Lesson 3
Listening to a Witness: Creating a Composite Sketch

OBJECTIVES
Students will:
- Use descriptive and positional words to convey the physical properties of objects
- Practice giving a description of an object to a peer
- Practice listening to a description of an object made by a peer
- Gain an understanding of mirror images

MATERIALS
Instructor:
- Examples of composite sketches
- 1 “artist” sticker
- 1 “sketch” sticker

Students (groups of four):
- 4 centimeter cubes in assorted colors
- 1 plastic cup
- 4 pencils
- 1 pack of crayons
- Student Books

PREPARATION
1. Divide the class into pairs.
2. Count out 4 cubes per group into a plastic cup.

Notes for the Instructor
A composite sketch is a drawing of a person associated with the crime. This person could be a possible suspect or a missing person.

To create a composite sketch, a forensic artist must listen closely to a witness’s description of a person of interest. From the description given, the forensic artist turns the witness’s words into a picture of the person of interest that the entire investigative team can reference.

Lois Gibson, a forensic sketch artist from Texas, has received a Guinness World Record. She achieved the record for “having the most criminals positively identified due to the composites of one artist.” Her drawings have helped law enforcement find hundreds of criminals. As a victim of a violent crime herself, she is excellent at spending hours helping victims, who think they remember little, come up with descriptions that are very accurate.

At this stage, young scientists are continuing to use descriptive and positional words to explain objects to their peers. Examples of descriptive words include words describing color, shape, size, hardness, texture, transparency, etc. Examples of positional words include near/far, beside, behind, in front of, on top of, below, diagonal to, etc.

Students will discover that a picture can replace a long verbal description and help others better understand. In science it is very common to use pictures — photographs, diagrams and graphs — to convey your process and findings.

Notes for the Students
Sometimes a forensic artist must draw something that she has never seen. This happens when a witness, or person who saw what happened, has information about the crime that the investigators are not able to look at. Sometimes this information is about an object that is no longer on the scene — such as a getaway car or something that was taken. Sometimes this information is about a person — such as a possible suspect or missing person.

When a witness sees something you did not, he can help you imagine what he saw by describing it. A witness might describe an object’s: (try to find an object in the classroom matching each descriptive word)

- Size – large, medium, small, gigantic, tiny…
- Color - red, orange, yellow…
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- Shape – round, square, oval, flat…
- Texture – smooth, rough, bumpy, spiky…

These words will help you to “see” the object in your mind.

The witness might also use words to describe the position of a person of interest or what happened. For example, he might say:

- She wore a hat on her head.
- He came out from behind the counter.
- They drove around the corner and out of sight.

Other positional words might include near/far, beside, in front of, below and diagonal to.

Drawing a composite sketch from a description can be tricky, especially if you are drawing a person or an animal, due to the concept of a mirror image. A mirror image is when something looks correct in appearance but is reversed, like your image in a mirror.

Discussion Demonstration:

- Choose two students to help you with this demonstration. Give one student the role of a forensic artist. The other student plays the object of the artist’s sketch. Ask them to wear the appropriate sticker so it is visible to classmates.
- As a class, help the Artist and the Sketch to identify their left hand. Use a washable marker to write “L” on this hand. Repeat with the right hand. You can also show students that their left hand can make a letter “L” with the pointer finger and thumb. The right hand makes a backwards “L.”
- Have the Artist and the Sketch stand facing classmates. Ask the Artist to point to the Sketch’s left hand. Then ask the Sketch to raise his left hand. Do they agree?
- Next have the Artist and Sketch stand facing one another. Ask the Artist to point to the Sketch’s left hand. Then ask the Sketch to raise his left hand. What happened?
- Ask, “Why is the Sketch’s left hand on the Artist’s right side?” Guide students to the idea of a mirror image. When two people face the same way, their left and right side line up. However, when two people face one another, their left and right side do not line up. They are a mirror image of one another.
- Explain that a forensic artist must remember that the left side of a person in a sketch is drawn on the right side of the paper and vice versa.

You have already practiced using your senses to gather information in front of you. Now you will practice sharing information about an object with a partner when only one of you is able to see it. Good forensic scientists are able to describe and listen to descriptions of objects. Both of these skills are important to this case and will help us bring Alice home!

