

Name:

Date:

READING COMPREHENSION

Tick the true statements and cross out the false ones.



- 1 Facial recognition is used to identify people ☐
- 2 Cece and Max were not able to fix the problems ☐
- 3 The students successfully built a facial recognition system with high accuracy ☐
- 4 Privacy is a concern in facial recognition systems ☐

- 5 Complete the sentences from the words of the story.

Their assignment was to build a _____

Faces were being misidentified, leading to _____

- 6 Answer the question below using complete sentences.

Which sentence describes how Ms. Smith felt about their project?

How would you feel after you accomplish such feat as theirs?

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Critical Thinking Questions

What problem(s) did Ms. Smith's students encounter during the testing phase of their project? How did they solve them?

Why is privacy important when building a facial recognition system?

Deeper Discussion Questions

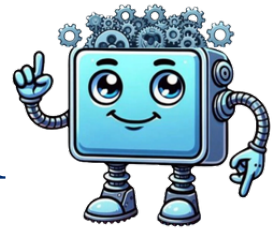
How did teamwork and problem solving skills enable Cece and Max to tackle the challenges they faced?

What lessons did you learn from the story of Cece and the Case of the Misidentified Face? What ways can you apply this to how you work with others?

Name:

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Facial Recognition



Based on the story on facial recognition, fill in the gaps with words from the word bank.

database privacy testing security algorithm parameters
false positives facial recognition accuracy infrared sensors

- 1 _____ a technology used to identify or verify a person from a digital image or video frame.
- 2 To troubleshoot the issue, Cece and Max adjusted the _____.
- 3 Finally, the team built a facial recognition system with high _____.
- 4 Their project focused on the _____ aspects of facial recognition.
- 5 They discovered the importance of _____, security and collaboration.
- 6 Cece and classmates collected images from the school's _____.
- 7 _____ led to the misidentification of faces.
- 8 Working together, they fine-tuned the _____.
- 9 They also implemented rigorous _____ procedures to ensure that the system was robust and reliable.
- 10 The malfunctioning of the _____ disrupted the data collection process.

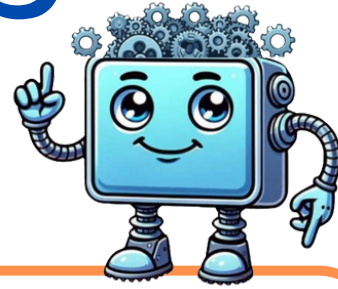
Name:

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Facial Recognition

Word Search

Can you find the words hidden
in the puzzle?



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

FALSE POSITIVE

FEATURE

DETECTION

PIXEL

SURVEILLANCE

MATCHING

BIOMETRIC

SECURITY

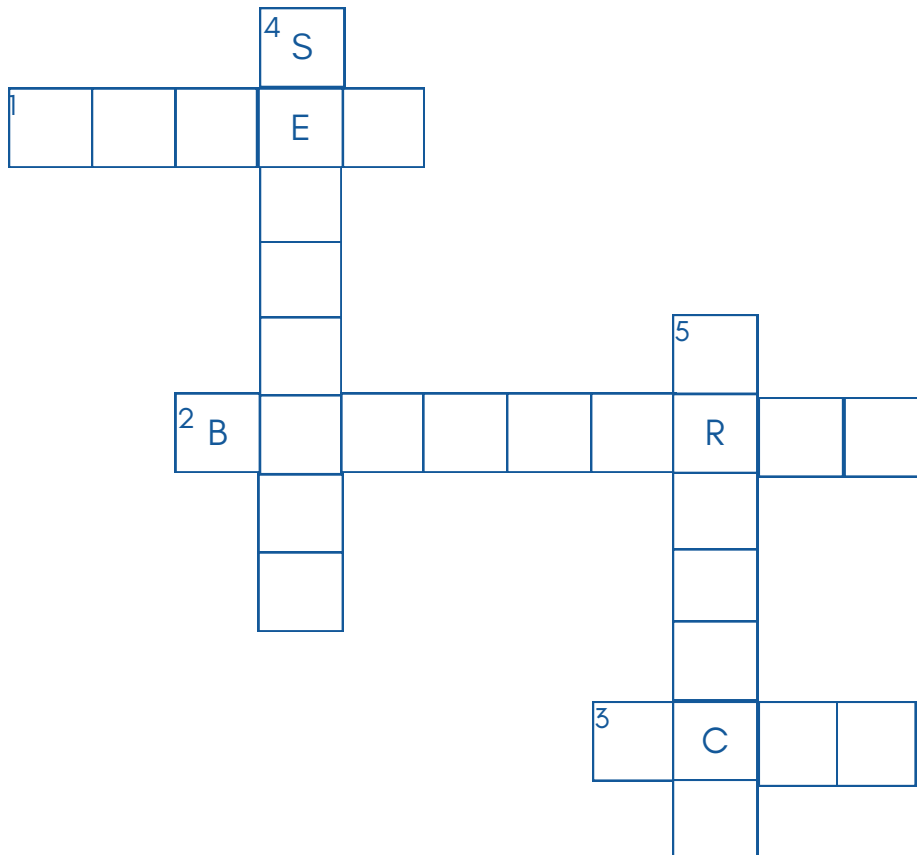
Name:

