

GRADES 6–8 · AGES 11–14 · 50 MINUTES · PHILOSOPHICAL CHAIRS

Should apps learn about you from your friends?

THE PROPOSITION

"Apps should be allowed to use who your friends are to suggest, sort, or guess things about you."

Philosophical chairs on social graphs: apps that suggest friends, guess things about you from your connections, and catch fake accounts by the company they keep. Three real cases, a seat-switching debate, and one rule each pair writes for how apps may use who you know.

STUDENTS WILL BE ABLE TO

- Explain what a social graph is and name two things apps use it for.
- Argue whether an app may learn about you from your friends, citing a case, and switch sides when persuaded.
- Write one rule for how apps use connections and say what it costs.

VOCABULARY FROM THE FIELD GUIDE

Graph (nodes and edges) · Social graph · Community detection · PageRank / centrality · Privacy (when using AI) · Consent (data use)

WHAT'S IN THIS PACK

- Teacher guide: background, vocabulary, agenda, format, positions, questions, roles, rubric.
- Student handouts (photocopy one per student): position organizer, sentence starters, exit ticket.
- Standards: CCSS ELA SL.7.1 / SL.8.1; CCSS ELA SL.7.3 / SL.8.3 (evaluate reasoning and evidence); CSTA 2-IC-23 (tradeoffs between public and private information); C3 Framework D2.Civ.10 (rights and responsibilities).

PRINT

US Letter, plain paper, duplex. Teacher pages once; student pages one per student. Free to photocopy for classroom and homeschool use. Not for resale.

Background for the teacher

Read this before class. Students get a version of the same facts on their handout; you get the framing and the traps.

A social graph is the map of who is connected to whom on an app: friends, follows, contacts, who messages whom. Apps use it all the time. 'People you may know' suggestions come from mutual friends and from address books other people uploaded – which is how an app can suggest someone you met once, and how it can hold the phone number of a person who never signed up.

The graph also lets an app guess. A 2010 study of a university social network found that when only about one in five students listed details like their major or class year, those details could be guessed for many of the rest just from who their friends were, because friends tend to share them. A 2017 study found the same kind of guessing works on people with no account at all, using what their friends shared. Researchers call these 'shadow profiles.'

The same connections also protect people. Fake accounts tend to stick together: they connect to each other far more than to real people, so a system that looks at the whole graph can find rings of them at once. In one published test on a real network, about nine out of ten accounts a graph method ranked most likely fake really were. That is the strongest version of the 'agree' side, so make sure the room hears it.

The question is not whether graphs are good or bad; it is who gets a say. Your friend can upload their contacts, and you never agreed. Push both sides toward a rule: an off switch, a limit on what may be guessed, or a ban on guessing certain things.

RUNNING DISCUSSION IN GRADES 6–8

Evidence enters the room. Students can hold a position they don't believe, and that's the point.

- Assign sides. Arguing a position you didn't choose is the fastest way to learn what the other side actually thinks.
- Require one piece of evidence per claim – a fact from the background sheet, a personal example, or a definition.
- Separate 'what is true' from 'what should we do.' Most middle-school debates tangle the two.
- Watch for the pile-on. If one side is winning on volume, pause and give the other side a 60-second huddle.

Vocabulary

Pulled from the Hi, Bot AI concepts field guide (hibot.space/learn/concepts). Read each card aloud, then have the class rewrite it in ten words or fewer.

Graph (nodes and edges)

Dots and lines: things, and how they're connected.

In computing, a graph isn't a bar chart – it's a set of things (nodes) and the connections between them (edges). Friends on a social app, web pages linking to each other, roads between towns, and atoms in a molecule are all graphs. Edges can point one way (a link from one page to another) and can carry labels ("is the parent of"). Some databases store a graph as nodes with properties attached, others as long lists of subject-relationship-object facts; either way, the connections are the data.

Social graph

The map of who knows whom – and what an app can guess from it.

A social graph is the network of people and their connections on a service: friends, follows, contacts, who messages whom. Apps use it to suggest "people you may know," rank feeds, and spot fake accounts. It also lets a service guess things you never told it – researchers have shown that details a person kept private, like their school or class year, can often be inferred from what their friends share publicly. Contact uploads can even put people who never signed up into the graph.

WHERE PEOPLE ARGUE

Is a connection your data, your friend's, or both? When a friend uploads their contacts, you didn't consent – and privacy rules written for individual records don't neatly answer who gets a say.

Community detection

Finding the clusters in a network – friend groups, fan bases, bubbles.

Community detection splits a network into clusters with many connections inside and few between: friend groups, fan communities, neighborhoods of related web pages. Popular methods (Louvain, Leiden) keep merging nodes into groups as long as that inside-versus-between score improves. Platforms use clusters to recommend content and to catch coordinated spam accounts – and the same grouping can narrow what people see, reinforcing a filter bubble.

PageRank / centrality

Important = pointed at by important things.

