toxic ink pads
- ❑ hole punch
- ❑ a variety of common items that make noise or a recording of common sounds
- ❑ a variety of common items with a strong - but not harmful or potent - scent
- ❑ opaque cups
- ❑ cotton balls
- ❑ a variety of common items with distinct textures and/or shapes
- ❑ tea towels
- ❑ clean drinking glasses
- ❑ sifted cocoa
- ❑ small spoon
- ❑ transparent tape
- ❑ white paper
- ❑ magnifying glass

Gathering: Super Sleuth Maze

Directions

Download a variety of mazes from the internet: https://www.google.ca/search?q=printable+mazes or use the maze included in the CSI challenge booklet.

Supplies

- ❑ printed mazes
- ❑ pencils, crayons, markers

Opening Discussion

Explain to the girls that you'll be working on the CSI Challenge. Ask them for ideas about what they think forensic science is and how it might be used in a broad context. Television shows often depict forensic science as a way to investigate violent crimes, but use this opening discussion to help the girls understand that forensic science is used to investigate other crimes, as well - from theft and art forgery to accounting fraud and cyber-crime.

Fingerprint Art Bookmark

Print some examples of fingerprint art for reference:

https://www.google.ca/search?q=fingerprint+art&tbm=isch

Directions

1. Press your thumb or finger onto an ink pad and then on to the bookmark.
2. Use markers, crayons or pencil crayons to add details to your fingerprint artwork.
3. When the decoration is finished, use the yarn to create a tassel for the bookmark. Encourage the girls to make a CSI-themed bookmark with examples.

Supplies

- ❑ cardstock cut to bookmark size
- ❑ yarn for bookmark tail
- ❑ non-toxic ink pad (washable makes for easier clean up, but permanent is better if you would like to colour on top of the prints)
- ❑ markers, crayons or pencil crayons
- ❑ hole punch

What's That Noise?

Directions

1. With the girls' backs turned so they can't see what is making the noise, start up each of the noise-makers in turn and ask them to identify what is making the sound.
2. To increase the difficulty, look for items that sound similar but not identical (jingling keys vs. a chain).

Supplies

- ❑ a variety (10-15) of common items that make noise or a recording of common sounds (examples: telephone, mixer, bell, computer keyboard, stapler, party noise maker, crinkling plastic, keys)

What's That Smell?

Directions

1. Place one item in each cup and cover with cotton balls so you can't see the item.
2. Then, ask girls to try and identify the item in each cup using only their sense of smell.

Supplies

- ❑ a variety of common items with a strong - but not harmful or potent - scent (examples: vanilla, chocolate, black and red licorice, lemon, coffee)
- ❑ opaque cups
- ❑ cotton balls

What's That Texture?

Directions

1. Place one item under each tea towel, so that it is hidden from view, and ask the girls to try and identify what is under the tea towel.
2. Again, using similar but not identical items might make it more difficult for older girls.

Supplies

- ❑ a variety of common items with distinct textures and/or shapes (examples: sandpaper, small distinctively shaped toys, baking supplies, fabrics, tinfoil)
- ❑ tea towels

Fingerprints

Ahead of time, have one of your suspects (a Guider) press her fingers onto a glass, being careful not to smudge the fingerprints that are left. For better fingerprints, have the suspect touch her forehead before touching the glass.

Supplies

- ❑ ink pads
- ❑ clean drinking glasses
- ❑ sifted cocoa
- ❑ small spoon
- ❑ transparent tape—not the "magic" invisible kind
- ❑ white paper
- ❑ magnifying glass
- ❑ two or more "suspects"

Directions

1. Have everyone press their own fingers onto the ink pad and then onto a sheet of white paper, being careful not to smudge. Use the magnifying glasses to examine your fingerprints and identify which features you can see (arches, loops, whirls). Make sure all your suspects get their fingerprints taken as well.


Arch


Loop


Whirl

2. After everyone has taken their fingerprints, gather everyone around and demonstrate how to take fingerprints from a glass.
3. Carefully handle the glass by the rim, the base or the stem so that you do not smudge the fingerprints left by the suspect. Hold the glass up to the light to find where the fingerprints are.
4. Using the small spoon, sprinkle a small amount of cocoa over the fingerprints, making sure they are completely covered. Gently blow off the excess cocoa.
5. Press one end of the tape to the glass on one side of the fingerprint, then stretch the tape across the fingerprint and down onto it. Be careful not to drag the tape across the fingerprint or to press it down onto the fingerprint with your fingers.
6. Lift the tape off the glass and stick it to a sheet of white paper.
7. Ask each girl to compare the fingerprints from the glass to the sample prints provided by the suspects and see if they can guess who dirtied the glass.

Guest Speaker

Having a guest speaker or field trip is a requirement for Guides to complete the CSI Challenge. If you are unable to schedule someone to come speak at your CSI Challenge meeting then make sure and do this part of the challenge on at a later date.

Ideas for a Speaker

- Invite a local police officer to come in and talk to your group about local laws, law enforcement, street safety or cyber bullying.
- Ask your fire department to do a presentation on arson investigation.
- If your RCMP detachment has a forensics department; they may be able to speak about crime scene investigation and the tools they use.
- Have a lawyer or judge teach your group about the BC legal system and court procedures.

Forensic Science in Real Life: The Cold Case of the Iceman

Ötzi the Iceman was found in September of 1991 by a couple hiking in the Alps. They called the authorities thinking they had found a hiker or skier buried in an accident but forensics revealed that he was over 5000 years old! Initially, scientists thought he had perished from exposure to the elements but in June of 2001, forensic investigators found evidence that pointed to another cause of death – Murder!

Ask Guides and Pathfinders to research the story of Ötzi the Iceman and ask some of the following questions. Results can be discussed at the opening of your next meeting.

What role did forensic evidence play in the investigations?

What forensic science techniques did the investigators use?

Was there any controversy about any of the evidence?

Were there any questions about the case that couldn't be answered by forensic evidence?

Closing

To wrap up your meeting and the challenge, discuss what you've learned about forensics from the activities. How do you think forensics in real life compare to what we see on television? We only tried one forensic activity at this meeting – how else do forensic scientists discover the answers to their questions?

Do your usual closing.

