

Samsung Solve for Tomorrow

AI BOOTCAMP **MARK CUBAN**
FOUNDATION

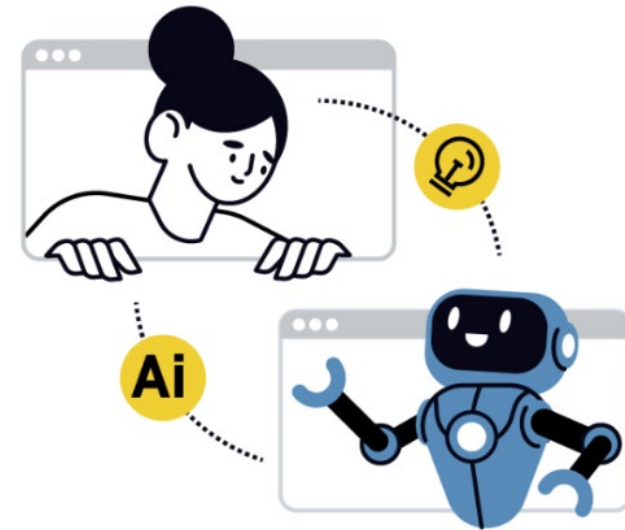
Lesson 4:
Using AI Agents for Research
and Comparison



Think About It

You tell Siri
— remind me about stuff —
It sets a reminder, checks your
calendar, and texts your friend.

Did YOU do those things or did the AI?



What is an AI Agent?

Not all AI is the same.

Chatbot

You ask a question

It answers

Done

AI Agent

Plan – Breaks the goal into steps

Act – Uses tools: search, code, write

Check – Evaluates what it got back

Adjust – Tries again if needed

Choosing Your AI Agent

Different tools. Different strengths.

Claude - deep research, writing code, building interactive artifacts

Perplexity - real-time web research with cited sources

Canva AI - design + polished visual outputs

ChatGPT - general task, brainstorming, conversation

Pro Move

Use multiple agents strategically - one for research, another for design, another for writing.

The BRIEF Framework



Background

Situation
Context



Role

Who the AI
should be



Input

The info it
must use



End Goal

What a great
answer looks like



Format

Layout,
length, style



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Activity #1: Design Your Agent

I'm a high school student working on a comparative analysis project. I need to objectively compare two options using specific criteria to understand their relative strengths and weaknesses.

Items to Compare:

- Item A: [Item A]
- Item B: [Item B]

Evaluation Criteria:

1. [Criteria 1]
2. [Criteria 2]
3. [Criteria 3]
4. [Criteria 4]
5. [Criteria 5]

Please search the web for current, reliable data about both items. For each criterion:

- Provide specific data, statistics, or concrete examples
- Cite credible sources with links
- Assign a score from 1-10 with clear reasoning
- Note any significant differences or trade-offs

Present your findings as a comparison table with these columns:

- Criterion
- Item A (details + score)
- Item B (details + score)
- Key Insights

After the table, provide:

- A 2-3 sentence summary of key findings
- Any limitations or areas where data is incomplete
- One surprising insight from the comparison

Activity #1: Design Your Agent

- 1 Open the [AI Agents Prompting](#) and make a copy
- 2 Choose your two items
 - Business & Entrepreneurship - e.g. McDonald's vs Burger King
 - Sports & Fitness - LeBron vs Jordan
 - Arts & Entertainment - Netflix vs Disney+
 - Healthcare - Yoga vs Running
 - Ecology - Solar vs Wind energy
 - Computer Science - iOS vs Android
- 3 Pick five criteria
 - Cost/Affordability - Performance/Effectiveness -
 - Innovation/Creativity - Environmental Impact - User
 - Experience - Market Success - Historical
 - Significance - Technical Advancement -
 - Accessibility - Safety Record - Educational Value -
 - Global Reach - Create your own

10:00



Yoga vs Swimming

Yoga = A

Swimming = B

CRITERION	YOGA (A)	SWIMMING (B)	KEY INSIGHT
⌘ Accessibility	Practiced by ~37 million Americans (19% of the population). Can be done at home, outdoors, or in a studio. Free YouTube videos and apps exist; chair yoga adapts it for people with mobility issues. No facility required. 9 /10	Requires a body of water — public pools may be unavailable in rural areas or subject to hours/weather. ADA regulations require accessible pool entry (lifts, slopes) for most public facilities, but gaps remain. Open-water swimming is free but seasonal. 6 /10	Yoga wins heavily — it can be done anywhere with zero infrastructure. Swimming depends on facility access that varies significantly by geography and income. Winner: Yoga
💰 Cost	A basic yoga mat costs \$10–\$30. Studio classes run \$5–\$20/session; average US practitioner spends ~\$90/month (~\$1,080/year). Free apps and YouTube eliminate that cost entirely. Minimal required equipment. 8 /10	Individual swim club memberships run \$200–\$400/year; family plans \$400–\$900/year. YMCA offers sliding-scale fees and financial assistance. Required gear: swimsuit, goggles (~\$15–\$40), optional cap. Pool access is the main expense. 6 /10	Yoga is significantly cheaper — it can cost literally \$0. Swimming's cost is dominated by pool access fees, though YMCA financial assistance helps lower-income participants. Winner: Yoga
	Proven benefits: improved flexibility, core strength, mental health, stress reduction, and lung function. A PubMed study	Meta-analysis of 2.6M participants (NCBI, 2024) found swimming reduces all-cause mortality risk by 15%. Also improves body	Swimming edges yoga for physical/cardiovascular health; yoga leads for mental health and