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Face Recognition Crossword



Read the clues and complete the crossword.



Across

1- Short for "picture element." It is the smallest unit of a digital image or display.

2- Something related to your body that's unique, like your fingerprint or your face.

3- It is located in front of your head and consists of features that can be used for identification.

Down

4- Facial recognition technology is mainly used for this purpose.

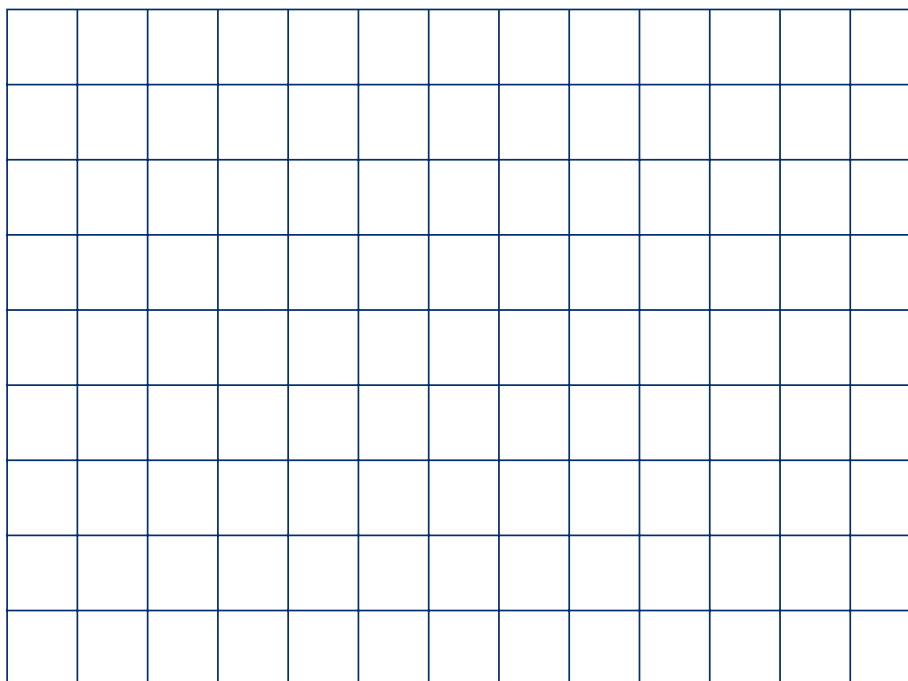
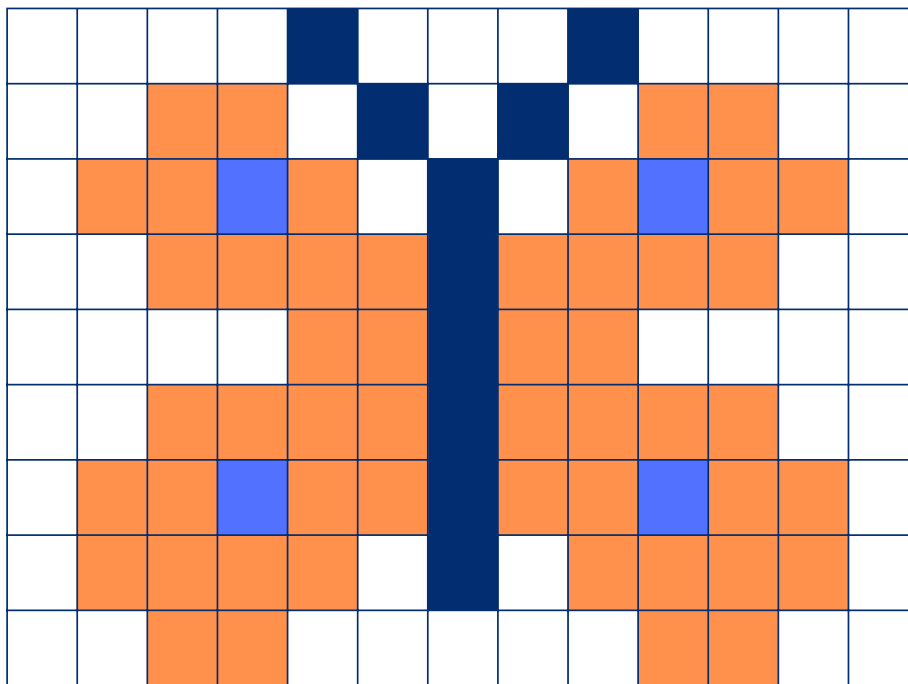
5- Refers to the protection of individuals' personal information and identities when facial recognition technology is used.

