

# TD Summer Reading Club 2009

## ***AGENT 009***

**Program for Ages 9 to 12**



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**TD Summer Reading Club 2009**  
**Agent 009**  
**Staff Manual**

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## 11. Program for Ages 9 to 12

### The Power of Disguise in Two Parts

(Target Audience: Ages 9–12)

This program can be done over two weeks or you can choose the activities you like for one program.

#### PART 1

Detectives should be experts in the art of disguise. Sometimes they have to disguise themselves in order to go undercover. Other times, they have to be very observant in order to see through the disguises that other people use to hide in plain sight. As a kid, you can't disguise yourself as an adult, but you can use a variety of methods to change your appearance.

#### Types Of Disguises and How To Use Them

##### Materials:

- Prepare a box with potential disguises to show the children and to let them try on. These may include hats, scarves, sunglasses, a pebble to put in a shoe and fake a limp, padding to make you look fatter, bigger shoes, cotton balls to put inside your cheeks to make them look fuller, different shirts, etc.
- Prepare another box with some unlikely disguises such as an eye patch, funny hat, fake eyeglasses, weird wig, fake nose, etc.

Ask children for some examples of disguises. Show children some of your examples and ask for several volunteers to try out various disguises. However, it is important not to choose something too unusual. The best disguises are ones that blend in. You don't want to look strange, as this will help people to remember what you look like! You can also show the children some examples of disguises that are too obvious.

#### Creating Your Own Legend

##### Materials:

- Pencils
- Paper
- Large sheet of paper to write down discussion questions

##### Instructions:

Give each child a pencil and piece of paper. Ask them to pair up with another child and discuss the type of disguise they would use to go undercover. They can discuss the answers to the following questions (which you have already written out on a large sheet of paper):

- How can I disguise myself?  
(My hair style, my eye colour, my style, my clothes, my posture, my size, my past, my way of speaking or my accent, my hobby or interests.)
- Create a new life story for yourself. What will it be like?

Children can write down their disguise/new life story. Pick several volunteers to come to the front and show the group how they would change their appearance.

Disguises are a way of changing our own appearance. Criminals will use disguises to cover up their features. They want people to remember the disguise, not their appearance. For example, if robbers use a bandana over their face, it disguises the nose, lips, cheeks and chin. If criminals use a hat, it covers their hair and ears, and sometimes eyes (if the hat is pulled down low). That is why it is so important for detectives to practise observation skills!

### **Practising Observation Skills**

Give children a chance to practise their observation skills. Here are several ways to do this. Choose one or both activities to sharpen skills.

#### **1) Stare Down**

##### **Materials:**

- Large piece of paper and a thick marker
- One adult volunteer

##### **Instructions:**

Ask for a staff member or parent volunteer to stand before the children for 30 seconds. After the person leaves the room, ask the children to call out descriptions and help them create an identity chart. Write answers down on a large piece of paper. Ask them for the following details: height, size, hair colour, eye colour, clothes worn, approximate age, any special identifying characteristics like tattoos, etc. After all the answers have been written down, ask the volunteer to return to the room. Ask the children, “How much did you remember?” “Were you accurate?” “What did you miss or forget?”

#### **2) Is It All Here?**

##### **Materials:**

- One large tray
- 15–20 different items to put on tray. Some examples could be toothbrush, spoon, ball, pen, etc.
- Tea towel or cover to put on top of tray

##### **Instructions:**

Prepare a large tray with a variety of items on it (15–20 different things). Pass it around and give children 20 seconds to remember all the items on the tray. Then take it away and put a cover on it. Ask what was on the tray.

Alternatively, take it away, remove a few things and then show the children again, asking them what has been removed.

### **3) Creating Wanted Posters**

In the past and even today, some crime-fighting departments use wanted posters. These posters are sometimes photographs, but can also be pictures drawn by artists with details given to them by witnesses with good memories.

#### **Materials:**

- Markers, crayons or pencil crayons
- Large white sheets of paper
- Pack of index cards
- White glue
- Cut out pictures of people from discarded magazines. Glue them onto the index cards (one picture per card). Prepare as many index cards as the number of children you expect for the program.

#### **Instructions:**

Divide the children into two groups.

Each child in the first group will be given a photograph of a person (clipped from a discarded magazine and glued to an index card).

Each child in the second group will be given a piece of paper and some crayons or markers. Have each child with a photograph find a partner who will draw the wanted poster. The child with the photograph will not show it to the other person, but will describe it to them. The artist's poster will be more accurate if the person with the photograph gives plenty of details (colour of hair, length of hair, eye shape and colour, shape of face, lips, type and colour of skin, shape of body—thin, fat, short, tall, muscular—clothes worn, glasses, tattoos, etc.).

After each pair has created a wanted poster, choose several to show the group and compare the poster to the photograph. Ask for feedback from the children. Did the artist miss some details?

## **PART 2**

### **The Clues We Leave Behind and How to Read Them!**

Begin the program by giving the children an opportunity to warm up and practise their observation skills.

#### **Simon Says Game**

##### **Instructions:**

The leader begins the game by giving one direction at a time and asking the children to follow the direction. For example, "Simon says touch your toes" (all the children should touch their toes). "Simon says rub your tummy and stick out your tongue" (all children follow directions). However, if the leader says, "Clap your hands" (without saying "Simon says" first), the children should not follow the directions. If a child obeys any direction without first hearing "Simon says," that child should sit down (and is now out). As the children catch on to this game, speed up the commands. Change leaders after every three to five commands.

#### **Fingerprint Profiles**

Each fingerprint is unique, but there are four distinct patterns that can be identified. These are the arch, loop, whorl and composite.

##### **Materials:**

- Pre-made posters showing examples of four different fingerprint types. See Wikipedia for pictures of four main types (arch, loop, whorl and tented arch)
- White paper
- Coloured paper
- Pencils
- Scissors
- White glue
- Pieces of paper towel
- Stamp pads

##### **Instructions:**

Children can learn to identify the different patterns in fingerprints by taking their own fingerprints.

Give each child one piece of white paper (8 ½" x 11"), one piece of coloured paper (8 ½" x 11") which can be folded and cut in half, a pencil, scissors, glue and a piece of paper towel. Place several stamp pads around the room for the children to use.

Children use a pencil to trace one of their hands onto the coloured paper. Then they trace their other hand on a second piece of coloured paper, and cut both handprints out with scissors.

Paste both handprints side by side onto the white paper. Leave enough room at the top of the white sheet to put your fingerprints. Then, press all five fingertips into the stamp pad and press them onto the white paper above the matching finger on the correct hand. Wipe off your fingers with paper towel. Repeat with your other hand. You will have a complete fingerprint set for yourself. Don't forget to write your name on your sheet. Compare your fingerprints with your friend and see if you can identify one of the four patterns in your fingerprints.

Congratulations, you are now a junior dactylographer (fingerprint specialist)!

## **Footprints**

Footprints can reveal many things. They can often tell you if the suspect is a woman, man or child. The suspect may have big feet or little feet, wear boots or high heels, be slim or heavy, or be tall or short (this is indicated by the space between each footprint).

### **Materials:**

- A variety of footprint patterns cut out of construction paper
- Construction paper
- Pencils

### **Instructions:**

Prepare some examples of footprints ahead of time and have the children guess what they reveal. Ask them to look at each other's footwear and tell the group if they see anything unusual that can be used as a clue. Some examples might include big treads, smooth bottoms on the sole, extra large feet, etc. Children can take turns tracing each other's footprints.

## **Teeth Marks**

Teeth prints or teeth marks can reveal things too! You might be able to tell if someone is bucktoothed, wears braces, has crowded teeth, is missing teeth, etc. And if you are a dentist, you can identify people by their dental records. Most people have gone to the dentist at one time or another and have had fillings put in. These can be used to identify them!

### **Materials:**

- Styrofoam plates

### **Instructions:**

Children can create and compare teeth prints. Divide children into small groups and give each child a piece of Styrofoam (cut Styrofoam plates into quarters). Each child bites into (but not through) the largest area on the Styrofoam to create an impression. Then they can compare with friends and see if they can identify differences.

## Lip Prints

It's not just your fingerprints that are unique. The ridges on your lips are too. Similar to how people can be identified by their fingerprints, they can also be identified by their lip prints. You might have noticed lipstick marks left on drinking glasses and cups. Lipstick, too, can be analysed and compared to a suspect's lipstick. (The study of lip prints is called cheiloscopy.)

Try this activity to see how lip prints might be used as evidence.

### Materials:

- Lipstick (darker lipstick is better)
- Q-tips to apply clean lipstick (one for each child)
- White paper

### Instructions:

Each child uses a Q-tip to put lipstick on both lips, rubbing them together. They fold the white paper in half, place it between their lips and press, being careful not to smudge. The children then write their name on the paper.

Examine the lip print. Can little lines, wrinkles and ridges be seen? What makes each lip print unique?

If the size of the group and the time allow, children could make a second set of lip prints. On this set, the children write their name on the back of the print. Mix up this set and have the children compare this set of prints to the first set to determine whose lip prints are whose.

## Hair Types

Everyone has a different hair type. That is why it is so important in helping to identify people. Ask children for some different examples of hair types.

Hair can be different colours and different textures (fine or thick), curly, straight, wavy, thinning, short or long, etc. Of course, a person could also be bald! As well, an adult can have facial hair like a beard or moustache, and could also have lots of body hair (hairy chest or arms).

Hair can also reveal many things about the inside of a person. If you analyse a strand of hair, you can find out if a person takes drugs, has an overload of heavy metal in the body, or is missing essential vitamins and nutrients.

### Materials:

- Paper to create one chart per group
- Pencils

Divide children into smaller groups of 8–10 if necessary, and have them chart each other's hair type.

Leaders prepare ahead of time one chart per group that includes the different options that can be filled in for each child. Examples include: First Name, Gender, Length of Hair, Wavy/Straight/Curly, Colour, Hair Accessories, Other.

After the charts have been filled in, ask the children for their input about the patterns they see in their own group. Why do people have different types of hair? (Genetics, hair processing, hair styling)

Do girls and boys have different types of hair? (The hair type is the same, but the style is usually different due to gender preferences.) Do people from different ethnic groups have different types of hair? (Yes!) What are the different ways people can change their hair? (Wigs, extensions, haircutting and styling, hair dyes.) What are some ways you shouldn't try to disguise your hairdo? (Dye it a bright colour, razor cut designs in your hair, etc.) These disguises are just too easy to remember!

For more ideas, see "Program Three: Detective Disguises" on page 24 of the "Week by Week Theme/Program Guide."

