LOZO

SHANGHAI SCIENCE DEBATE
COMPETITION 上海市高中生科普英语辩论赛

SSDC

Lesson Objectives

In this lesson, you will:

- What is the SSDC format ?

- What is the SSDC format of Phase 1 & Phase 2?

- What is burden of proof?

What is the SSDC format?

It is a research based format, where students will need to prepare cases for both sides of the debate.

It is a format that intends to help students develop critical thinking skills that they can later use in scientific research, argue on thesis statements regardless of their field of study, and be able to communicate findings and challenge ideas.

Shanghai Science Debate Format

SSDC is a debate style used at the Shanghai Science Debate Competition.

- Students work in **two teams of 5 students.**

- The sides are called **PRO (supporting the topic)** and **CON (opposing the topic).**

- Topics are **shared before the debates (usually 1-2 month in advance)** and students use **logical reasoning and evidence to support their cases.**
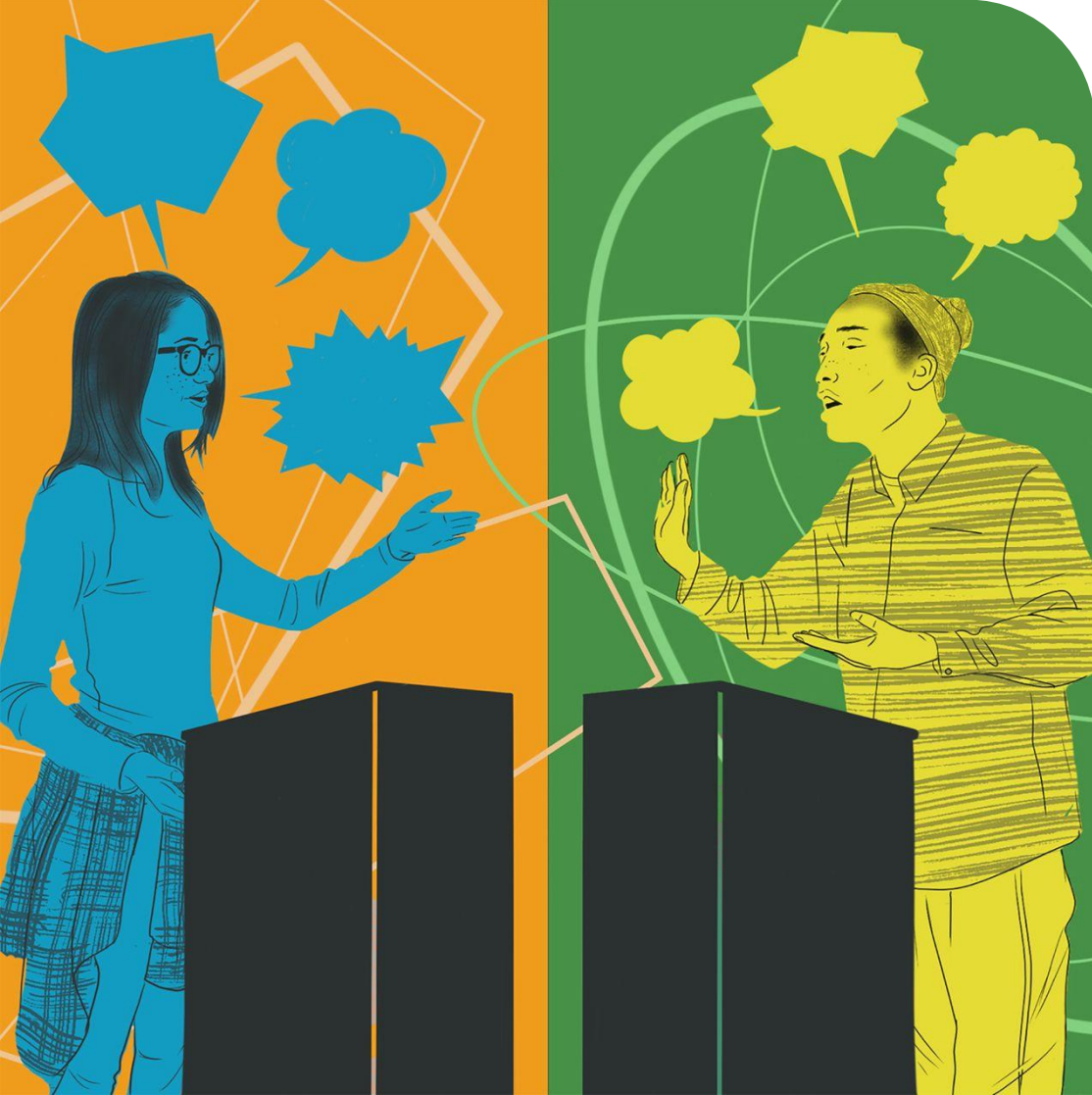
Shanghai Science Debate Format