Name:

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IMAGE RECREATION

Machines are able to identify objects by breaking it down into smaller x called pixels. Using your drawing skills and the grid method, recreate and identify the object in the painting.



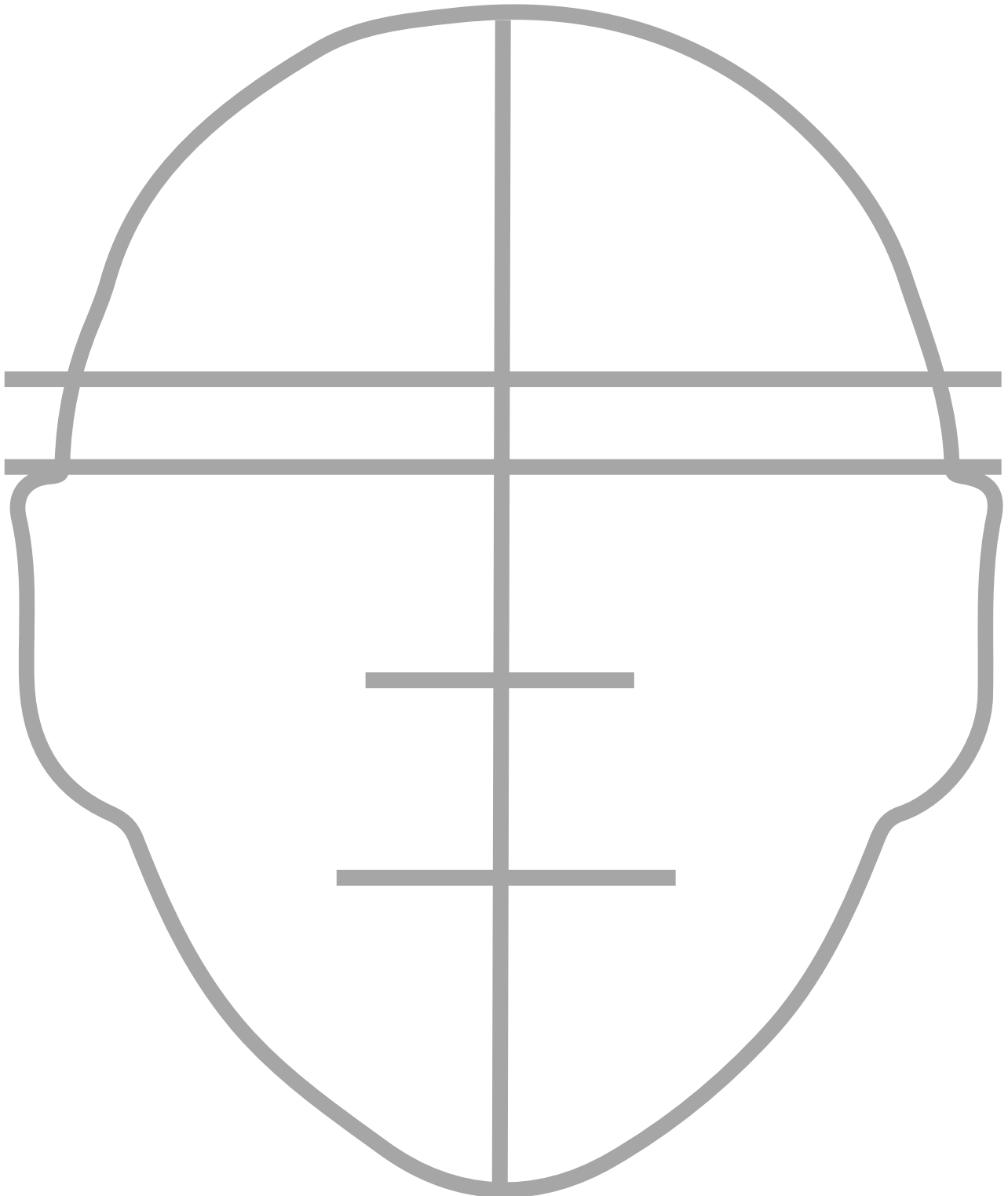
What image did you identify?

