

Data, Personal Data, and Privacy

Every click tells a story.





What Data Did You Create Today?

Your morning journey to school is full of data moments.



KEY IDEA

We create data even when we do not notice it.



What Is Data?

123

Numbers



Data is raw facts or details that can be collected, stored, and used.

Aa

Words



Images



Sounds



Videos



Locations



Dates and Times



Data vs Information



DATA = raw facts



Example 1: Temperature Readings

36, 37, 38, 39

These are just numbers.
On their own, they don't
tell us much.

Example 2: Survey Results



TikTok



YouTube



Instagram

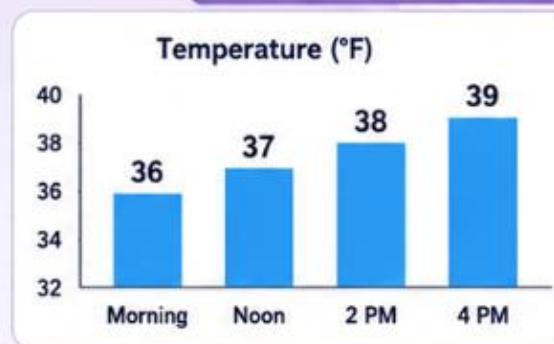
15 chose TikTok,
8 chose YouTube,
5 chose Instagram.

These are raw survey counts.
No meaning yet.



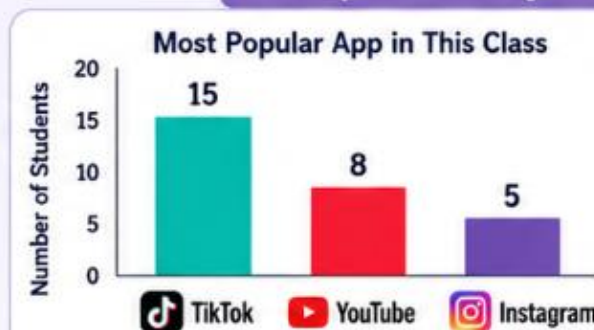
**INFORMATION = data that has been
organized and given meaning**

Example 1: Temperature Readings



The student's
temperature
increased during
the afternoon.

Example 2: Survey Results



TikTok is the
most popular
app in this class.



KEY TAKEAWAY: Data are raw facts and figures. **Information** is what we learn from data!



Types of Data



Data comes in different forms. The **two main types** are:

QUANTITATIVE DATA

can be counted or measured



Age

15 years



Height

165 cm



Score

85 / 100



Temperature

28 °C



Number of
Students

32 students



Quantitative data is **numerical**.
You can do math with it.

QUALITATIVE DATA

can be described



Color

Blue



Opinion

It's helpful



Taste

Sweet



Favorite
App

Instagram



Music Style

Pop



Qualitative data is **descriptive**.
You cannot do math with it.

QUANTITATIVE DATA		ASPECT	QUALITATIVE DATA	
	Numbers	What is it?		Words or descriptions
	Counted or measured	How is it collected?		Observed or described
	Math and statistics	How is it analyzed?		Grouping, themes, patterns
	Examples: age, height, score, temperature	Examples		Examples: color, opinion, taste, favorite app, music style



Both types of data are **important!** They help us understand the world in different ways.

What Is Personal Data?



1 Full Name
John Smith



2 Address
123 Maple St.
Springfield, USA



3 Phone Number
(555) 123-4567



4 Student ID
S12345678



5 Email
john.smith@school.edu



6 Photo



Personal data is data that can identify a person or give information about them.



7 Location
Springfield, USA



8 Birthday
May 14, 2008



9 Username
jsmith08



10 School
Springfield High School



11 Fingerprint / Face
Biometric data



12 Online Behavior
Websites visited,
likes, purchases



Some information may not identify you alone, but together it can reveal who you are.



Sensitive Personal Data



Some personal data is more sensitive because it can cause **serious harm** if misused.



Passwords

Can give unauthorized access to your accounts and personal information.



ID Card Number

Can be used for identity theft and fraudulent activities.



Bank Information

Can lead to financial loss, stolen funds, and unauthorized transactions.



Health Information

Can affect your privacy, discrimination risks, and emotional well-being.



Location History

Can reveal your daily routine, places you visit, and put your safety at risk.



Private Messages

Can expose personal conversations and relationships if leaked.



Face / Fingerprint Data

Biometric data is unique and cannot be changed if compromised.