- Students should bring their PRO & CON cases **prepared** and brought at the tournament.

- **POI's are allowed** – students can ask their opponents questions (within time constraints)

- Sides are decided by a **coin toss** right before the round starts.

- Students should **only attack the arguments** in the round, never the opponents and **no AI should be used.**

How do you win a round?

- Teams win debates by being persuasive with respect to the burdens their side of the debate is trying to prove, within the constraints set by the rules of the format.

- Arguments are persuasive if they are relevant, proven to be true, and have high importance. Arguments are proven through the use logical reasoning and evidence.

- Rules are important because they ensure fairness and good sportsmanship.

- **The outcome of the debate should be based on what teams say and judges should judge holistically. Judges must not intervene in the debate by adding or rebutting arguments on their own.**
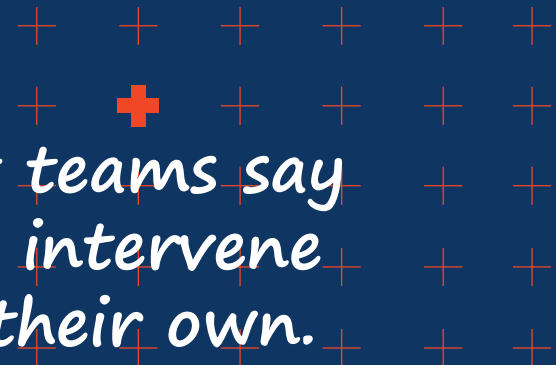
Phase 1(预选赛）

o All videos must be encoded in MP4 format.
o Each video must be strictly under 4 minutes in duration.
o The file size of a single video must not exceed 150MB.
o Each participating team must submit 5 separate videos, corresponding to the following segments:
  o (1) Affirmative Constructive Speech (Speaker 1)
  o (2) Negative Cross-Examination (Speaker 2)
  o (3) Affirmative Response (Speaker 3)
  o (4) Negative Rebuttal (Speaker 4)
  o (5) Affirmative Summary/Analysis (Conclusion) (Speaker 5)
o Each video must be linked to one actual debater and labelled accordingly when uploading to the system.

How do you win a round?

- For phase 1 the criteria we will use are:

CONSTRUCTIVE SPEAKERS: Content (case set up, argument development, evidence use) Organization (external and internal structure), Role Fulfilment and Time Compliance.

REBUTTAL SPEAKERS: Engagement (rebuttal quality), Organization (external and internal structure), Role Fulfilment and Time Compliance.

SUMMARY SPEAKERS: Debate Synthesis (clash coverage, argument prioritization, evidence synthesis, flow & transitions) Comparative Weighing (impact weighing, decision directive) and Organization (external and internal structure), role fulfilment and time compliance.
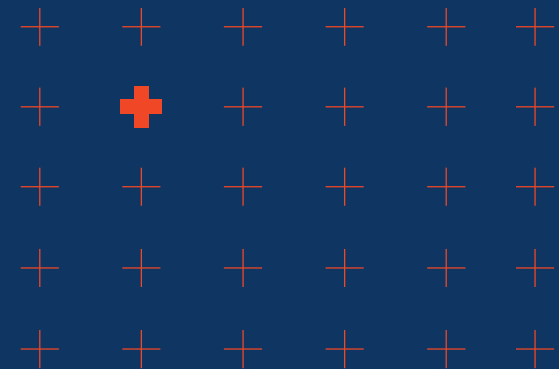
How do you win a round?

