

The AI Tech War

Geopolitics Series — Worksheet 3 of 3 | Reading & Discussion | Intermediate–Upper Intermediate

Name: _____

Date: _____

Class: _____

PART 1 — Key Vocabulary

Study these words before reading. You will see them in the passages below.

| Word | Definition |
|--------------------------------|--|
| semiconductor | a material — usually silicon — that can conduct electricity under certain conditions; used to make computer chips |
| artificial intelligence | the ability of computers to perform tasks that normally require human thinking, such as understanding language or recognizing images |
| export ban | a government restriction that prevents certain goods or technologies from being sold to foreign countries |
| algorithm | a set of step-by-step instructions that a computer follows to solve a problem or complete a task |
| national security | the protection of a country from threats, including military attacks, espionage, and technology theft |
| dual-use technology | technology designed for civilian purposes that can also be applied to military uses |
| chip (microchip) | a tiny piece of semiconductor material containing billions of electronic circuits, used in every digital device |
| innovation | the creation of new ideas, products, or methods that improve on what already exists |
| surveillance | close, continuous monitoring of people or places — often using cameras, sensors, or digital tracking tools |
| data sovereignty | the principle that data collected in a country is subject to that country's laws and cannot be freely moved abroad |
| arms race | originally competition for more powerful weapons; now also used for technology competition such as AI |
| large language model | a type of AI trained on vast amounts of text that can generate human-like writing and reason through problems |

PART 2 — Vocabulary Practice

A. Matching: Write the number from Column A next to the correct definition in Column B.

| Column A — Words | Column B — Definitions |
|-------------------------|--|
| 1. algorithm | A. step-by-step instructions a computer follows to solve problems |
| 2. surveillance | B. technology serving both civilian and military purposes |
| 3. dual-use technology | C. the idea that data is subject to the laws of the country where it was collected |
| 4. arms race | D. an AI trained on huge text datasets to generate human-like responses |
| 5. export ban | E. competition between nations to develop more powerful technology |
| 6. data sovereignty | F. a government restriction on selling technology to foreign countries |
| 7. large language model | G. monitoring people using cameras, sensors, or digital tools |

B. Fill in the Blank: Complete each sentence with a word from the vocabulary list.

1. ChatGPT and DeepSeek are examples of _____ — AI systems trained on enormous text datasets.
2. Both the US and China are investing heavily in AI research, creating what many experts call an AI _____.
3. The US government placed an _____ on advanced chip designs to prevent China from using them in military systems.
4. When apps collect data from users in China, the principle of _____ means that data can be accessed by Chinese authorities.
5. Critics worry that AI-powered cameras in public spaces create a _____ state where citizens are constantly watched.
6. Because advanced AI can be used to build weapons or analyze military intelligence, it is classified as _____.

PART 3 — Reading Passage 1

"The Race for AI Supremacy"

A New Kind of Arms Race

For most of human history, military power meant soldiers, ships, and weapons. Today, a new form of power is emerging: artificial intelligence. AI systems can analyze satellite images, predict enemy movements, crack encrypted communications, and generate disinformation at scale. Both the United States and China recognize that whoever leads in AI development will hold enormous advantages — economic, military, and political. The result is a technology arms race unlike anything since the Cold War.



A semiconductor fabrication facility. The machines required to make the most advanced chips cost over \$150 million each and are made by only one company in the world.

Why AI Matters for Power

AI's importance goes far beyond military applications. AI drives productivity gains in manufacturing, healthcare, finance, and logistics. Countries with strong AI ecosystems attract investment, produce higher-value exports, and employ more highly-paid workers. China's government published a plan in 2017 to become the world leader in AI by 2030. The US responded with massive investment, chip export controls, and restrictions on Chinese companies. The competition is no longer just about trade — it's about which country shapes the technological future.