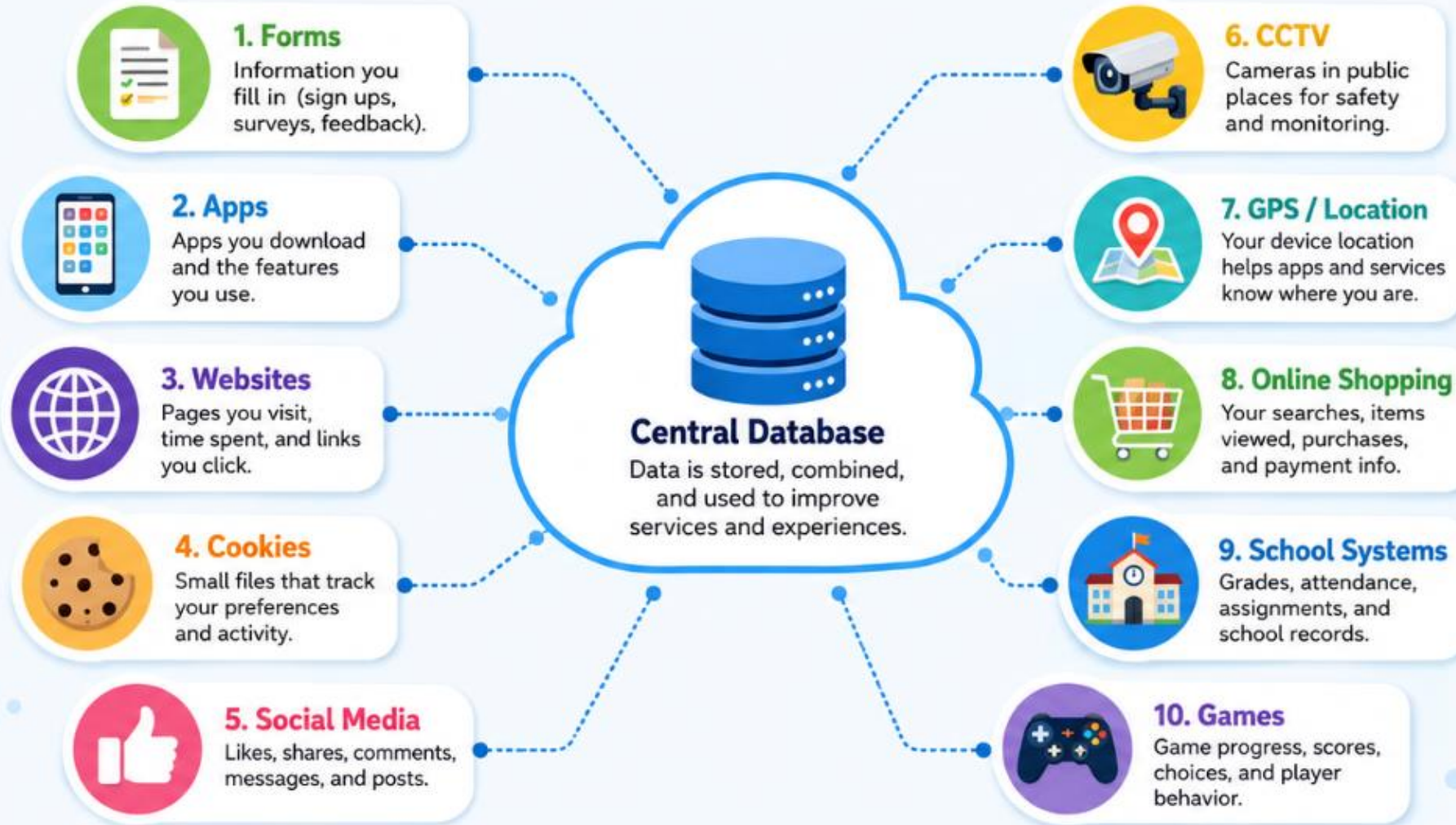


The more sensitive the data,
the more carefully it should be protected.



How Is Data Collected?

Data comes from everywhere you go online and offline.



DISCUSS!



Which of these collect data **with your permission?**



Which of these collect data **without you thinking about it?**



Think, pair, and share your ideas!



Not all data is bad! Data can help make services better and keep us safe.



Be smart. Be safe. Be in control.

Why Do Companies Collect Data?

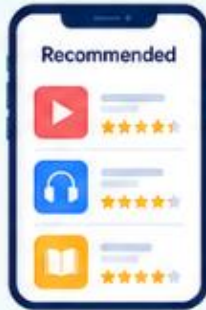
1 Improve Services

Data helps companies understand what works and what doesn't so they can improve features, fix problems, and create better experiences.



2 Recommend Content

Data helps companies suggest content, products, or services you might like based on your interests and activity.



3 Show Advertisements

Data helps companies show you relevant ads that may be more useful to you—and more valuable to them.



6 Analyze User Behavior

Data helps companies understand how people use their products and make decisions based on trends and patterns.



4 Remember Preferences

Data helps companies remember your settings, language, theme, and other preferences to personalize your experience.