PageRank was Google's original idea for ranking web pages, published in 1998: a page is important if important pages link to it. Picture a surfer who clicks random links and now and then jumps to a random page – the pages where they spend the most time rank highest. Modern search mixes in many other signals. More broadly, "centrality" is the family of ways to score importance in a network, from the most-connected node to the one that sits on the most shortest paths between others (a bridge).

WHERE PEOPLE ARGUE

Any ranking built on links can be gamed: link farms are fake pages that point at each other to look important. Search engines and spammers have fought over this since the start.

Privacy (when using AI)

What you paste into a model may be stored, logged, or used to improve products.

Privacy in AI use means knowing whether your prompts are retained, reviewed by humans, used for training, or shared with subprocessors. Enterprise tiers often offer "no training on customer data"; consumer free tiers may not. Treat prompts like email to a third party: don't send secrets you wouldn't want leaked.

Consent (data use)

Whether people agreed to their data being used to train or fine-tune systems.

Consent questions arise when personal writing, medical records, student work, or biometric data might enter a training or fine-tuning pipeline. Schools and companies often ban pasting identifiable student data into public models for this reason. "Public on the web" is not the same as "consented for AI training" in many ethical frameworks.

Warm-up

6 minutes.

Each student draws themselves as a dot, then five dots for people they know (initials or 'Friend A' only; nobody shares their drawing), and lines between people who know each other. Ask: 'If an app saw only this drawing, what could it guess about you?' Collect guesses out loud – school, interests, roughly how old you are.

Agenda - 50 minutes

Minutes	Segment	What happens
0-6	Warm-up	Draw a private mini social graph. What could an app guess from it?
6-14	Cases + vocabulary	Read the three cases (people you may know, guessing from friends, catching fake accounts) and the vocabulary cards. Each student writes one claim.
14-38	Philosophical chairs	Agree / Disagree lines, plus an Undecided row for 'only with an off switch.' Restate the last speaker before answering. Switch seats any time and say what moved you. Teacher tallies switches.
38-45	Write a rule	Pairs write one rule apps must follow when they use your friends, and what that rule costs (worse suggestions, more fake accounts, more work).
45-50	Exit ticket	Handout. Share the switch tally and two of the rules.

How philosophical chairs runs

Chairs face each other in two lines – Agree and Disagree – with a short Undecided row at the end. A speaker from one side speaks; the other side must summarize what was said before responding. Anyone may switch seats at any time, and switching is praised, never mocked.

GROUND RULES – POST THESE

1. Attack ideas, never people. "That claim has a hole" – not "you're wrong."
2. One voice at a time. The listener's job is to be able to repeat what was said.
3. Evidence beats volume. A quiet fact outranks a loud opinion.
4. Changing your mind is winning. Say so out loud when it happens.
5. Restate the last speaker before you answer.
6. Talk about apps and examples, never about classmates' real friends.

The two positions

Starter arguments are scaffolds, not scripts. Strong teams find their own. Assign sides where the format calls for it; students record their real view on the exit ticket.

Agree – connections make apps useful and safer

Using who you know helps you find friends, see things you'll like, and keeps fake accounts out.

- Fake accounts stick together, so the graph is how you catch them.
- Suggesting people I actually know saves me time.
- If my friends like something, I might too. That's how good suggestions work.

Disagree – my friends aren't my permission

An app shouldn't learn things about me from other people's choices.

- My friend uploaded their contacts. I never agreed to that.
- Guessing my age or school from my friends is still learning about me without asking.
- Being in a group with someone doesn't make me like them.

Discussion questions

OPENING

1. What's one thing an app could guess about you just from who your friends are?

CORE

1. Is a guess about you private information, even if it's only a guess?
2. Your friend uploads their contacts and your number is in it. Whose information is that?
3. Is catching fake accounts worth letting apps study everyone's connections?

CLOSING

1. Write one rule apps must follow when they use your friends. What does it cost?

Roles

Role	Job
Line speaker	Speaks for your side. Restate the last speaker before answering.
Switch tracker	Counts seat switches and writes down the reason each switcher gives.
Evidence keeper	Notes every time someone names one of the three cases. Reports the count at the end.
Rule writer	Writes the pair's rule and its cost in two sentences.

Assessment rubric

Share this before the debate. Judges and self-assessors use the same sheet. 'Meets' is the target; note above or below in the margin.

Criterion	Meets
Claim	States a clear position that answers the question.
Evidence	Supports each claim with a fact, definition, or specific example.
Response	Restates the other side accurately before rebutting.
Vocabulary	Uses at least two lesson terms correctly.

Criterion	Meets
Conduct	Follows ground rules; invites quieter voices in.

Exit ticket prompts

1. A social graph is ____.
2. One thing an app could guess about me from my friends: _____. Is that OK? ____ because _____.
3. My rule for apps that use friends: _____. Its cost: _____.