This website also has good ideas:

<http://www.cyberbee.com/whodunnit/crime.html>

## **Solve the Mystery**

(Target Audience: Ages 9–12)

Sometimes looking for clues can be like searching for a needle in a haystack (or in this case, a paper clip in a rice bowl).

### **Paper Clips In A Rice Bowl Game**

#### **Materials:**

- Several large bowls
- Enough uncooked rice to fill the bowls\*
- Several packages of paper clips\*
- One large piece of paper to chart the results of each person on each team
- One thick marker

#### **Instructions:**

1. This game can be played by individuals in a small group (8–10) or, if you have a large group, divide it into several smaller groups who compete against each other.
2. Leaders should prepare ahead of time several large bowls filled with uncooked rice.
3. Empty a package of paper clips into each bowl of uncooked rice and stir them in well.
4. Prepare a bowl for every group playing the game.
5. The object of the game is to find as many paper clips as possible within 10 seconds.
6. The bowl is given to the first person in the group.
7. The leader calls “Go” and counts down the 10 seconds out loud. At the end of the allotted time, the leader calls “Stop” and asks for a count of the paper clips found.
8. The number of paper clips found by each individual on each team is recorded.
9. Then the paper clips are mixed back into the rice and the bowl is passed to the second person on the team.
10. This continues until all individuals have had a chance to find the paper clips.

When all the children have finished the game, the winner is the person who found the most paper clips in 10 seconds. If you have several groups competing against each other, tally up the totals for each team, and the team with the most paper clips found wins the game.

\*If you don't have paper clips and rice, you can play this game with toothpicks and spaghetti broken into pieces that are the approximate size of the toothpicks.

## Scavenger Hunt & Decoding Messages

### Instructions:

1. Create the eight clues that will be hidden throughout the library. They can be hand-drawn or photocopied from clip art. Make sure the clues are large (15 to 20 cm, or 6 to 8 inches). The eight clues are:
  - Footprints
  - Flashlight
  - Mask
  - Carryall bag
  - Fingerprint
  - Hat
  - Fake nose and glasses
  - Jewellery
2. Hide the clues throughout library as explained in the Instructions for Detectives below. Use the hiding places given or modify them (and the instructions) as needed.
3. Make as many photocopies as needed of the instructions for detectives (larger groups can be subdivided into groups of four or five to look for each clue together). Children can look for all the clues together or be assigned one each.
4. Make as many photocopies as needed of the secret message to be decoded.
5. Create a large poster with the alphabet written out horizontally, e.g. ABCDEF... This will help your detectives solve the encoded message.
6. The clue to decoding the message is to shift each letter of the code back 3 letters, e.g. "O" in the coded message equals "L" in the decoded message. The answer to the coded message is "Library staff area under kitchen sink jewellery."
7. Staff can then show the eighth and final clue (photocopied picture of jewellery clip art.)

### Instructions for Detectives:

A thief entered the library at night looking for an expensive item hidden by his accomplice. The accomplice left him a coded message, but the thief had to look in seven different places before he found the message! The thief accidentally left clues behind in each place.

Your first goal for this scavenger hunt is to find all seven clues listed on this sheet using the directions provided. **DO NOT REMOVE THE CLUES. Removing or touching the clues means you are tampering with the evidence!** Simply write down the facts about the clues you find. When you have found the answer for each question, come back together as a group to solve a coded message.

1. The clue that was left in the teen fiction section shows us that the thief accidentally walked through the bushes before entering the library.  
What did you find? \_\_\_\_\_ Where did you find it? \_\_\_\_\_
2. The thief used this clue to peer in dark corners, but he lost it in the adult mystery section.  
What did you find? \_\_\_\_\_ Where did you find it? \_\_\_\_\_  
\_\_\_\_\_
3. The thief lost part of his disguise when he tripped on the bench near the children's computers.  
What did you find? \_\_\_\_\_ Where did you find it? \_\_\_\_\_
4. The thief was going to use this to carry his stolen goods but lost it under one of the tables.  
What item did you find? \_\_\_\_\_ Where did you find it?  
\_\_\_\_\_
5. The thief left this clue behind when he decided to take a break and play checkers.  
What did you find? \_\_\_\_\_ Where did you find it?  
\_\_\_\_\_
6. The thief nearly lost his head when he saw two lions in the library. Before he realized it was only a poster, he was so scared he left a clue behind.  
What did you find? \_\_\_\_\_ Where did you find it?  
\_\_\_\_\_
7. I don't know how it got there, but the photocopier is wearing a part of the thief's disguise.  
What is it? \_\_\_\_\_ Where did you find it? \_\_\_\_\_

Finally, the thief has found the coded message! He has to sit down and figure out what it says before he can find the treasure.

**To find out what the goods are and where they were hidden in the library, come back to the group and decode the secret message.**

O L E U D U B    V W D I I

D U H D    X Q G H U

N L W F K H Q    V L Q N

M H Z H O U B

## Villain School (Bad Guys Are People Too)

(Target Audience: Ages 9–12)

**Contest:** How many coins in the jar? (Guessing game)  
Use foil-wrapped chocolate or some other substitute

### **Introduction: Welcome to Villain School**

Please note that if you wish to have more intensive training, or if you wish to branch out into other areas of nastiness, you should try to find a Perilous Pirate School or an Evil Wizard & Sorceress Academy!

**Tongue Twisters:** One wise whistling wizard.  
Six sharp sleepy sharks.  
Seven short striped snakes.  
*(oops, that's just my shopping list!)*  
Daring detectives devour delicious doughnuts.  
Thieves seize skis.  
Picky pirates pick panicky parrots.  
Very vivacious villainous villains vanquish varmints.  
Suspicious spies seize pies.  
Seven sleepy sleuths slurp slushies.  
Many mix-ups make mysteries.  
Clever clues conquer crimes.  
Droopy detectives don disguises.  
Sleuths sail slowly south.  
Sly spies soar high.

### **Evil Laugh Practice!!!**

**Poem/Chant:** "Great Green Gobs of Greasy, Grimy Gopher Guts" (from the Internet)

**Demonstration:** Make water bubble up at your command

### **INGREDIENTS:**

- Clear glass (not coloured)
- White vinegar
- Food colouring (any colour is fine, but red is recommended)
- 15 mL (1 tablespoon) baking soda
- Flat plate or tray

Announce that you can create a villain's drink from plain water.  
Present the glass half filled with vinegar and pretend it is water.  
Place it on a big tray or plate in case it overflows.

Add food colouring to the glass—red will be dramatic—then, with a flourish, add the secret ingredient (the baking soda) to the vinegar. Tell your audience that it is something appropriately villainous. Snow stolen from the highest Himalayan mountains, for instance.

An evil laugh will also help set the mood.

The mixture will foam.

Challenge someone else to do this but give the volunteer real water instead.

**Game:** Villain & Hero Match-Up Game (see p.148)

**Craft(s):** Hero Sandwiches

“What better way to vanquish your nemesis than eating him for lunch?”

1. Use foam for the bread and cardboard for the fillings. Add an extra serving of your imagination!
2. Encourage kids to make the grossest combinations possible!!
3. Colour the foam with pencil crayons, not markers.

### **The Villain’s Revenge: A Participation Story**

#### **Instructions:**

Each character in the story has a corresponding word or phrase.

On a flipchart, list each character with his or her corresponding word or phrase.

Example: Villain’s Revenge

Hero(es) – “BOO!”

Pirate(s) – “Yo Ho Ho!”

Giant(s) – “Fee Fi Fo Fum”

Witch(es) – “Whoosh” (sound of flying)

Wicked Queen(s) – “Off with her head”

Evil Wizard(s) – “Poof” (magic spell sounds)

Bear(s) – “Growl”

Break the kids into groups—a couple of methods are suggested below.

You can write the name of each character and the corresponding word or phrase on a piece of paper, then cut the names and words into strips, and hand them to each participant so that the characters are evenly distributed. This can take some time, so you might want to use one of the following methods to break the kids into groups.

- Break the kids into the same number of groups as there are characters. Assign each group a character.

Or

- If you have a small group, have all the kids play all the parts.

Practise the phrases with the kids. Explain that, as you read the story, every time one of the characters is mentioned, the group who has been assigned that character calls out the corresponding word or phrase.

If you feel more practice is required, you can do a warm-up with them by randomly calling out the different characters and getting them to respond with the corresponding word or phrase.

Read the story. Encourage each group to shout out the word or phrase enthusiastically. (Depending on numbers, you may not need, or want, to do this)

Hero(es) – “BOO!”

Pirate(s) – “Yo ho ho!”

Giant(s) – “Fee Fi Fo Fum”

Witch(es) – “Whoosh” (sound of flying)

Wicked Queen(s) – “Off with her head!”

Evil Wizard(s) – “Poof” (magic spell sounds)

Bear(s) – “Growl”

Anyone who wants to be a hero (*BOO!*) is just a big zero,  
'Cause a pirate (*Yo ho ho!*) is oh so much better!  
And so is a giant (*Fee Fi Fo Fum!*), if you just try it  
Though pirates (*Yo ho ho!*) get considerably wetter!

Giants (*Fee Fi Fo Fum!*) are cool and they don't go to school  
They're just scary because of their size.  
With their thumb they can squish you as flat as a tissue  
And from that it's real hard to rise!

A witch (*Whoosh*) on a broomstick can fly around real quick  
But flying heroes (*BOO!*) are really quite lame,  
'Cause they got to wear tights that don't fit 'em quite right  
And they leave them in terrible pain!

Wicked queens (*Off with her head!*) are still royal and they make a great foil  
To princesses who think they're sooo great.  
They can poison some fruit, which (*Woosh*) make girls go mute  
They fall asleep 'cause of something they ate.

Evil wizards (*Poof!*) cast spells using a potion that smells  
Like a bear (*Growl*) who lives deep in the wood.  
They'll turn you into a newt, that isn't so cute

Or make you disappear from where you just stood!

And a bear (*Growl*) for a creature can also be a teacher  
To those who want to be evil.

A giant (*Fe Fi Fo Fum!*) animal villain, whose doin' some illin'  
Chasing bunnies, or squirrels, or a weevil.

Yeah, a hero's (*BOO!*) just a dummy, who wouldn't do anything funny  
Like pirate (*Yo ho ho!*) a new song or movie.  
Hero's (*BOO!*) never go bare (*Growl*) though some wear underwear  
But they shout things like "Shazam!" and "Groovy!"