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Activity #2: Put Your Agent to Work

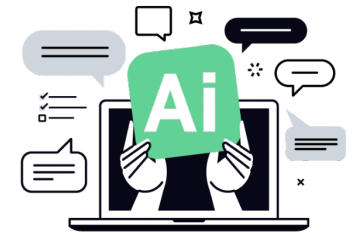
WHAT TO DO

1. Open claude.ai - Sign in/Create an account with your school login
2. Type your BRIEF prompt - copy from the yellow section of your spreadsheet
3. Read carefully - Does anything look wrong or surprising?
4. Push back - "Verify the date for [criterion]" or "Find more recent info"

WHAT TO LOOK FOR

1. Scores that seem too high or too low
2. Claims without a source
3. Data that feels outdated
4. Clear, specific comparisons
5. Something you can fact-check

10:00



Debrief – Activity #2

- 1 What did Claude get right? What did you have to correct or question?
- 2 Did your follow-up questions improve the output? What changed?
- 3 How could you tell if Claude was being confidently wrong?



COMPARATIVE HEALTH ANALYSIS

Staying Healthy

A data-driven comparison of Yoga and Swimming across five key wellness criteria

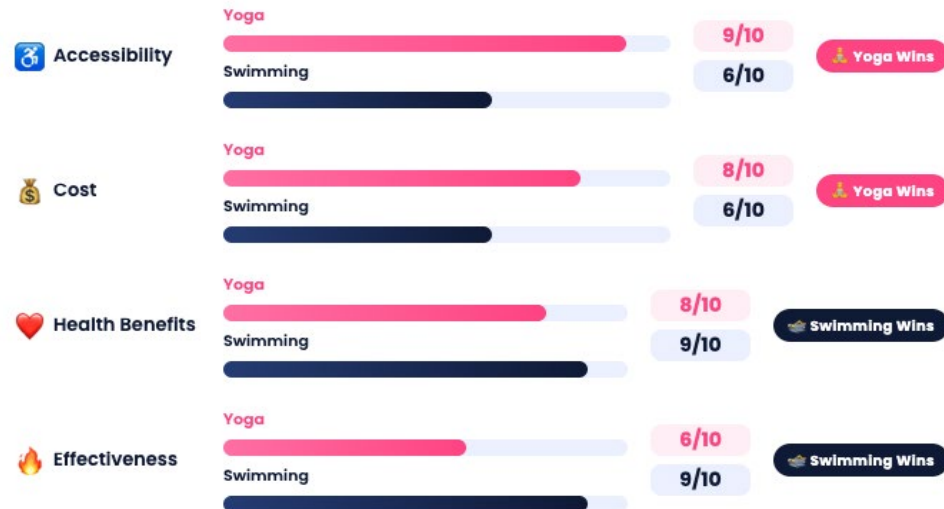
● 🧘 Yoga

● 🏊 Swimming

■ Bar Chart

○ Radar Chart

▦ Detail Cards



Activity #3: Create an Interactive Artifact

Type this prompt into Claude

Based on our analysis, create an interactive HTML visualization.

Requirements:

- Project Title: [*your title*]
- Color Scheme: [*e.g. pink + dark blue*]
- Font: [*e.g. Arial*]

Include: hover effects with scores, bar / radar / card toggle, animations, and a winner indicator per criterion.

- 1. Customize first**
Add your title, colors, and font before sending
- 2. Interact with it**
Hover, click, and toggle — does it work?
- 3. Specific feedback**
"Make bars vertical"
- 4. Stuck? Retry**
"Rebuild the entire artifact from scratch."

10:00



Debrief – Activity #3

- 1 Walk us through your artifact. What does it show and what surprised you?
- 2 Did the visualization change how you read the comparison? Why or why not?



What is an AI Agent?

AI agents complete tasks – YOU define the goal

What AI agents can do

Search and synthesize vast information

Generate and iterate on code and visuals

Run the same task 1,000 times without fatigue

Complete routine multi-step workflows

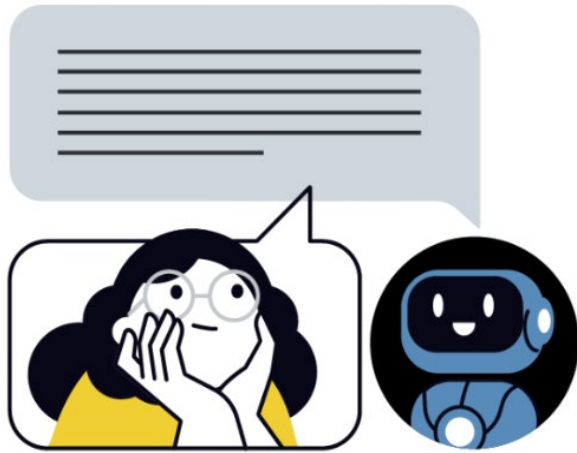
What only YOU can do

Decide what question matters

Judge whether the output is trustworthy

Bring real-world context and values

Take responsibility for the result



The AI did the research, built the visualization, and wrote the code.

What did you contribute today?

Does that answer make you feel confident or nervous?