Extension

With a grown-up, open the suggested-people list in an app they use. For three suggestions, guess why the app picked that person (mutual friends, a school, uploaded contacts, location). Then play the free Who's Important? dice game at hibot.space/games/whos-important to see how a network decides who matters.

SEND HOME

Ask at home: 'Has an app ever suggested someone you know before you'd told it anything about them? How do you think it knew?'

STANDARDS ALIGNMENT

- CCSS ELA SL.7.1 / SL.8.1
- CCSS ELA SL.7.3 / SL.8.3 (evaluate reasoning and evidence)
- CSTA 2-IC-23 (tradeoffs between public and private information)
- C3 Framework D2.Civ.10 (rights and responsibilities)

More lessons by grade band, and the full AI concepts field guide, at hibot.space/learn/debates. Tell us how it went: hello@hibot.space.

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"Apps should be allowed to use who your friends are to suggest, sort, or guess things about you."

WHAT YOU NEED TO KNOW

A social graph is the map of who is connected to whom on an app: friends, follows, contacts, who messages whom. Apps use it all the time. 'People you may know' suggestions come from mutual friends and from address books other people uploaded – which is how an app can suggest someone you met once, and how it can hold the phone number of a person who never signed up.

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The question is not whether graphs are good or bad; it is who gets a say. Your friend can upload their contacts, and you never agreed. Push both sides toward a rule: an off switch, a limit on what may be guessed, or a ban on guessing certain things.

WORDS WE'LL USE

Graph (nodes and edges) – Dots and lines: things, and how they're connected.

Social graph – The map of who knows whom – and what an app can guess from it.

Community detection – Finding the clusters in a network – friend groups, fan bases, bubbles.

PageRank / centrality – Important = pointed at by important things.

Privacy (when using AI) – What you paste into a model may be stored, logged, or used to improve products.

Consent (data use) – Whether people agreed to their data being used to train or fine-tune systems.

MARK IT UP

Underline one sentence you agree with. Circle one you doubt. Write one question in the margin. Bring all three to the discussion.

Position organizer

Proposition: "Apps should be allowed to use who your friends are to suggest, sort, or guess things about you."

Name: _____ Side (assigned or chosen): _____

OUR CLAIM, IN ONE SENTENCE

THREE REASONS – AND THE EVIDENCE FOR EACH

Reason 1:

Evidence (a fact, a definition, or a specific example):

Reason 2:

Evidence (a fact, a definition, or a specific example):

Reason 3:

Evidence (a fact, a definition, or a specific example):

WHAT THE OTHER SIDE WILL SAY – AND OUR REPLY

Their best argument:

Our reply:

VOCABULARY I WILL USE CORRECTLY

☐ Graph (nodes and edges) ☐ Social graph ☐ Community detection ☐ PageRank / centrality ☐ Privacy

(when using AI) [] Consent (data use)

Sentence starters

Use these until you don't need them. The goal is to respond to what was actually said.

- What I heard ___ say is ___.
- I'm moving to ___ because ___.
- That's true for fake accounts, but for ___.
- A guess about me is / isn't private because ___.
- My rule would be ___, and it would cost ___.

GROUND RULES

1. Attack ideas, never people. "That claim has a hole" – not "you're wrong."
2. One voice at a time. The listener's job is to be able to repeat what was said.
3. Evidence beats volume. A quiet fact outranks a loud opinion.
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5. Restate the last speaker before you answer.
6. Talk about apps and examples, never about classmates' real friends.

HOW PHILOSOPHICAL CHAIRS WORKS

Chairs face each other in two lines – Agree and Disagree – with a short Undecided row at the end. A speaker from one side speaks; the other side must summarize what was said before responding. Anyone may switch seats at any time, and switching is praised, never mocked.

YOUR ROLE TODAY

Role: _____

Role	Job
Line speaker	Speaks for your side. Restate the last speaker before answering.
Switch tracker	Counts seat switches and writes down the reason each switcher gives.
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LISTENING TALLY

Keep count while others speak. Claims: ____ Evidence: ____ Questions: ____ Vocabulary used: ____
Minds changed: ____

Exit ticket

"Apps should be allowed to use who your friends are to suggest, sort, or guess things about you."

Name: _____ Date: _____

A social graph is ____.

One thing an app could guess about me from my friends: ____ Is that OK? ____ because ____.

My rule for apps that use friends: ____ Its cost: ____.

SELF-ASSESSMENT

Criterion	Meets looks like	Me today (above / meets / below)
Claim	States a clear position that answers the question.	
Evidence	Supports each claim with a fact, definition, or specific example.	
Response	Restates the other side accurately before rebutting.	
Vocabulary	Uses at least two lesson terms correctly.	
Conduct	Follows ground rules; invites quieter voices in.	

TAKE IT HOME

Ask at home: 'Has an app ever suggested someone you know before you'd told it anything about them? How do you think it knew?'