So I'm asking you why, you'd be a girl or guy  
Who doesn't seem to have any fun?  
Why be a hero (*BOO!*) that no one can fear-oh  
The villain is still #1!

## **Make A Story**

(Target Audience: Ages 9–12)

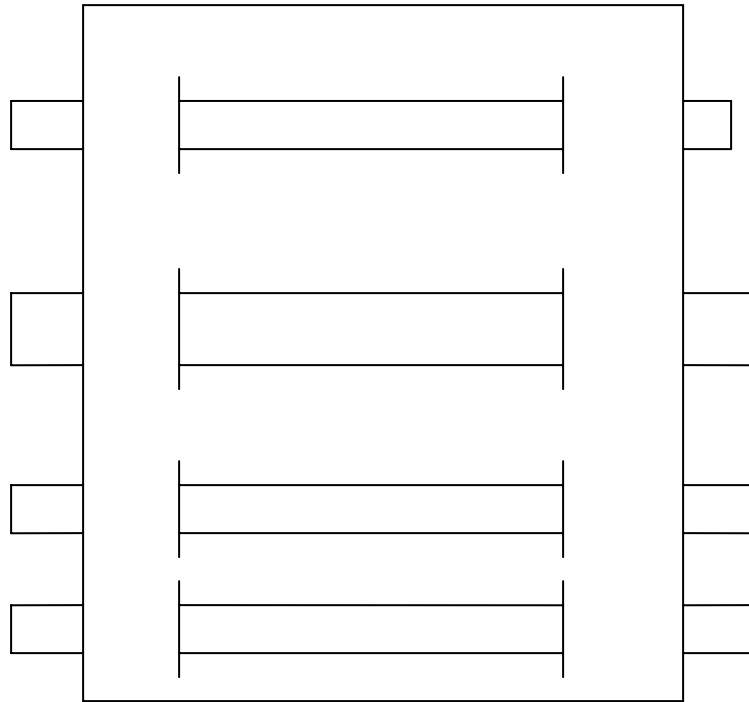
Encourage the kids to use their imagination to create their own mystery stories. The activity can be adapted to accommodate different numbers of participants. If numbers are large, break into groups or work in pairs.

### **Instructions:**

1. Have each child, pair or group choose approximately three characters, two settings, three objects and one plot. This can be done by writing the story elements onto plain or colour-coded paper (e.g. green for characters, blue for settings, yellow for objects, white for plot) and then cutting the paper into strips.
2. Put the strips into separate containers and have the kids pick from each. Alternatively, simply give each child, pair or group the information.
3. Give out pencils and paper. The kids create their own stories using the chosen information.

### **Alternatively:**

1. Cut four sets of slits into a piece of construction paper – one piece for each child.
2. Give each child a strip of blank white paper that will go through the slits.
3. Have the kids write the names of characters on one strip, leaving space between the names so that only one name will be visible at a time.
4. Repeat with the settings, objects and plots.
5. Thread the pieces of paper through the slits and have the kids pull the papers through the slits to create different scenarios for stories.



The finished stories can then be read out loud.

Examples of possible story time elements:

## **CHARACTERS**

Ace Lacewing  
Detective LaRue  
Alex Rider  
Amber Brown  
Amelia Bedelia  
Anne Shirley (Anne of Green Gables)  
Artemis Fowl  
Bunnicula  
Bad Bears  
Cam Jansen  
Captain Underpants  
Chet Gecko  
Encyclopedia Brown  
Frank and Joe Hardy  
Geronimo Stilton  
Harriet the Spy  
Jake Gander  
Jigsaw Jones

Jillian Jiggs  
Judy Moody  
Junie B. Jones  
Katy Kazoo  
Madeline  
Marvin Redpost  
Melvin Beederman  
Nancy Drew  
Nate the Great  
Sammy Keyes  
Scooby-Doo  
Sherlock Holmes  
Waldo

## **OBJECTS**

Candlestick  
Crystal Goblet  
Delicious Pie  
Diamond Necklace  
Doll  
Egg Sandwich  
Flowers  
Gold Coins  
Hidden Map  
Hollow Tree  
Ice Skates  
Jade Mask  
Magic Wand  
Music Box  
Old Key  
Opal Necklace  
Patchwork Quilt  
Priceless Picture  
Rare Book  
Ruby Bracelet  
Silver Locket  
Statue  
Umbrella  
Violin

## **SETTINGS**

Abandoned Factory  
Your Library (*insert name*)

Art Gallery of Ontario  
Local, Well-known Store  
Chocolate Factory  
Emerald City  
Fowl Manor  
Green Gables  
Haven City  
Hogwarts  
Holiday Inn  
Parliament Hill  
Larkspur Lane  
Old School  
Playground  
Red Gate Farm  
Redwall Abbey  
Local Museum/Art Gallery, etc.  
Skating Rink  
Soccer Field  
Swimming Pool  
Head-Smashed-In Buffalo Jump  
Zoo

## **PLOTS**

Aliens  
Buried Treasure  
Disappearing Ships  
Counterfeit Money  
A Ghost in a Tower  
A Hidden Map  
Kidnapped Wizard  
Lost At Sea  
A Lost Twin  
A Missing Will  
Poisoned Chocolates  
Polluted Water  
A Secret Staircase  
Smugglers  
Stolen Diamonds  
A Stolen Painting

## **Invisible Messages**

(Target Audience: Ages 9–12)

### **Introduction:**

Invisible messages are a great way for detectives to prevent anyone, especially enemy agents, from finding out about their investigations. Discuss when you could use invisible messages as a detective and the importance of secret messages. There are three different ways to do essentially the same thing.

### **Under Colour Message**

#### **Materials:**

- White, unlined paper
- White crayon
- Food colouring mixed with water
- Q-tips

#### **Instructions:**

1. Using a white crayon, carefully write a message on the paper.
2. To reveal the message, mix a bit of food colouring in water, then dip a Q-tip into the food colouring and spread it across the paper.

### **Lemon Juice Message**

#### **Materials:**

- 65 mL ( $\frac{1}{4}$  cup) lemon juice (try this first, then use orange juice and/or vinegar)
- Small plastic containers such as yogurt or clear egg cartons cut into small sections
- Cotton swabs or paintbrushes
- White paper
- Lamp with light bulb

#### **Instructions:**

1. Put lemon juice in the small containers.
2. Dip the cotton swab into the lemon juice and write a message such as “secret meeting this afternoon at 4:00 p.m.” on the sheet of white paper.
3. Allow the message to dry and you should not be able to see it.
4. When it is dry, remove the lampshade from the lamp and turn it on.
5. Hold the message close to the light bulb. Can you read the message?
6. Compare this result with the result you get from orange juice and vinegar.

#### **Explanation:**

This will be a good opportunity for participants to learn about the chemical components of detective work.

Heat from the bulb turns the lemon juice brown, and the hidden message appears. Many juices and other liquids such as milk and soda pop contain carbon atoms to form carbon-containing molecules and they have almost no colour when dissolved in liquid. Heat causes a chemical reaction to occur and produces carbon, which is black or brown in colour. Consequently, the lemon juice turns brown when heated.

## **Grape Juice Messages**

### **Materials:**

- Paintbrushes
- Grape juice and small paper cups
- Paper and baking soda for leaders

### **Instructions:**

1. Prepare five secret messages ahead of time. Use 125 mL ( $\frac{1}{2}$  cup) baking soda and mix it into the same amount of water. Use a paintbrush to print out these simple messages on plain white paper. Let dry.
2. Children will be given a small paper cup of grape juice and a small brush or swab to paint over the paper. This will reveal the secret!

## Gadgets

(Target Audience: Ages 9–12)

All good spies need gadgets!

Conduct this program as an arts and crafts session or scientific demonstration, and help your budding sleuths prepare for their first case out of spy school by filling up their spy kit.

### Materials:

- Manila envelopes
- Pencils
- Rubber or latex gloves
- Sandwich bags

### Instructions:

1. At the beginning of the program, play the theme music from *Inspector Gadget* if you can get it.
2. Give each child a manila envelope marked “SPY KIT.” In each envelope, provide a sharpened pencil (for note-taking), a rubber or latex glove (for picking up evidence) and a few sandwich bags (for collecting evidence).

### Decoder Watch

No one will suspect that there is a secret code hidden in this watch!

### Material:

- Ribbon
- Matchboxes
- Construction paper
- White paper
- Velcro
- Glue
- Markers
- Pencils

### Instructions:

1. Cut the ribbon to fit your wrist.
2. Cover the matchbox using glue and coloured construction paper. Make sure it will still open.
3. Cut a piece of the white paper to fit inside the matchbox.
4. Write out the Caesar’s letter code from “Cracking Codes Part II” (pg. 111) on the paper, and glue it inside the matchbox.
5. Glue the middle of the ribbon to the back of the matchbox.
6. Attach Velcro to each ribbon end.
7. Draw a watch face on the top of the matchbox cover.

### How To Use It:

- a) Attach the decoder watch around your wrist.
- b) Slide open the matchbox to reveal the secret code.

### Periscope

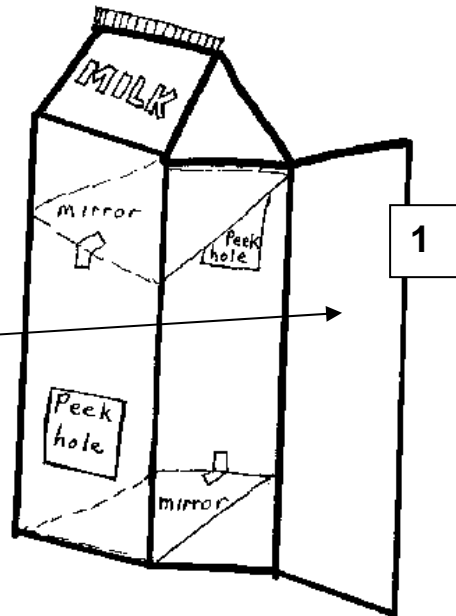
Try this periscope activity and turn an empty milk or juice carton into a spy tool for looking around corners, over walls and out windows.

#### Materials:

- Empty milk or juice cartons
- Scissors
- Masking tape
- Two small mirrors for each carton, about 5 cm x 7.5 cm (2 x 3 inches)

#### Instructions:

1. Referring to the diagram on the right, cut the side of the carton (at 1).
2. Cut 2 peek holes.
3. Tape 2 mirrors facing each other, at an angle.
4. Tape the flap back (at 1), so the periscope is closed.



### How To Use It:

- a) Hold the periscope upright and look into the hole at the bottom. You'll see what's caught in the reflection from the top hole.