Name:

Date:

FACE DRAWING

Sketch the features of the face by using the lines as a guide.
Try to make the features of the face symmetrical.



Name:

Date:

EXPLORING FACIAL RECOGNITION TECHNOLOGY AND ETHICS



1. What is the main technology discussed in the story?

2. What problem do Cece and her classmates encounter during their project?

3. Describe Cece's traits and motivations throughout the story. How do her actions contribute to the sequence of events?

4. How does Max's skepticism influence the group's approach to solving the problem?

5. What does the phrase "false positives" mean in the context of the story?

6. Identify and define the meaning of the word "algorithm" as used in the story.

REFLECTION

Explain how facial recognition technology works using your own words. Consider the potential impact of facial recognition technology on society. How might this technology affect individual privacy, civil liberties, and social interactions? Provide examples to support your response.

Name:

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ANIMAL INVESTIGATION

You are a detective on a mysterious case at the zoo. This folder contains a series of clues related to a suspect. Read the questions, examine the clues provided, and see if you can crack the case... Who devoured all of the gorilla's bananas?



Your name: _____

Class: _____

Date: _____

Unknown

CLASSIFIED CLASSIFIED
TOP SECRET
CLASSIFIED CLASSIFIED

Clue 1:
Eye
distance



Eye Distance Analysis : Analysis reveals a precise measurement of 1.5 inches between the centers of the suspect's eyes.

← → ↻ www.example.org ☆ ⋮

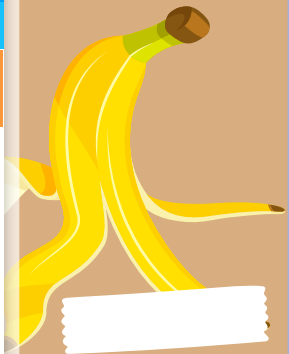
Fact Sheet : Understanding Gorilla Traits

Here are some key facts about the traits gorillas inherit from their parents:

1. **Fur Color:** Gorillas can inherit fur color ranging from black to various shades of brown or gray.
2. **Body Size:** The size and build of gorillas, including height and muscle mass, can be influenced by genetics.
3. **Facial Features:** Traits such as the shape of the face, nose, eyes, and ears can be inherited from parents.