5 Prevent Fraud

Data helps companies detect suspicious activity and protect users from fraud, scams, and unauthorized access.



7 Make Money

Data is valuable. Companies use it to grow their business, sell products or services, and in some cases, sell data (anonymized or aggregated) to partners.



Data can make services more useful,
but it can also create privacy risks.





Data Privacy Risks

When personal information is shared, it can be used in ways we don't want.

1



IDENTITY THEFT

Someone steals your personal information and pretends to be you.

2



SCAMS

People use your data to trick you into giving them money or information.

3



TARGETED ADS

Companies use your data to show ads meant to influence what you buy or do.

4



EMBARRASSMENT

Your private information or photos could be shared without your permission.



Our data matters because it can be **stolen**, **misused**, or used to **influence** us.



5



ACCOUNT HACKING

Hackers break into your accounts and steal your data or money.

6



TRACKING LOCATION

Apps and websites can track where you go and build a map of your movements.

7



REPUTATION DAMAGE

False or private information can be shared and hurt your reputation.

8



UNFAIR DECISIONS

Your data could be used to judge you unfairly for school, jobs, or opportunities.



Remember from earlier lessons:



Think before you share.



Use strong privacy settings.



Be kind and respect others.



Protect your data. Protect your future.

How to Protect Personal Data



Small choices can protect big parts of your life.



Mini Activity: Is It Personal Data?

For each example, decide which category it belongs to.



A. Not personal data

Information that does not identify a specific person and cannot be used to identify them.



B. Personal data

Information that can identify a person or give information about them.



C. Sensitive personal data

Personal data about private or sensitive topics that should be extra protected.

How to answer



1 finger
= A



2 fingers
= B



3 fingers
= C



Look at each example carefully before choosing.



Think first. Then decide.



Is It Personal Data?

Round 1: Easy Examples



= Not personal data



= Personal data



= Sensitive personal data



Favorite color



Phone number



**Number of
students in M4**



Student ID



Choose **A**, **B**, or **C** for each example.

Is It Personal Data?

Round 2: Challenge Examples



= Not personal data



= Personal data



= Sensitive personal data



Class photo



Game username



Location history



Test score



Choose **A**, **B**, or **C** for each example.

Case Study: A Free Game App



 **"Mega Racer" Would Like to Access the Camera**
This lets you take photos and record videos.

Don't Allow

Allow

 **"Mega Racer" Would Like to Access the Microphone**
This lets you voice chat with other players.

Don't Allow

Allow

 **"Mega Racer" Would Like to Send You Notifications**
This lets you know about events and rewards.

Don't Allow

Allow



 **"Mega Racer" Would Like to Access Your Location**
This lets us show you nearby events and offers.

Don't Allow

Allow

 **"Mega Racer" Would Like Access to Your Contacts**
This lets you find and invite your friends.

Don't Allow

Allow

 **"Mega Racer" Would Like to Access Your Photos**
This lets you upload pictures and share!

Don't Allow

Allow



Think and Discuss

1



Which permissions are necessary?

2



Which permissions are suspicious?

3



What should the student do before accepting?



Free apps may ask for more data than they really need.

Data Detective Activity

Profile A



M4BasketballBoy

Follow

128

Posts

356

Followers

210

Following

🏀 Basketball is life 🏀

📖 8th Grade |
Springfield Middle School

📞 (555) 123-4567
Call or text me!

🎮 Gaming, Music, Friends

📅 May 14, 2008
(My Birthday!)



M4BasketballBoy

May 14 · 🌐

It's my 16th birthday today! 🎉🍰
Thanks to everyone who made my day awesome!



74

23 Comments



M4BasketballBoy is at 📍 Springfield Middle School

May 15 at 3:45 PM · Springfield, USA · 🌐

Practice done! 🏀💪



35

5 Comments



Let's Discuss



What personal data is visible?

.....

.....

.....



What risks could happen?

.....

.....

.....



What should be changed?

.....

.....



Too much public information can reveal more than you expect.



Data Detective Activity

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Let's Discuss



What personal data is visible?

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.....



What risks could happen?

.....

.....



What should be changed?

.....

.....



Too much public information can reveal more than you expect.



Data Detective Activity

Profile B



soccer.grace16

Follow

Message



156 posts

842 followers

412 following

Grace M. ❤️

Sophomore @ Springfield High School 💙💛

Varsity Soccer #16 ⚽

14 years old • May 12 (birthday girl!) 🎂

Springfield, USA 📍

Life's better with friends, family & Friday night lights ✨

Email me! gracemoore16@gmail.com ✉️



Soccer Life



Besties



Springfield



My Dog



Concerts



Gaccer dye!
Springfield High vs. Central
📍 Springfield Stadium



Sleepover at Ava's!
123 Oakwood Dr, Springfield 🏠



First day back!
Sophomore Year 😊
Room 214



Let's Discuss



What personal data is visible?