### Magnifying Glass

Spies often use magnifying glasses in their work. They may need to view secret messages written in very small print. But what happens if you've misplaced your trusty magnifying glass and need to read a tiny message? Try this!

#### Materials:

- A 10-cm (4-inch) square piece of waxed paper
- Sheet of newspaper with small print
- Drinking glass
- Tap water
- Eyedropper

#### Instructions:

1. Place the square of waxed paper on top of the newspaper. Observe the newspaper through the waxed paper.
2. Fill the glass half full with water.
3. Use the eyedropper to place a tiny drop of water on the waxed paper.

**How To Use It:**

- a) Observe the newspaper through the drop of water.
- b) The drop of water forms a rounded shape on the waxed paper, due to the surface tension of the water. Surface tension is the force of attraction between water particles that creates a thin skin on the surface of the water. This rounded shape of the water drop is the same shape as a convex lens, which is a lens that is curved like the outside of a ball. When light from an object passes through a convex lens, the image of the object is magnified.

The smaller the drop of water, the more curved its shape and the more it magnifies an image. The larger the drop of water, the less curved it is and the less it magnifies, because the weight of a larger drop of water causes it to flatten out and lose its curve. With a larger drop of water, you can see more letters but they are less magnified.

## Family History/Identity Detectives

(Target Audience: Ages 9–12)

Warm up your investigative skills with this game!

### Who Am I Game?

#### Materials:

- A pack of index cards
- Marker

#### Instructions:

1. Leaders prepare index cards (at least one per child expected). Print a name on each card. Make sure that each name is one which children will recognize. Examples of names that can be used include fairy tale characters (Cinderella, Rumpelstiltskin), comic characters (Bart Simpson, Garfield, Spongebob, Archie), superheroes (Spiderman, Batman, Incredible Hulk), book characters (Harry Potter, Geronimo Stilton, Captain Underpants, Curious George), movie characters (Scooby-Doo, Mulan, Mary Poppins, Mickey Mouse), etc.
2. Divide children into pairs. They will work together.
3. Give one child in each pair a card with a name on it. This name should be hidden from the child who does not have a card.
4. The object of the game is for the child without a card to guess what name is on the card by asking yes or no questions. Examples of types of questions to ask include: Am I an animal? Am I a cartoon character? Am I in a movie?
5. Children ask as many questions as they can to figure out the name. Once the identity is guessed, both children in the pair put their hands in their laps. See how fast everyone can solve the puzzle and do this. The object of the game is to not be the last pair left with an unsolved identity.

In this game, you get to learn more about your friends and they get to know more about you!

### Have You Ever? Game

(Great for larger groups)

#### Instructions:

1. The leader prepares 20 or more questions to be asked in this game. Some examples of questions that could be asked include:  
Have you ever flown in an airplane?  
Have you ever ridden on a horse?  
Have you every sung karaoke?  
Have you ever had a pet turtle?

Create a variety of questions which most of your children could answer in a positive manner.

2. All children stand up and gather in a large circle. The leader calls out a question and any children who have done what the leader calls out should run to the middle of the circle, jump up and down twice, and give a high five to everyone else in the centre. Then they all run back to the outside of the circle.
3. The leader calls out the next question.

This next game is great for burning off energy! It also helps you find your place in an imaginary family!

### **Find Your Family Game**

(Great for larger groups)

#### **Materials:**

- Index cards
- Thick marker

#### **Instructions:**

1. Before the game, leaders prepare card sets (five in each set) for different family names. For example, one set would be for the Family Smith (Dad Smith, Mom Smith, Older Brother Smith, Younger Daughter Smith, Baby Smith). Other sets of five could be for the Family Jones (Dad Jones, Mom Jones, Older Brother Jones, Younger Daughter Jones, Baby Jones), Family Nathan, Family Lee, etc.
2. Prepare one set (five cards) for every five children who will play the game. If you expect 30 children, prepare six sets with six different family names.

Before the game begins, hand out a card to each child.

**Game Rules:** The leader begins by playing a CD of some lively music (or if you don't have a CD player, bang a drum or clap your hands). While the sound continues, each child passes off his/her card to another child, who hands it to another child and then another. Each child tries to hand around each card he/she receives to another person as quickly as possible. After two or three minutes, the music/drum beat/clapping hands ends and all card exchanges between children must stop. Hopefully, the cards are now totally mixed up and no one knows who each child is supposed to be. Now, each child looks at his/her card, sees the family name and must try to find all other members of the family as quickly as possible. This will involve asking each child if they belong to your family (Family Smith, Family Jones, etc.). As soon as all five family members find each other, they must sit down in order of seniority—Mom/Dad, Dad/Mom, Older Brother, Younger Daughter, Baby). The object of the game is to find your family and sit down as quickly as possible.

## **Create Your Own Family Masterpiece Project**

### **Materials:**

- Large sheets of construction paper
- Markers/crayons/pencil crayons
- Scissors
- Old magazines

### **Instructions:**

1. Give each child a large piece of construction paper that has been folded into nine equal pieces.
2. Using markers, crayons or pictures cut out of old magazines, children create a collage/poster of their life.
3. Each of the nine squares may be filled up with pictures/collages of the following:

<b>Your home</b>	<b>Your room</b>	<b>Your school</b>
<b>Your family members</b>	<b>Your favourite object in your house</b>	<b>Your teacher (last year)</b>
<b>Your friends</b>	<b>Your favourite sport/ subject in school</b>	<b>Your name, age &amp; self- portrait</b>

A good book to help the children do more with their family history is:

*The Family Tree Detective: Cracking the Case of Your Family's Story* by Ann Douglas

## **Dramatic Detectives**

(Target Audience: Ages 9–12)

These drama activities can form a whole program, or you can pick and choose single activities to be used as short time fillers in a larger program.

### **Drama Game #1: The Action Detective**

**Instructions:** Have the children sit in a circle on the floor. One child is selected to be the “Action Detective.” The detective will either close his/her eyes, or leave the room for a minute while an “Action Leader” is chosen from the group. Explain to the children that the Action Leader will lead the others in the circle in various actions (e.g. clapping, snapping their fingers, head nodding). The Action Leader must be quick and subtle about changing the action, and the others in the group must be quick to follow the leader! Explain to the children that they should try not to stare at the leader so that they don’t make it too obvious who the leader is.

The Action Detective will come in, observe the actions and try to guess who the Action Leader is. If the detective is correct, the Action Leader becomes the next Action Detective.

### **Drama Game #2: Hmm... Something’s Different!**

**Instructions:** Divide the children into smaller groups. Give each group a scene written on a strip of paper, and tell them to create a tableau about it (e.g. waiting for a bus, playing in the playground). Explain to the children that tableaux are silent, frozen scenes like in a photograph. They must stay as still as possible!

Each group will prepare two tableaux for the other groups to watch. The two tableaux will be almost identical but with very subtle, slight changes. The others will have to use their great skills of observation, skills that all good detectives need, to observe what is different in the two “photographs” or tableaux.

Give the groups ample time to plan their tableaux. Each group will have a chance to perform. At the start of the tableau, one group member announces the scene, e.g. “after school at the park.” The group then freezes in their photograph position and stays frozen while the other groups jot down what they observe. After a few minutes, either ask the other groups to close their eyes, or turn off the lights while the performing group changes the scene just a tiny bit. Turn on the lights (or have the others open their eyes) and now ask the audience groups to observe and jot down what is different. Have the children share with the others what they observed.

### **Drama Game #3: Now You See It... Now You Don't!**

#### **Materials:**

- A variety of 20 to 50 objects
- Pens/pencils
- Paper for all
- A large chalkboard/easel/whiteboard is useful for the brainstorming session

**Instructions:** The children will try to remember things they can no longer see. A variety of objects are placed on a table ahead of time. The objects are covered with a sheet so that the children can't see them until the game starts. They will have one minute to look at the objects and try to remember as many as they can. After one minute, the objects are covered over again, and the children have a few minutes to write down as many objects as they remember seeing. Before revealing what is under the sheet again, brainstorm a list together with the children of the items they remember. You can also try to trick the children by asking things like "Did you see a red yo-yo?" when it was really a blue yo-yo.

### **Drama Game #4: Mystery Story Starters**

**Instructions:** Use a book such as *The Mysteries of Harris Burdick* by Chris Van Allsburg to inspire kids to create their own mystery stories. If this book is not available to you, you can easily create your own story starters (introductory lines that are prompts for stories) to inspire the children to create their own mini-mystery plays. For example, a story starter could be "As soon as I arrived, I could sense that something was not quite right..." or something like the old cliché, "It was a dark and stormy night..." These lines can be written on strips of paper and distributed one per group.

Divide the children into groups (about four to six children per group would work well). Give each group their story starter (could be a page from Harris Burdick or your own made-up story starters) and give them ample time to create a mini-mystery story that is inspired by the story starter. They will then perform the story as a mini-mystery play for the other groups. Remind them to start their play off by reciting the first line (the story starter line.)

### **Drama Game #5: Fairy Tale Detective – Twisted Tales!**

**Materials:** Copies of favourite fairy tales (e.g. *The Three Little Pigs*). There should be a different story for each group. Try to choose simple, short versions of the stories to ensure that the program won't take up too much time.

Have copies on hand of fractured or twisted tales such as *The True Story of the Three Little Pigs* by Jon Scieszka or *Kate and the Beanstalk* by Mary Pope Osborne, for display.

**Description:** Divide the group into smaller groups (approximately four to six children per group). Give each group a copy of a traditional fairy tale. Each group should have a reader who can read the story to the rest of the group. Give each group ample time to read the

story, and plan how they will act it out to the other groups. Here is the twist: the groups have to plan out their stories so that there are some details missing or slightly changed from the original. The audience groups have to watch the performances and see if they can detect the differences. They can record their observations and then share their suspected differences at the end of the performance.

Talk about fractured or twisted fairy tales, and show some examples of books that use this technique. Scripts and ideas are available at this website:

[http://www.education-world.com/a\\_curr/reading/ReadersTheater/ReadersTheater003.shtml](http://www.education-world.com/a_curr/reading/ReadersTheater/ReadersTheater003.shtml)

For more ideas, see “Week by Week Theme/Program Guide; Program Five: Fairy Tale Mysteries” page 25.

## **Discovering Detectives**

(Target Audience: Ages 9–12)

### **Introduction:**

This is a good start to the summer program. Talk about the theme, show the poster, activity book, etc. and go over how the TD SRC is going to be run at this location.

### **Detective Scramble**

Detective Scramble Activity Sheet (see pg. 151)  
Hand out one for each child along with a pencil.