The Rise of DeepSeek

In January 2025, a Chinese AI company called DeepSeek released a large language model that shocked the tech world. It performed comparably to leading American AI systems — but reportedly cost a fraction of the price to train. Crucially, it was built using chips far less powerful than those the US had banned from export to China. American tech stocks fell sharply. Policymakers questioned whether export bans were as effective as assumed. DeepSeek demonstrated that restricting hardware does not automatically stop a determined competitor.

Comprehension Questions: Answer in complete sentences.

1. Why do both the US and China consider AI development a national security priority?

2. What advantages does AI provide beyond military applications? List at least two from the passage.

3. What was China's stated goal in its 2017 AI development plan?

4. What was surprising about DeepSeek's AI model when it was released in January 2025?

5. What does the DeepSeek case suggest about the effectiveness of US chip export bans?

6. In your own words, explain why the AI race is compared to the Cold War nuclear arms race.

PART 4 — Reading Passage 2

"Chips, Bans, and the Future of Tech"

Why Chips Are the Battlefield

Training a powerful AI model requires enormous computing power — delivered by specialized chips called GPUs (Graphics Processing Units), made by companies like NVIDIA. The most advanced chips process AI calculations hundreds of times faster than standard processors. Because these chips are so critical to AI development, they have become the central battleground of the tech war. Whoever controls chip production controls the pace of AI progress.

| US vs CHINA: AI KEY FACTS (2025) | |
|--|--|
| UNITED STATES | CHINA |
| OpenAI • Google Meta • Anthropic NVIDIA chips Microsoft Azure AI export ban enforcer | DeepSeek • Baidu Alibaba • Huawei domestic chip push AI goal: #1 by 2030 surveillance leader |

Key players in the US-China AI race, 2025. Both sides are investing billions of dollars per year.

The US Export Ban

Beginning in 2022 and expanding through 2025, the US placed sweeping restrictions on advanced AI chip exports to China. NVIDIA's most powerful chips — the H100 and successors — were banned from sale to Chinese companies. The stated reason: national security. These chips could train AI for military uses, including autonomous weapons and advanced surveillance. Critics argued the bans were also economic protectionism — slowing China's tech industry by cutting off access to the best hardware.

China's Response

China responded on multiple fronts. The government poured billions into domestic semiconductor development. Chinese companies found workarounds — purchasing chips through third-party countries before US regulators closed loopholes. DeepSeek showed that competitive AI systems can be built with less powerful chips, given creative software and training techniques. China's long-term goal is 'chip independence' — a domestic supply chain that cannot be disrupted by foreign governments.

Who Controls the Future?

The AI tech war raises profound questions about the future of technology and society. AI systems built in different countries reflect different values and laws. An AI trained under Chinese law must follow government censorship rules. An AI trained under US law reflects American norms about free speech and privacy. As these systems spread globally, the country whose AI is most widely adopted will gain enormous influence — not just economic, but cultural and ideological. The battle over chips and algorithms is ultimately a battle over whose version of the world becomes the default.

A. True or False: Write T or F on the line.

1. ___ The US and China are currently the two leading nations in AI development.

2. ___ NVIDIA's most advanced chips are freely available for sale to any country in the world.

3. ___ DeepSeek is a Chinese AI model that surprised the technology world in January 2025.

4. ___ TSMC in Taiwan manufactures the most advanced chips used by AI companies worldwide.

5. ___ The US export ban on advanced chips applies only to Chinese military organizations.

6. ___ China's government set a goal of becoming the world leader in AI by 2030.

7. ___ Training a powerful AI model requires very little computing power, making chips less important.

8. ___ AI systems built in different countries may reflect different laws, values, and government rules.