Vocabulary

Composite sketch: a drawing of a face used in forensic science to help identify a person of interest

Cube: a box-shaped object with six equal square sides

Mirror Image: an image of an object that is correct in appearance but reversed

Square: a four-sided flat shape with straight sides of equal length

Witness: a person who saw what happened

Activity 1: Tell Me What You See

25 minutes

1. Divide the class into pairs. Have pairs sit back to back.
2. Give each pair a cup of four cubes. One person, the builder, uses the four cubes to make a small structure. The building must use all of the cubes, and all the cubes must touch.
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3. The forensic artist's job is to draw the building that the builder will describe to him. Students may use a two dimensional square to represent the cube for this activity.

4. The builder uses positional and descriptive words to explain the building to his partner. The partner listens to the description and attempts to draw what the building looks like.

5. Switch roles and repeat the activity.

6. If time allows, review the definition of a square and a cube. Talk students through the steps to draw a cube in their student books. Perfection is not to be stressed, just the basic concept.
   1. Draw a square.
   2. Draw an overlapping square.
   3. Connect the squares at their right angels using four dotted, diagonal lines.

7. Collect cube cups.

Activity 2: Drawing Alice

30 minutes

1. Have students find the blank guinea pig template in their Student Books. Point out the words “Alice's left side” and “Alice's right side” on the sketch. Remind them that when two people are facing one another their left and right side do not line up.

2. Explain that you will read a description of Alice to them several times. As you read, encourage them to imagine what Alice looks like on their sketch. One could describe Alice as striped and she has crazy hair that goes every which way!
   - Alice has black eyes.
   - She has a black nose.
   - Alice has a furry black patch between her eyes.
   - She has bushy orange eyebrows.
   - Alice's right ear is white.
   - Alice's left ear is brown.
   - Both sides of Alice's face are mixed brown and orange.
   - Alice has a wide orange ring around her neck.
   - The middle of Alice's body is the same mix of orange and brown as her face.
   - Alice has a wide orange ring around her body near her hips.
   - The back of Alice's body is the same color as her face and middle body.

3. Next give students access to crayons. This time, as you read the description, students should try to create a composite sketch of Alice in their books. Remind them that because Alice's hair is crazy and has a mix of colors that a mistake can easily be covered.

4. Read through the description as many times as students would like. Allow them to ask questions about the description. Encourage them to change their drawing as necessary.

5. Afterwards, have students compare their sketches. What do you notice?

6. Reveal the pictures of Alice. Have students share their reactions.

Wrap-up

10 minutes

1. Encourage discussion about the lesson. Ask:
   - What was it like to describe your building to your partner?
   - How is drawing what you are told different from drawing something that you can see for yourself?
   - How similar were the drawings and the actual buildings? Why do you think that is?
   - Which role did you prefer — the describer or the listener? Why?
   - What was it like to draw Alice from a description?

How similar was your drawing to your friends' drawings? To the actual picture of Alice?
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Clean-up

5 minutes

Put away photos, cubes and crayons.

Other Directions, Discussions and Destinations

1. Have students use their drawings of Alice to make “MISSING” posters. Encourage them to use descriptive words and art to help others identify Alice.

2. Play your own version of Guess Who? in the classroom. Have everyone stand up. The teacher will choose one student to be “the suspect.” Do not reveal who the suspect is. Have students ask yes or no questions about the suspect (ex. Does this person have on glasses? Is this person wearing pink?). As questions are answered, students who do not match the given description should sit down until “the suspect” is the only one standing. Keep track of how many questions it takes to find the suspect. Challenge students to try to get this number as low as possible.

3. Have students spend time drawing self portraits using mirrors. Encourage them to use descriptive words about themselves.
Use the space below to practice drawing a cube.

1. Draw a square.
2. Draw an overlapping square.
3. Connect the squares using four dotted, diagonal lines.
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Drawing Alice

Make a colorful composite sketch of Alice the guinea pig from the description below. Check off each number as you finish it.

☐ 1. black nose and eyes
☐ 2. furry black patch between eyes
☐ 3. bushy orange eyebrows
☐ 4. white right ear
☐ 5. black left ear
☐ 6. both sides of face: mixed brown and orange
☐ 7. wide orange ring around neck
☐ 8. middle of body: orange and brown like her face
☐ 9. wide orange ring around her body near her hips
☐ 10. back end same color as her face and middle body
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Drawing Alice

Alice's right

Alice's left