### **Activity:**

Brainstorm – What makes a good detective?

How good a detective are you?

Challenge the kids with short mystery stories such as those found in *More True Lies: 18 Tales for You to Judge* by George Shannon, or *Two-Minute Mysteries* by Donald J. Sobol (if available). There are also mysteries available online. Because of copyright, be careful only to tell the story rather than handing out copies of it.

### **Memory Game:**

For this activity, see *Is It All Here?* under “The Power of Disguise,” pg.76. If you prefer not to collect lots of objects for this, put up or hand out a picture with lots of things going on (magazines are a good place to find pictures), or use the TD SRC poster. Cover up the picture and hand out paper and pencils. Ask the kids questions about the picture.

### **Activity: Design a Detective**

#### **Materials:**

- Paper with full figure drawn on it or a cut-out figure — one page for each child
- Crayons
- Cut-out hats, coats, magnifying glasses, moustaches, high heels for female detective, etc.
- Coloured paper for the kids’ own additions

#### **Instructions:**

Have the kids create their own detective. This can be kept very simple with just crayons, or you can cut out items before the program (hats, glasses, magnifying glasses, moustaches, etc.). Alternatively, the kids can cut out their own clothing and accessories from coloured paper.

## **Cracking Codes – Part 1**

(Target Audience: Ages 9–12)

There are many different ways to send messages so that only the intended recipient can read them.

You can do this as a two-week program or longer, depending on how much you and the children like codes.

Each week you can warm up your audience by playing one of these games.

### **1) Hangman**

#### **Materials:**

- Flipchart paper or large sheets of paper and a thick marker

#### **Instructions:**

1. Prepare sheets ahead of time so that the game goes quickly.
2. On each sheet, draw a series of lines to represent each letter in the word. For example, if the word to be guessed is “disguise,” draw eight lines in a row on the bottom of the sheet.
3. Draw a gallows in the middle of the sheet.
4. Call on children individually to guess a letter. If that letter is in the word, write it on the appropriate line. If it is not in the word, draw a body part on the sheet (starting with the head and working downwards).
5. Each child gets a chance to make a guess as the game progresses.
6. The object of the game is to fill in the word before the hangman gets his man (and the whole body on the gallows is drawn, part by part)

Some suggestions for words include surveillance, disguise, detective, mysterious, solution, investigate.

### **2) Acronym Guessing Game**

#### **Materials:**

- Flipchart paper or large sheets of paper
- Thick marker

#### **Instructions:**

1. Write out 12 or more acronyms on flipchart paper and ask the children if they can guess what each acronym stands for. Start out easy and then move on to more difficult ones. Some examples include LOL, CUL8R, ASAP, BTW, NB, CFL.
2. Ask for examples from the group and see if others can guess the meaning. If the children have an example to give, they can come up to the front and write it down for everyone to guess.

### **3) Phone Anagram Game**

**Materials:**

- Flipchart paper or large sheets of paper
- Thick marker
- Paper and pencil for each child

**Instructions:**

1. Create an example of a phone pad on a large piece of paper so that children can see it throughout the room.

	ABC	DEF
1	2	3
GHI	JKL	MNO
4	5	6
PRS	TUV	WXY
7	8	9
*	0	#

2. Ask the children to create a cool phone number. First, they need to think of a phrase they like that has only seven letters.
3. Using the phone pad as a guide, they choose numbers that represent each letter in the phrase to create a unique phone number.
4. For example, to spell out COOL GUY, the number would be 266-5489.
5. Have children practice with some other phrases like SKIPPER, LOVE YOU, PHAT BOY, SWEETIE.
6. Give children five to 10 minutes to come up with their own unique number and then ask for volunteers to share their ideas with the group.

**Develop Code-Cracking Skills** (choose one or several)

Code cracking can be practised together in a small group or, if your group is large, divide it into several smaller groups. Children will be given a variety of messages to decode using different methods of code cracking.

**1) Pin-Prick Method****Materials:**

- Five sheets of newspaper
- Pins
- Flashlights (preferred but not necessary)
- Pencil and paper for each group of children

**Instructions:**

1. Prepare five secret messages ahead of time.
2. Use one sheet of newspaper for each message.
3. Take a pin and prick a hole under each word you want to use in your message.
4. Use words consecutively.
5. Children have to look at the whole page and find the pin-prick holes in order to find the complete message.

**2) Julius Caesar Code****Materials:**

- Large sheets of paper for code and solution
- Thick marker
- Photocopied pages (one for each child) of secret messages to be decoded
- Pencil and paper for each child

**Instructions:**

1. Prepare five secret messages in code and print them on one sheet of paper (using the master code sheet you have already printed out).
2. Photocopy this message sheet and distribute one copy to each child.
3. The master code sheet should be written out on poster-size paper and taped up at the front of the room so that children can refer to it when attempting to crack the code.
4. Children try to solve the messages by using the master code sheet.
5. To decode a message, children must shift each letter back by three (e.g. WKH=THE).

To create the master code, shift letters forward by three (ex. THE=WKH)

Decoded Letter:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Coded Letter:

D E F G H I J K L M N O P Q R S T U V W X Y Z A B C

This also works well backwards:

Decoded Letter:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Coded Letter

Z Y X W V U T S R Q P O N M L K J I H G F E D C B A

Here are some messages to use, or you can make up your own:

- Go northeast 100 steps, then dig down six metres.
- Go outside, turn left, walk two blocks and look up.
- Look in the upstairs closet on the bottom shelf.

- I know who did it. His name is Sam.

### 3) Sdrawkcab Message

#### Materials:

- Paper
- Pencils
- Mirror

#### Instructions:

1. Write the message on a piece of paper. Then write the same message backwards on a separate piece of paper. This takes practice!
2. To reveal the message, hold it in front of a mirror.
3. In order to read the message in the mirror, you have to write the word in reverse order and invert the letters.

### 4) Masked Message

#### Materials:

- Three pieces of paper
- Pencil
- Scissors

#### Instructions:

1. To create the message, put two pieces of paper together and cut identical windows in each to make identical "masks."
2. Write "TOP" at the top of each mask.
3. Put one mask over a blank piece of paper and write a message by placing a word or words in each window.
4. Remove the mask and add more words to the paper to hide the message.
5. To reveal the message, give one mask and the message to a partner. The message can be decoded by placing the mask over it and reading the words in the windows.

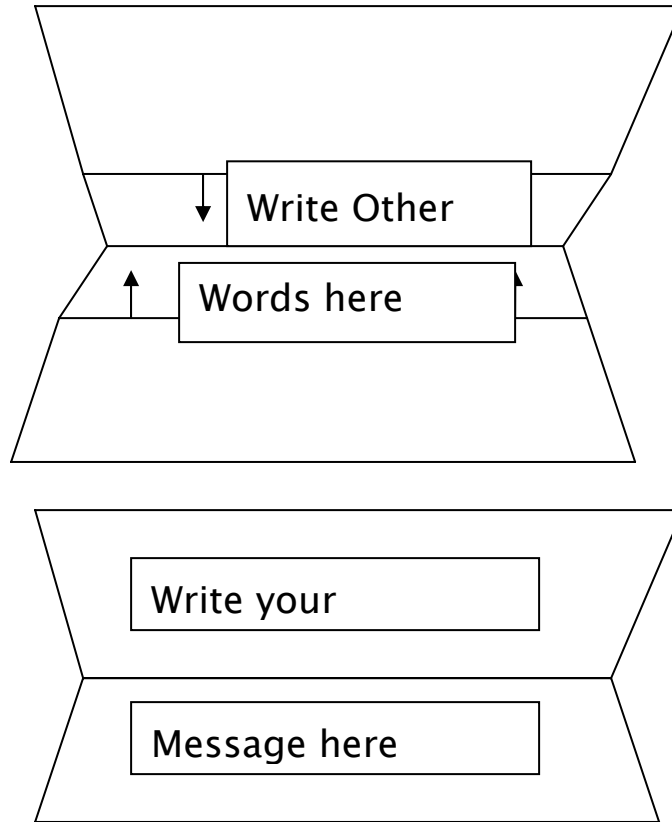
### 5) Folded Message

#### Materials:

- Piece of paper
- Pencil

#### Instructions:

1. Fold the paper in half.
2. Fold the halves back to make quarters.
3. Write a message so that the words read across the first and last panels.
4. Jumble the message by adding extra words in the two middle panels.



- To reveal the message, fold the two middle panels together so that only the first and last panels are exposed. Read the message from left to right.

## 6) Inchwords, a.k.a. ruler message

### Materials:

- Several pieces of paper
- Pencil
- Ruler

### Instructions:

- Write a message on a piece of paper.
- On a separate piece of paper, print the same message in capital letters, using a ruler to help you print each letter every 2 cm ( $\frac{3}{4}$ ").
- Circle the last letter of the message
- To confuse snoopers, add letters between the letters of your message to form other words. The words shouldn't have anything to do with the real message.
- To reveal the message, place a ruler under the line of words, with the circled letter over one of the 2-cm marks. Write down the letters appearing at each 2-cm interval.

W S O E M C O R D E J T D O

## Cracking Codes – Part 2

(Target Audience: Ages 9–12)

Start off the programs with some of the warm-up exercises from “Cracking Codes Part I” or go straight to the secret messages below.

There are many codes that use symbols to replace letters. Here are three of them.

### 1. Ancient Alchemy

#### Materials:

- Piece of paper
- Pencil
- Copies of the secret characters

#### Instructions:

1. Using these characters, compose the secret message:

A	B	C	D	E	F	G	H	I	J	K
☉	4	h	Υ	⋈	⊙	♀	♂	♀	☾	⊙
L	M	N	O	P	Q	R	S	T	U	V
∩	⊖	∩	⋈	≅	♁	↖	∇	⋈	∇	⊖
W	X	Y	Z							
☞	X	Υ	Z							

2. Make sure your buddy has the code breaker in order to decipher what was written.

### 2. Pills

#### Materials:

- Piece of paper
- Pencil
- Copies of the secret characters

#### Instructions:

1. Using these characters, compose the secret message:

A	B	C	D	E	F	G	H	I	J	K
☹	☹	☹	☹	⊗	⊕	⊙	⊖	⊖	⊖	⊙
L	M	N	O	P	Q	R	S	T	U	V
☹	☹	☹	⊕	⊕	⊕	⊕	⊖	⊖	⊖	⊖
W	X	Y	Z							
☹	☹	⊖	⊖							

### 3. Moon Writing

#### Materials:

- Piece of paper
- Pencil
- Copies of the secret characters

#### Instructions:

1. Using these characters, compose the secret message:

A	B	C	D	E	F	G	H	I	J	K
Λ	↳	⊂	⊃	Γ	↑	↑	⊙		↓	<
L	M	N	O	P	Q	R	S	T	U	V
L	⌈	N	○	⌒	↳	\	/	—	∪	V
W	X	Y	Z							
∩	>	┘	Z							

In these next two codes, children just need to figure out what is wrong with each word.