What risks could happen?



What should be changed?

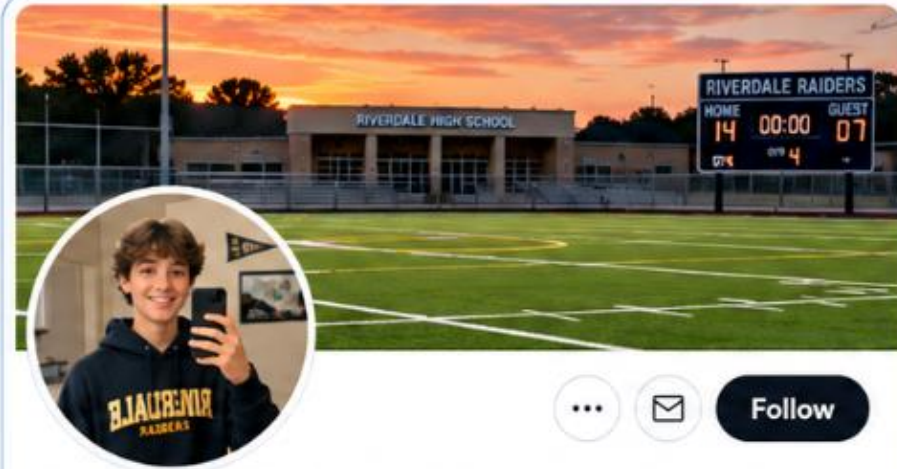


Too much public information can reveal more than you expect.



Data Detective Activity

Profile C



Cameron Blake ✓

@CamB_16

Sophomore at Riverdale High School | #16 Varsity Soccer 🏆
Student Council • Honor Roll • Aspiring Sports Journalist
Romans 8:31

📍 Riverdale, OH 🔗 cameronblakeblog.com ⌚ Born May 14, 2009

✉️ cblake16@gmail.com 📅 Joined March 2023

278 Following 612 Followers

Posts

Replies

Media

Likes



Cameron Blake @CamB_16 · May 14

16 today! 🎉 Can't believe I'm officially a sweet 16 😊
Thanks to everyone who made my day awesome!



💬 23

🔄 12

❤️ 98

📊

📤



Cameron Blake @CamB_16 · May 16

Game day! ⚽ Riverdale vs. Westview tonight at 7pm.
Come out and support! 💙 #RaiderPride

💬 8

🔄 5

❤️ 47

📊

📤



Cameron Blake @CamB_16 · May 18

Study session in the library before 3rd period 📖
APUSH test tomorrow 😊

💬 6

🔄 3

❤️ 22

📊

📤



Cameron Blake @CamB_16 · May 20

At the conference track meet with Emma!
Go Riverdale! 🏃💨

📍 Riverdale High School Track



Let's Discuss



What personal data is visible?

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.....



What risks could happen?

.....

.....

.....



What should be changed?

.....

.....

.....



Public posts can reveal more than you think.
Think before you post!



Data Detective Activity

Profile D



emma_loves_life 🌸

Emma ☆ stay positive

Follow

Message



312 Following 2,458 Followers 45.6K

🏠 Riverview High School | 10th Grade

📍 Austin, Texas USA

📅 May 22 (Gemini ♊)

💖 cheer • soccer • coffee • friends

📸 Snap: emma_22xoxo

✉ emma.smith22@riverviewhs.edu

🔗 linktr.ee/emma_loves_life



Videos

🔄 Reposts

🔒 Liked



▶ 24.3K

Riverview High 🌟



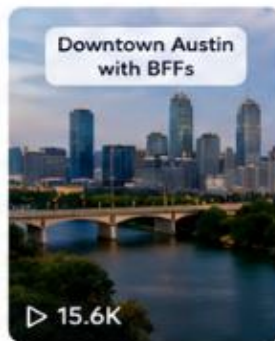
▶ 18.7K

Beat Westlake! 🏈



▶ 11.2K

Starbean's = best ☕



▶ 15.6K

Perfect weekend 🌉



▶ 9.8K

Room tour 🏠



Let's Discuss



What personal data is visible?



What risks could happen?



What should be changed?



Think before you share. Public profiles can expose private information.





Exit Ticket



Complete the sentence:

One type of personal data I should
protect more carefully is _____
because _____.



Your data is valuable. Think before you share!



Reflection Prompts



Privacy

Why is it important to keep this information private?



Passwords

How can strong passwords help protect you?



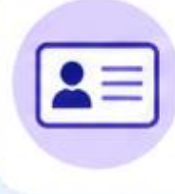
Location

Why should you be careful about sharing your location?



Photos

What should you think about before sharing a photo?



Personal Information

What are some examples of personal information?