TRAIT	INHERITED	RECUIN	ENC
1. Fur Color	1.5 to 2.0 inches	1.5 to 2.0 inches	1.5 to 2.0 inches
2. Body Size	1.5 to 2.0 inches	1.5 to 2.0 inches	1.5 to 2.0 inches
3. Facial Features	1.5 to 2.0 inches	1.5 to 2.0 inches	1.5 to 2.0 inches



Clue 2:
Mouth
Width

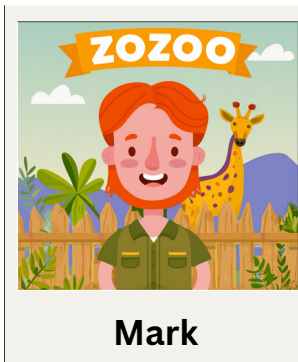
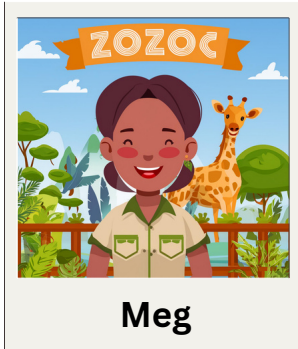
Mouth Width Analysis :Measurements show that the width of the suspect's mouth spans precisely 4 inches when measured from corner to corner.

Clue 3:
Nostril
Size

Nose Analysis: The distance between the nostrils of the suspect is a distinctive 1/2 inch.

WITNESS STATEMENTS

1. Meg the zookeeper saw Gorilla A near the banana stash shortly before the bananas went missing.
2. Meg the zookeeper also noticed Gorilla C eating bananas earlier that day.
3. Mark the zookeeper observed Gorilla E acting suspiciously near the banana stash
4. Mark the zookeeper overheard Gorilla D making noises that sounded like satisfaction.
5. Logan was visiting the zoo. He saw Gorilla B with banana peels.



Do you think each witness statement is reliable ? Why or Why not ?

Name:

Date:

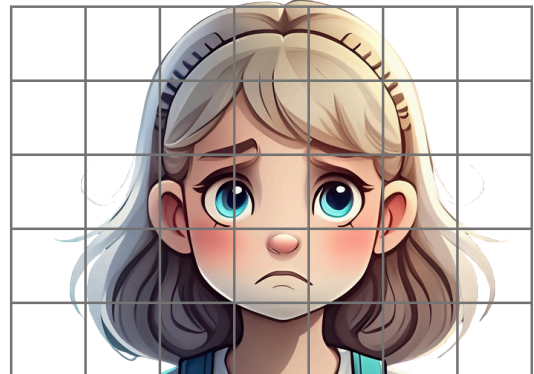
Face Grids

The face grids below show the . Note the differences in the features of the face different face grids with emotions: happy, sad, surprised, angry, and fearful.

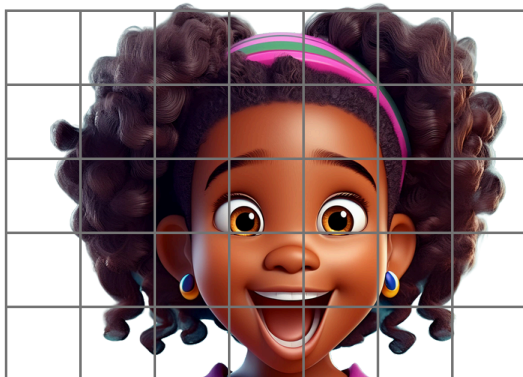
Happy



Sad



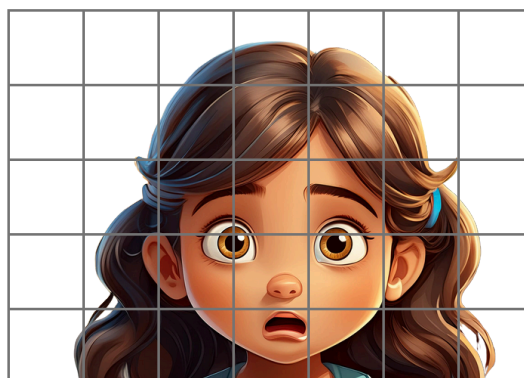
Surprised



Angry



Fearful



Name:

Date:

Measuring Facial Features

Objective: Measure the distances between key facial features and compare them.