### 4. Random Letters

#### Materials:

- Several pieces of paper
- Pencil

#### Instructions:

1. Write a message on a piece of paper.
2. On a separate piece of paper, replace the first letter of each word with a random letter.

Example:

**WHE CIRST OETTER PF KACH EORD JS ZRONG**  
(THE FIRST LETTER OF EACH WORD IS WRONG)

3. To make the message even more difficult, remove the vowels and/or write it backwards.

### 5. Missing Vowels

#### Materials:

- Several pieces of paper
- Pencil

**Instructions:**

1. Write a message on a piece of paper.
2. On a separate piece of paper, remove all of the vowels in the words.

Example:

**THS MSSG LKS VRY STRNG**  
(THIS MESSAGE LOOKS VERY STRANGE)

**6. Caesar's Letter****Materials:**

- Several pieces of paper
- Pencil

**Instructions:**

1. Write a message on a piece of paper.
2. On a separate piece of paper, create the code by substituting one letter for another.

Example:

A=B, B=C and so on until Z-A

**UFJT JT HSFBU GVO**  
(THIS IS GREAT FUN)

3. Alternatively, you could create a variation of this code by substituting a number for each letter.

Example:

A=1, B=2 and so on until Z-26

**20.8.9.19/9.19/7.18.5.1.20/6.21.14**  
(THIS IS GREAT FUN)

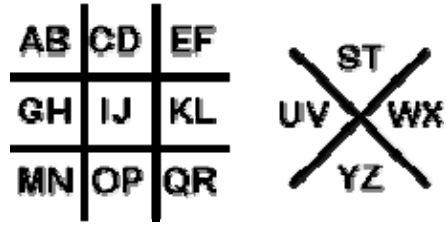
4. Rewrite your message using one of these substitution codes.

**7. Pigpen****Materials:**

- Several pieces of paper
- Pencil

**Instructions:**

1. Write a message on a piece of paper.
2. On a separate piece of paper, write out the whole alphabet in two grids:



3. Each letter is represented by the part of the “pigpen” that surrounds it. If it’s the second letter in the box, then it is represented by a dot in the middle.

So an A looks like this: 

And a B looks like this: 

Example:



## **Bone Detectives**

(Target Audience: Ages 9–12)

### **Introduction:**

Discover what clues bones can tell you about people, and how bones can help solve a crime.

Learn about all the bones in your body and even make bone shapes.

Add some bone-chilling stories to your investigation. The books listed below are just a few suggestions. Check your shelves for other titles.

### **Suggested Books:**

*The Skeleton and Muscular System* by Carol Ballard

*Dem Bones* by Bob Barner

*Discover Bones* by Lesley Grant

*Drumheller Dinosaur Dance* by Robert Heidbreder

*Skeleton* by Steve Parker

*Short and Shivery: Thirty Chilling Tales* by Robert D. San Souci

*Scary Stories to Tell in the Dark* by Alvin Schwartz

### **Activity:**

Make Your Own Skeleton

### **Materials:**

- White cardboard or Bristol board to cut out and prepare the bones of the human skeleton

### **Instructions:**

1. Put the pieces together and hang them on display.
2. Make a copy of all the names of the bones and have the children match them up.

### **Activity:**

Making the Bones

- 600 mL (2½) cups flour
- 250 mL (1 cup) table salt
- 1 large bowl
- 250 mL (1 cup) water
- food colouring

### **Instructions:**

1. Mix all the ingredients together.
2. Knead mix until smooth.
3. Store in the refrigerator before the program, if possible.

Children can make a bone in one of the shapes they choose.

**Song:** “Dry Bones”

You can find the lyrics here:

<http://kids.niehs.nih.gov/lyrics/bones.htm>

## Jumblies

(Target Audience: Ages 9–12)

One or two letters in each word is bolded. Find all the bolded letters and unscramble them to create a word

1) Prison  
Correctional Facility  
Lockup  
Joint  
**Answer:** \_\_\_\_\_

2) Deliver  
Save  
Set Free  
Extricate  
Release  
Bailout  
**Answer:** \_\_\_\_\_

3) Bell  
Alert  
Signal  
Siren  
Mayday  
**Answer:** \_\_\_\_\_

4) Fly the coop  
Freedom  
Break  
Evade  
Slip the collar  
**Answer:** \_\_\_\_\_

5) Mystery  
Puzzle  
Secret  
Unknown  
**Answer:** \_\_\_\_\_

6) Operative  
Undercover  
Agent  
Investigator  
Intelligence  
Sherlock Holmes  
**Answer:** \_\_\_\_\_

7) Disguise  
Shroud  
Camouflage  
Put out of sight  
**Answer:**\_\_\_\_\_

8) Private  
Confidential  
Hush-Hush  
Classified  
Hidden  
Top  
**Answer:**\_\_\_\_\_

9) Sham  
Make-Believe  
Counterfeit  
Forgery  
**Answer:**\_\_\_\_\_

**Answers: 1) Jail 2) Rescue 3) Alarm 4) Escape 5) Clue 6) Sleuth 7) Hide 8) Secret 9) Fake**

## **Body Detectives – Analysing the Evidence**

(Target Audience: Ages 9–12)

Children learn that the body can be used in many ways, and it often gives detectives some clues to help solve a mystery. Here are a variety of games to help children become more aware of the role of the human body in detective work.

### **Activity: Pantomime**

#### **Materials:**

- Index cards: Each card has a job or career printed on it. Some examples include barber, boxer, carpenter, doctor, postal worker, painter, police officer, photographer, singer, truck driver, waiter, model, pianist, cleaner, librarian, cook, bicycle rider, gardener, etc.

#### **Instructions:**

Children sit down in a group facing the front. Ask for one volunteer at a time to come before the group and silently demonstrate one action that illustrates the job on the card provided. Everyone else in the group has to guess the job that is being portrayed and call it out. As soon as it is guessed, the volunteer sits down and another child is chosen to demonstrate another job. If no one can guess what is being demonstrated, call for a second volunteer to come to the front and look at the card with the job printed on it. Ask him/her to demonstrate it in another way together with the first child. Continue until the activity is guessed!

### **Activity: Senses and How We Use Them**

Detectives also use their senses to discover clues. These include touch, smell, taste, sight and hearing. Play one or more of the following games to help demonstrate the senses.

#### **1) Touch – What’s In The Bag?**

#### **Materials:**

- 10 or more thick, opaque bags (paper or plastic)
- Elastics to close bags securely
- Objects to put inside each bag. These could include several similar items such as an orange and a baseball, a pencil and a pen, puppet and stuffed animal, etc. Bags could also include very common items such as a stapler, scissors, spoon, etc.

#### **Instructions:**

Prepare bags with one or two objects inside. Make sure they are tightly closed. Pass one bag at a time around the circle and give each child two squeezes to figure out what is inside. They should call out their guess so all can hear. If they can't figure it out, they pass it to the next person in the circle to squeeze and guess. After a child has made a correct guess, start a new bag around the circle with the next child.

## 2) Smell – Whose Nose Knows?

### Materials:

- Blindfolds
- Objects with a distinctive smell such as an orange, grapefruit, garlic powder, cinnamon, vinegar, coffee
- A few objects with no smell such as salt, sugar, water
- Enough identical containers to display the items

### Instructions:

Ask for one volunteer to come to the front of the room. Blindfold the child and then show one of the objects to the rest of the crowd. In the case of something hard to identify by its appearance, such as salt, show the rest of the room the package so that they know what it is. Make sure to remind them not to say it out loud. Slowly pass the object under the blindfolded child's nose and ask if he/she can identify it by smell.

If the blindfolded volunteer cannot identify a smell, ask for the audience to give verbal clues without revealing what it is. For example, they can give clues such as it can be put in a shaker. The blindfolded volunteer may be able to guess after hearing the clues.

After a correct guess, choose another volunteer to be blindfolded and given another item to smell.

## 3) Taste – A Matter Of Taste

### Materials:

- A variety of items that look almost identical, such as water and vinegar, sugar and salt, flour and baking soda, vanilla and soy sauce
- Identical containers to display the items
- A package of cotton swabs

### Instructions:

Children sit down facing the front. Ask for two or three volunteers. The volunteers line up facing the group and taste two identical-looking items. They try to guess what is in the containers by tasting them (using a new cotton swab for each taste). Ask the audience for suggestions if volunteers cannot guess the correct answer.

Choose new volunteers for the next set of items to taste.

## 4) Hearing – Decoding Sounds and Voices

### Materials:

- Sound effects tape/CD
- Your voice
- A variety of sound-producing items like a kazoo, drum, whistle, elastic band, etc.

Leaders demonstrate two different emotions by repeating the same phrase using their voice in a variety of ways. (Use a neutral phrase like “I live in the house down the road.”) Children guess what emotion is being shown. Examples of emotions could be anger, fear, happiness, shyness, aggressiveness, sadness, joy, tiredness, boredom, etc. After demonstrating two emotions, ask the children as a group to demonstrate other emotions.

Use a sound effects tape/CD and get children to guess individual sounds.

Gather a variety of items and demonstrate several sounds. Have the children close their eyes as you produce different sounds like a whistle blowing, drum beating, pencil tapping, kissing sound, blowing sound, teeth tapping together, or hands clapping or rubbing together. See if they can guess the sound.

## **5) Sight – Seeing Can Be Deceiving**

### **Materials:**

- Information about optical illusions from a book or Internet site, such as <http://kids.niehs.nih.gov/illusion/illusions.htm> or [http://www.exploratorium.edu/exhibits/f\\_exhibits.html](http://www.exploratorium.edu/exhibits/f_exhibits.html)
- Obscure items children may not recognize like a garlic press, spaghetti measurer, level, etc.

### **Instructions:**

Use a book of optical illusions to demonstrate how people can look at the same item but see different things. Compare what the children see. As well, you could bring in some items that children are unlikely to have encountered (e.g. obscure kitchen gadgets, hardware items) and see if they can guess what they are. Sometimes, sight is not enough.

### **Activity:**

#### **Disguise Crafts (Choose One)**

These crafts demonstrate the significance of our sight. It is one of the most important senses used in detection.