B. Comprehension Questions: Answer in complete sentences.

1. Why are semiconductor chips so central to the AI arms race? What would happen without them?

2. What is the US export ban on chips, and what reasons has the US government given for it?

3. How did DeepSeek challenge US assumptions about the effectiveness of chip export bans?

4. What is the relationship between AI and surveillance? Give a specific example from the passage.

5. Why might critics argue that the US chip export ban is a form of economic protectionism, not just security policy?

6. How is the AI tech war connected to both the trade war (Worksheet 1) and the Taiwan situation (Worksheet 2)?

PART 5 — Fill in the Blank

Use the word bank to complete each sentence below.

Word Bank: *export ban | AI | surveillance | arms race | dual-use technology | data sovereignty | geopolitical*

1. The US placed an _____ on advanced NVIDIA chips, making it illegal to sell them to Chinese companies.
2. China's government wants to develop _____ systems that rival or surpass American technology by 2030.
3. AI _____ systems — which analyze faces and movements in real time — have been deployed in major Chinese cities.
4. When two countries compete to develop more powerful AI, they are engaged in a technological _____.
5. Advanced AI models like LLMs are considered _____ because they serve both business and military purposes.
6. The principle of _____ means data collected on Chinese platforms stays subject to Chinese law.
7. TSMC's dominance in chip manufacturing gives Taiwan enormous _____ leverage in the AI race.

Sources & Further Reading

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- MIT Technology Review. "DeepSeek: What Just Happened?" January 2025.
- US Bureau of Industry and Security. "Export Controls on Advanced Computing and Chips." 2023–2025.
- Kania, Elsa B. "Battlefield Singularity: AI, Military Revolution, and China's Future Military Power." CNAS, 2017.
- Video: "The AI Cold War" — DW Documentary (YouTube, 45 min)
- Video: "Why the US Is Banning Chips to China" — Wall Street Journal (YouTube, 8 min)

ANSWER KEY — The AI Tech War — For Teacher Use Only

PART 2A — Matching

- 1 – A (algorithm: step-by-step computer instructions)
- 2 – G (surveillance: monitoring with cameras/sensors)
- 3 – B (dual-use technology: civilian + military)
- 4 – E (arms race: competition for more powerful tech)
- 5 – F (export ban: restriction on selling tech abroad)
- 6 – C (data sovereignty: data subject to local law)
- 7 – D (large language model: AI trained on text)

PART 2B — Fill in the Blank

- 1. large language model
- 2. arms race
- 3. export ban
- 4. data sovereignty
- 5. surveillance
- 6. dual-use technology

PART 3 — Passage 1 Comprehension

- 1. AI provides military advantages (intel analysis, autonomous weapons) and economic advantages (productivity, exports).
- 2. Higher-value exports; attracting investment; higher-paid jobs (accept any two).
- 3. To become the world leader in AI by 2030.
- 4. It performed comparably to top US models but cost far less and used weaker chips.
- 5. Restricting hardware does not stop a determined competitor — software innovation compensates.
- 6. Both involve a high-stakes competition for dominance that could determine global power for generations.

PART 4A — True or False

- 1. T
- 2. F — NVIDIA's most advanced chips are banned from export to China.
- 3. T
- 4. T
- 5. F — the ban applies broadly to Chinese companies, not just military.
- 6. T
- 7. F — training powerful AI requires enormous computing power; chips are critical.
- 8. T

PART 4B — Passage 2 Comprehension

- 1. AI training requires vast computing power from specialized chips; without them, AI progress slows.
- 2. Bans NVIDIA's advanced chips to Chinese companies; stated reason: preventing military AI use.

- 3. DeepSeek built competitive AI with weaker chips — showing software can compensate for hardware restrictions.
- 4. AI facial recognition and movement-tracking deployed in Chinese cities for continuous public monitoring.
- 5. The bans also protect US chip companies — limiting China protects American market dominance.
- 6. Trade war = economic decoupling; Taiwan = chip supply risk; AI race = all three are interlinked.

PART 5 — Fill in the Blank

- 1. export ban
- 2. AI
- 3. surveillance
- 4. arms race
- 5. dual-use technology
- 6. data sovereignty
- 7. geopolitical