Materials:

- Printed face grids
- Rulers
- Pencils

Instructions:

- Look at the face grid page.
- Measure the distance between the eyes, the width of the mouth, and the length of the nose.
- Record your measurements in the table provided.

Feature	Distance (cm)
Between Eyes	
Width of Mouth	
Length of Nose	

Questions:

Which feature is the widest??

Which feature is the longest?

How do these measurements change with different emotion?

Name:

Date:

Data Analysis of Emotions

Objective: Collect and analyze data to understand common patterns in facial expressions.

Materials:

- Printed face grids with different emotions
- Pencils
- Data recording sheet

Instructions:

- Look at the different face grids with emotions: happy, sad, surprised, angry, and fearful.
- Measure and record the distance between the eyes and the mouth for each emotion.
- Fill in the table with your measurements.

Emotion	Distance Between Eyes (cm)	Width of Mouth (cm)
Happy		
Sad		
Surprised		
Angry		
Fearful		

Questions:

1. Which emotion has the widest mouth?

2. Which emotion has the smallest distance between the eyes?

3. What patterns do you observe in the data?

Name:

Date:



Differentiating Emotions Using Face Grids

Instructions:

- Study the face grids and identify key features (eyebrow position, mouth shape, eye shape).
- Use the emotion key to match each face grid with the correct emotion.

Emotion Key	Eyebrow Position	Mouth Shape	Eye Shape
Happy	Raised and relaxed	Curved upwards	Normal
Sad	Lowered and angled	Curved downwards	Normal
Surprised	Raised and arched	Open round shape	Wide open
Angry	Lowered and close together	Straight or curved down	Squinted
Fearful	Raised and close together	Open round shape	Wide open

Matching Table:

Face Grid Number	Emotions
1	
2	
3	
4	
5	

Questions:

How do the positions of the eyebrows change with different emotions?

How does the shape of the mouth indicate different emotions?

What features helped you the most in identifying the emotions?

Drawing Bar Graphs

In the table below, record the measured distance of in the shows the number of students who use the mode of transportation to school. Draw a bar graph for the given data.

Emotions	Distance between x
x	
x	
x	
x	
x	

Draw your graph here: 

Emotions (x -axis) and the distance (y - axis)



Conclusion:

From the graph above, what did you observe about the change in the distance between x across the different emotions?

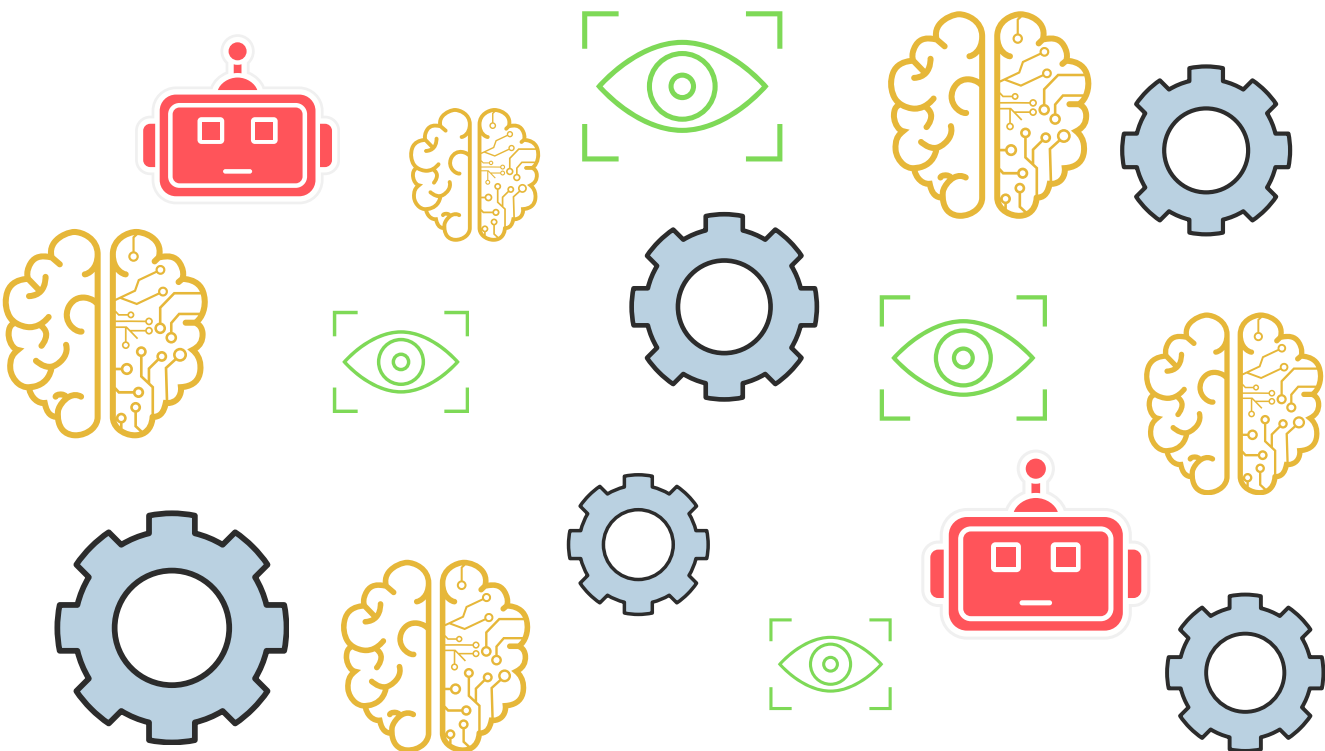
Name:

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COUNTING SHAPE



Count the geometric shape and color the chart according to the number you find for each of them.

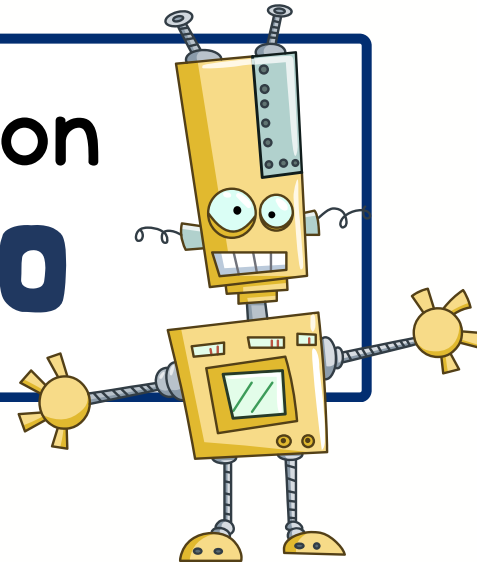
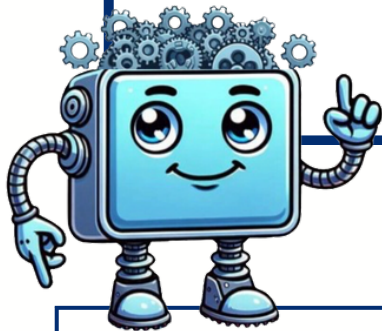


 AI Brain							
 ML Gear							
 Eye symbol							
 Robot Head							



Name:

Date:



Facial Recognition Check or No

Cameras in a retail store monitor customers to prevent theft and identify known shoplifters.	You enter your username and password on a website to log into your account.	You show a QR code on your phone to gain entry to a concert.
You ask your digital assistant to play your favorite song.	An interactive billboard shows ads tailored to the demographic profile of passersby detected through a camera system.	You hold your phone up to your face, and it unlocks without needing to enter a password.
A social media platform suggests tagging friends in a photo based on its ability to recognize their faces.	Your home security system uses motion detectors to alert you of any movement within your house when you're away.	Employees clock in and out by having their faces scanned by a device at the entrance.
You swipe your credit card and enter your PIN to complete a purchase.	You make a digital payment by looking at a camera that verifies your identity through facial features.	You walk up to a kiosk, look into a camera, and the system verifies your identity to allow you to proceed to your flight without showing your boarding pass.