#### **1) How Different Can You Look?**

##### **Materials:**

- Markers/crayons/pencil crayons
- Photocopied outlines of a basic face shape  
The child's task is to try to create two totally different-looking characters using the same face pattern.

#### **2) Mask Making**

##### **Materials:**

- Construction paper (one page per child)

- Markers/crayons/pencil crayons
- White glue
- Feathers/glitter, etc.

Children enjoy a session of creating a mask to disguise or cover their own face.



## Mystery in Algonquin Park – Animal Detectives

(Target audience: Ages 9–12)



**Approximate Time:** 60 minutes (Can be shortened or lengthened depending on the amount of discussion that takes place.)

### Note to programmers:

If you would rather use another national or provincial park in place of Algonquin Park, the ideas in this program can be adapted to any natural setting (you would need to change the animals in the field guide and the animal tracks provided below to adapt the program to a natural setting of your choice). Animal tracks from animals all over the world can easily be obtained in field guides and on the Internet.

### Suggested Books:

*Big Tracks, Little Tracks: Following Animal Prints* by Millicent Ellis Selsam

*How to Be a Nature Detective* by Millicent Ellis Selsam

*Nature's Footprints In the African Grasslands* by Q.L Pearce & W.J. Pearce

*Animal Tracks of Ontario* by Ian Sheldon

### Instructions:

- Gather various books about animal tracks and other means of identifying animals in the wild (e.g. their food, droppings, etc.).
- Cut out animal tracks (templates provided below). The animal tracks should be cut out without any labels on them, so as not to give away what animal it is. The children will have to identify the animals using their field guide (see the field guide below). Lay the tracks out to form trails in various parts of the program room or area.
- Have large pictures of all the animals (the Algonquin ones and the animals from other regions). You can locate pictures in books (e.g. field guides, park guides), on the Internet or in magazines such as National Geographic. These will be posted for the discussion part of the program at the end.
- If possible, gather any other materials you can find that would help to identify animals. For example, gather sticks and twigs, and place them in a pile—this could be a sign of a beaver having been there to build a dam. Other examples are pictures of food, such as berries or fish, that a bear could eat. These pictures can be photocopied or printed from clip art (e.g. MS Word clip art) and laid out in different piles around the program room.

- Another means of identifying animals along a trail is by their droppings. Copies of images of animal droppings can be found in animal field guides (such as the four listed above) and on the Internet. These images can also be put on the trails to identify the animals.

## Introduction:

Start the program off by reading any story (or portions thereof) that talks about using clues to identify animals in the wild (e.g. their tracks, food left behind, even their poop!). Some suggested titles are listed above.

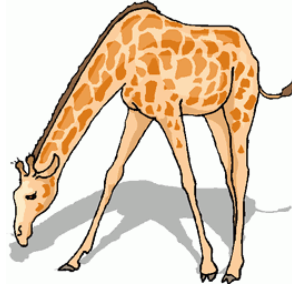
Have the children imagine that they are in a forest somewhere in Canada, in a rainforest in Costa Rica, or on an African safari. As they walk along, what might provide them with clues as to what animals have been there? Have them share these ideas.



## Description:

- Each child becomes an animal detective. You can give each child a badge to wear (see template below).
- Everyone will be working together to solve a mystery: **“There have been some very unusual animal tracks spotted in Algonquin Park lately. These sightings have been reported by visitors to the park as well as park rangers. It seems that these animals don’t belong in this particular area of the country/world. We must identify these animals and get them back safely where they belong!”**
- Every child will receive an Algonquin Park Animal Tracks Field Guide to identify the animals that belong in Algonquin Park (see below).
- The children can follow the animal tracks on the trails and use their guide to identify the animals that belong in the park.
- The children will record their findings (check off which animal they found in their field guide).
- There will be some tracks that the children are not able to identify (because that animal is not listed in their field guide). These will be the animals that don’t belong in Algonquin Park. They can use the notes section of the field guide to sketch the prints and make notes to try to figure out what animals don’t belong in the park.
- Tell the children to examine the prints carefully because there are some that look alike but are made by different animals.
- After about 20–30 minutes of walking along the trails and recording their findings, participants will get together to report on what they found.
- Post copies of the footprints on some sort of surface (a whiteboard, chalkboard or easel, for example). Have the children identify the tracks and name the animal that made them, and report on whether or not they found them in the park. Once the children have identified the tracks (in the reporting session), you can post the picture of the animal next to the tracks. Ask the children to share information that they know about the animals.

- When it comes to the unidentified tracks, you can discuss their characteristics (e.g. are they made by a hoofed animal or perhaps an animal related to the cat? What does the shape of the track tell you about the animal that made them?).
- Have some clues about the unidentified animals so that the children can guess which animals made them (e.g. this animal is known to be the fastest runner in the animal kingdom—clue for the cheetah).
- Once the mysterious animals and their natural habitats have been identified, they can be returned to their native homes!




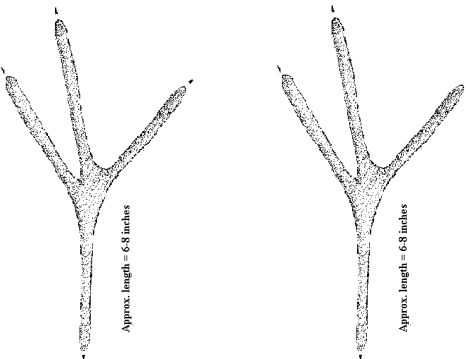
Federal Bureau of Animal Investigation

Animal Detective




Name: \_\_\_\_\_




Algonquin Park – Animal Tracks Field Guide

Animal Tracks	Animal Information	Animal Observed? YES or NO
 <p align="center">Hind Print    Fore Print</p>	<p><b>Raccoon (<i>Procyon lotor</i>):</b>                      The raccoon is commonly spotted in most cities. A very curious animal, and is very good at using its hands for many tasks such as digging (for food like grubs) and opening garbage cans! The raccoon's unusual footprint looks remarkably like a human handprint. Their trails may often lead you up a tree where the raccoon likes to rest.</p>	
	<p><b>Great Blue Heron (<i>Ardea herodias</i>):</b>                      This graceful bird can be spotted near water or wetlands in search of food. This bird often walks in straight, neat lines.</p>	

Algonquin Park – Animal Tracks Field Guide

Animal Tracks	Animal Information	Animal Observed? YES or NO
	<p><b>Moose (<i>Alces alces</i>):</b> The male of this large-bodied animal has an impressive set of antlers on its head. Moose tracks can often be seen in wet areas where they like to feed. Moose are very good swimmers. Be careful not to get too close to a moose or to approach it; moose may seem quiet and peaceful, but they can charge at people if they feel threatened.</p>	

Algonquin Park – Animal Tracks Field Guide

Animal Tracks	Animal Information	Animal Observed? YES or NO
 <p>Hind Foot</p> <p>Front Foot</p> <p>Hind Print</p>	<p><b>Beaver (<i>Castor canadensis</i>):</b> The largest North American rodent, beavers are very busy creatures; they are the engineers of the animal world, with their amazing ability to build dams and domed lodges out of sticks, branches and tree stumps. Look for webbing on the hind footprints — this webbing helps the beaver to be a good swimmer!</p>	
 <p>Fore Print</p> <p>Hind</p>	<p><b>Black Bear (<i>Ursus americanus</i>):</b> Black bears can be found in forested areas in many parts of Ontario. They hibernate (sleep deeply) in the winter, so don't expect to find any of their footprints in the snow!</p>	
 <p>Hind Print</p> <p>Fore Print</p>	<p><b>Striped Skunk (<i>Mephitis mephitis</i>):</b> The striped skunk enjoys living in open woodland or bushy areas. The skunk is best known for its way of defending itself... by spraying a strong, smelly odour (yuck!)</p>	



# Animal Detective Notes



<b>Unidentified Animal Track (sketch the track in the space below)</b>	<b>What do you know about the animal that made these tracks?</b>
Animal Tracks #1	Notes:
Animal Tracks #2	Notes:
Animal Tracks #3	Notes:



# Animal Detective Notes



<b>Unidentified Animal Track (sketch the track in the space below)</b>	<b>What do you know about the animal that made these tracks?</b>
Animal Tracks #4	Notes:
Animal Tracks #5	Notes:
Animal Tracks #6	Notes:



## Animal Detective Notes



<b>Unidentified Animal Track (sketch the track in the space below)</b>	<b>What do you know about the animal that made these tracks?</b>
Animal Tracks #7	Notes:
Animal Tracks #8	Notes:
Animal Tracks #9	Notes:



## Animal Detective Notes



<b>Unidentified Animal Track (sketch the track in the space below)</b>	<b>What do you know about the animal that made these tracks?</b>
Animal Tracks #10	Notes:
Animal Tracks #11	Notes:
Animal Tracks #12	Notes:

Striped Skunk – Algonquin Park

Hind Print



Fore Print



Raccoon – Algonquin Park

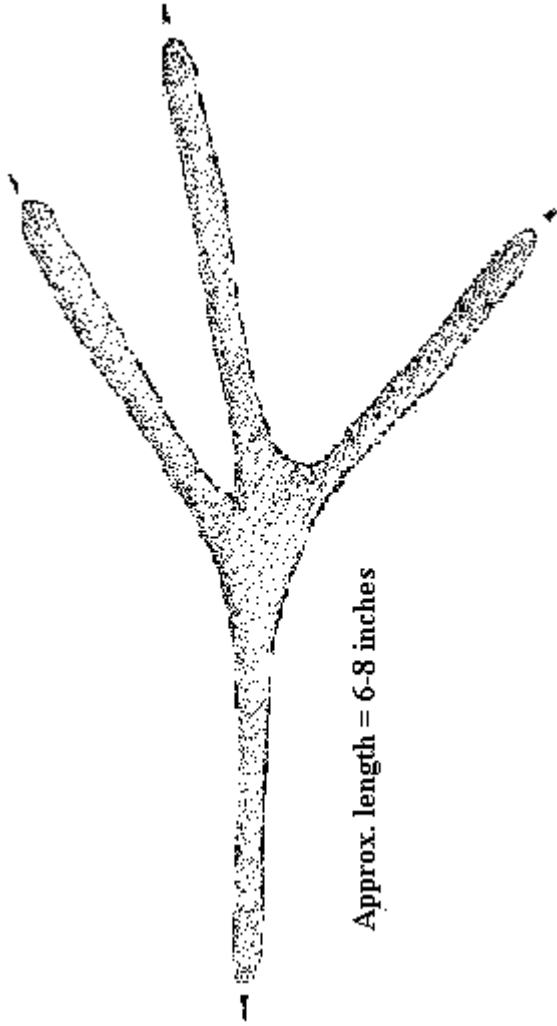
Hind Print



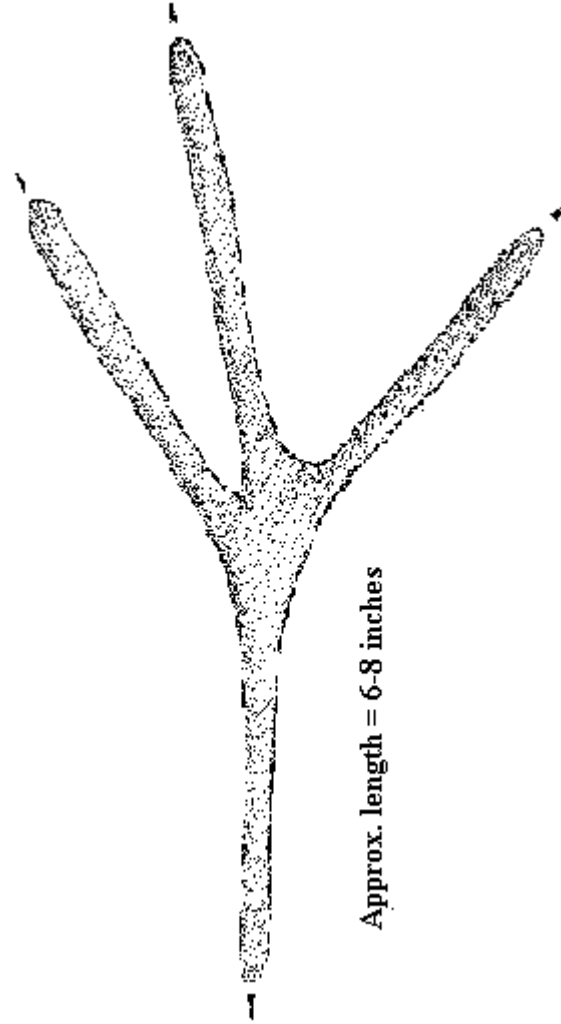
Fore Print



Great Blue Heron – Algonquin Park

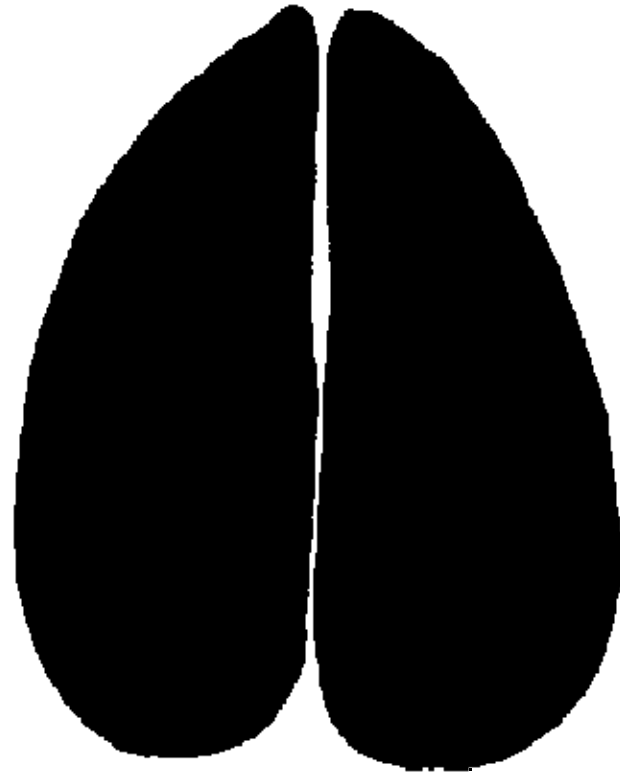
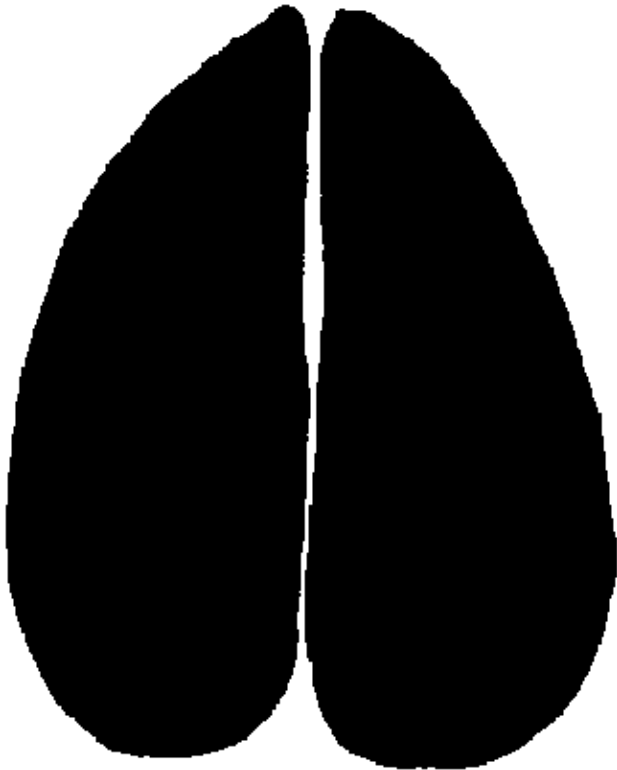


Approx. length = 6-8 inches

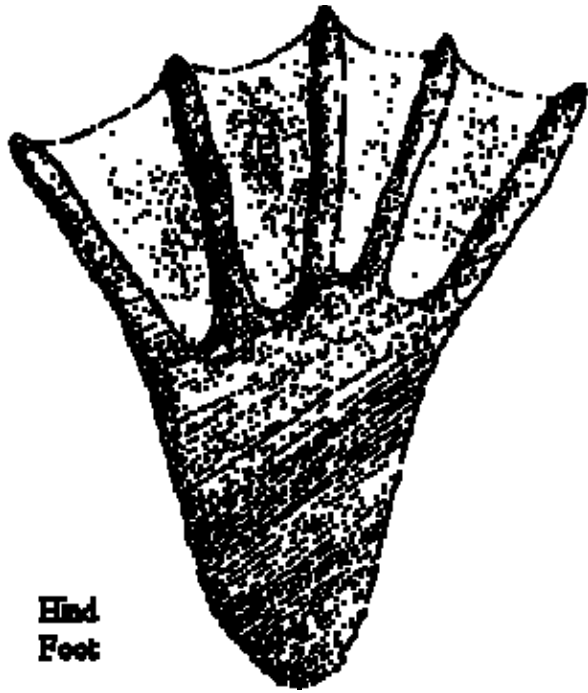


Approx. length = 6-8 inches

Moose Tracks – Algonquin Park



Beaver – Algonquin Park



Hind  
Foot

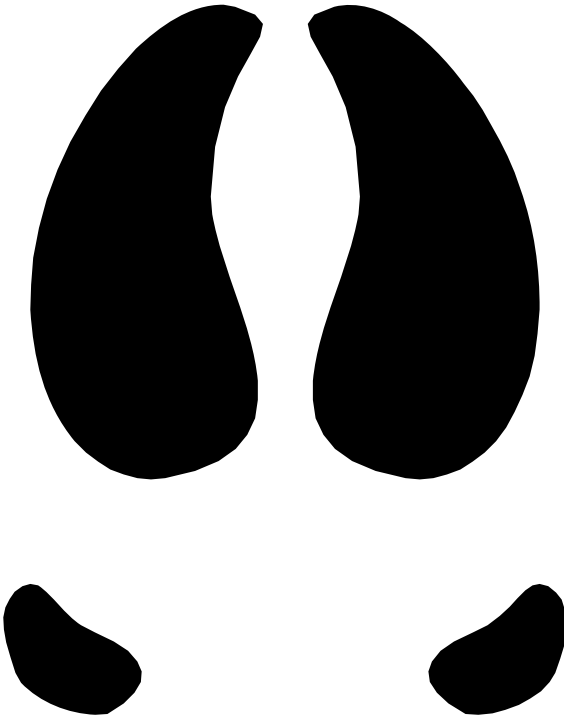
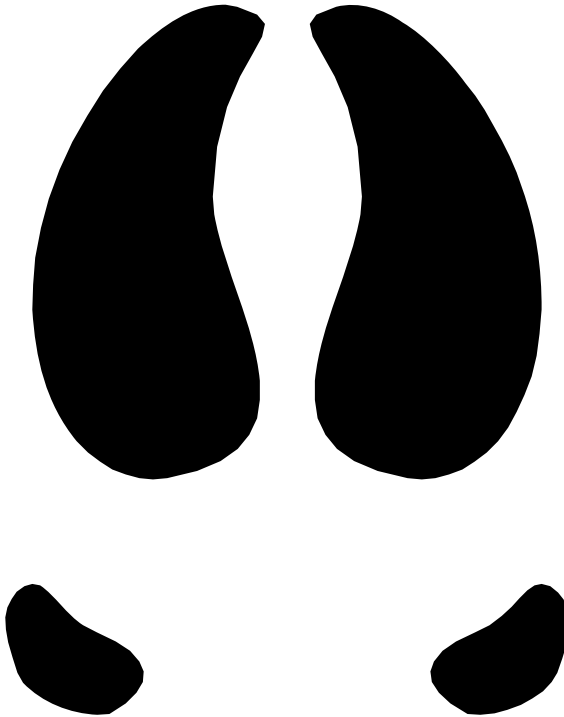


Front  
Foot

Black Bear Tracks – Algonquin Park



Caribou Tracks – Arctic Adventure



Arctic Fox Tracks – Arctic Adventure



Polar Bear Tracks – Arctic Adventure

**Fore Foot**



**Hind Foot**



Giraffe Prints – African Safari



Elephant Tracks – African Safari



Cheetah Prints – African Safari



## Animal Detectives Match-Up

(Target Audience: Ages 9-12)

Match up the name of the detective with the correct animal

BENJI

COW

SCOOBY DOO

PIG

WISHBONE

GRASSHOPPER

SAM

RABBIT

SNOWY (TIN TIN SIDEKICK)

COW DOG

CLIFFORD

GREAT DANE

INSPECTOR HOPPER

SHEEP DOG

GERONIMO STILTON

MUTT

FREDDY

MOUSE

TUFF FLUFF

JACK RUSSELL TERRIER

MINNIE OR MOO

RED DOG

HANK

FOX TERRIER