Name:

Date:

Emotions

Facial recognition can be used to detect emotions.
Look at the pictures and write the names of the emotions

- | | | | |
|-------|---------|-----------|--------|
| Sad | Excited | Sleepy | Scared |
| Silly | Shy | Surprised | Hungry |
| Happy | Hurt | Tired | Angry |



Name:

Date:

Feelings

Look at the pictures and circle the correct words



Sad

Happy



Scared

Tired



Angry

Tired



Angry

Sad



Angry

Happy



Sleepy

Excited



Sad

Surprised



Tired

Worried



Excited

Nervous



Nervous

Calm

Name: _____

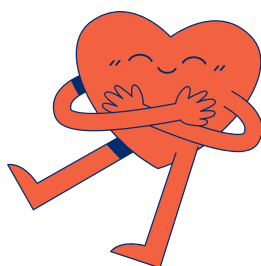
Date: _____

MEET MY EMOTIONS

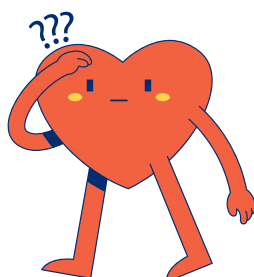
Different events make us feel different emotions.

Can you finish the sentences?

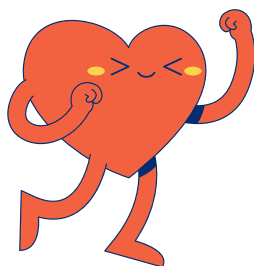
I feel happy when



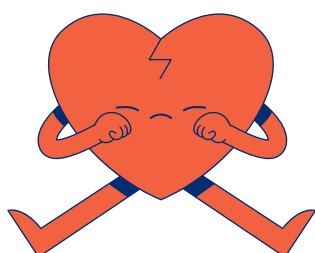
I get confused when



I feel proud when



It makes me sad when

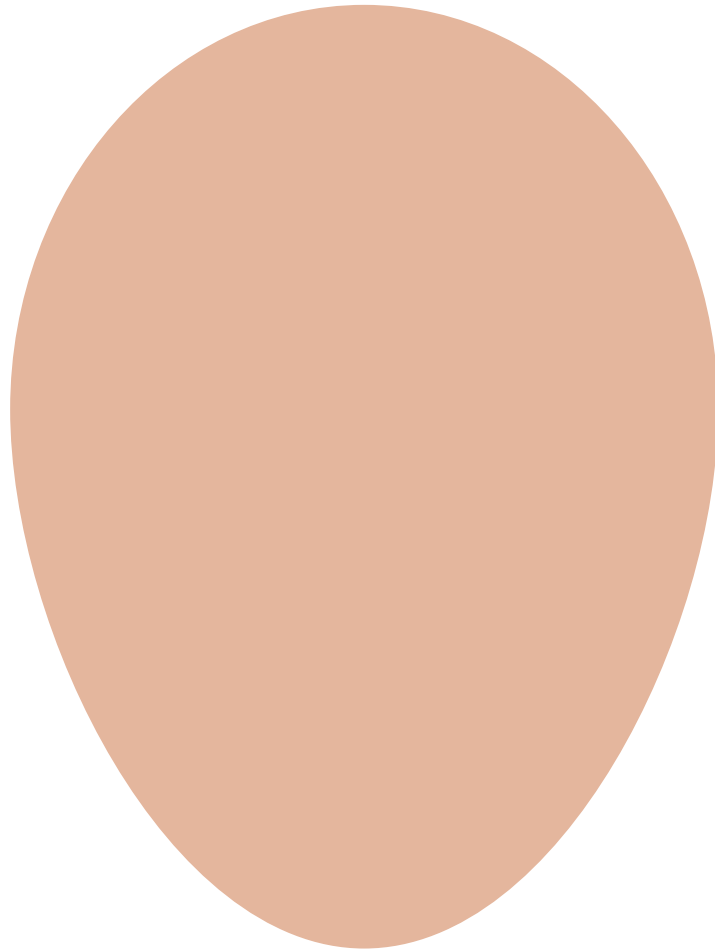


Name:

Date:

How do you feel today?

Draw on the face how you feel today and complete the sentence below. Add more features to the face like ears, hair, eye brow, and more.



I am _____.