- For phase 1 the criteria we will use are:

WHEN ASKING QUESTIONS: quality of questions, structure, relevance and prioritization.

WHEN ANSWERING QUESTIONS: acknowledgment of questions, answer quality, reinforcement of constructive arguments and conclusive remarks.

Phase 2（晋级赛/决赛）

1st Speakers on PRO and CON (Constructive Speeches): Affirmative side first, followed by the negative side, 6 minutes each. They set up the debate (give definitions) and present the main arguments for their side.

2nd Speakers on PRO and CON (Rebuttal and Extension): Affirmative side starts first, followed by the negative side, 6 minutes are given to each speaker to rebut the other team and extend their case.

3rd Speakers on PRO and CON (Rebuttal and Clash Analysis): Affirmative side starts first, followed by the negative side, 6 minutes each. Rebut the other team and explain why your side has won each clash in the round.

Closing Statement on PRO and CON: Negative side first, followed by the affirmative side, 4 minutes for each. Speakers need to explain why their side won the debate, based on everything that was shared in the round by all speakers. No new arguments should be added.

Interaction Segment Rules:

Questioning Phase:
- During the first six speeches, the first and last minute of each speech are protected time—no questions allowed. The remainder of the opponents team time is open to questions if the speaker allows to be asked. A speaker should accept 1 but no more than 2 questions.
- No questioning is permitted during the closing statements.

Evidence Usage Rules:
All arguments used in the debate must be supported by clearly cited, reliable scientific sources.

How do you win a round?

- **For PHASE 2, in the finale, the criteria we will use to evaluate speakers are (LAST UPDATE):**

  - Preparation—Strength of Evidence (20 pts)

  - Demeanor—Etiquette & Conduct (10 pts)

  - Content—Logic & Argumentation (20 pts)

  - Organization—Structure & Delivery (20 pts)

  - Expression—Fluency & Language (10 pts)

  - Engagement—Questioning & Rebuttals (20 pts)

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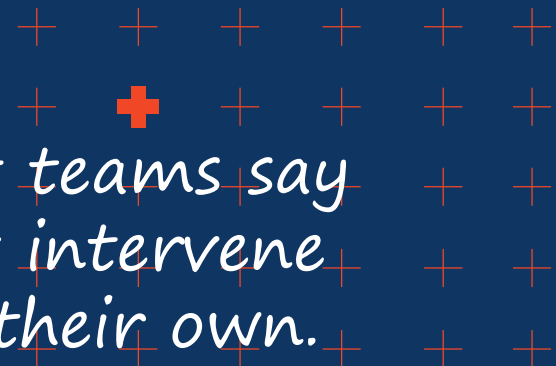
Burden of Proof

- Burden: what teams need to prove in order to win the round.

- **Burdens are determined by the keywords in the motion and the side assigned.**

Burden of Proof

Example motion: **We should not allow schools to expel students.**

Burden of Proof

Example motion: We should not allow public schools to expel students.

This means that the PRO team needs to explain why specifically schools should not be allowed to expel students and for the CON why schools should be allowed under certain circumstances to do so.

This means that all arguments that are selected by the teams, need to cover the all burdens from the motion.

Burden of Proof

Example motion: Social media platforms should not allow children under the age of 18 to register.

The PRO team argues that social media is all around us. They say that some people tend to use it a lot and that once they start using social media, they cannot control themselves.

This argument might be okay, but it is not quite perfect. Why so? How can we make this argument better?

Burden of Proof

Example motion: We believe that **developing countries** should **prioritize economic development** over **environmental protection.**

The PRO team argues that developing nations usually have **high rates of poverty**. Thus, for governments, it is **crucial to tackle this issue**, since it affects people's health and life satisfaction.

This argument might be okay, but it is not quite perfect. Why so? How can we make this argument better?

Burden of Proof

Example motion: We should introduce a high carbon tax.

The PRO team spends a large portion of their case, **proving that climate change is real and that it is a serious problem** that we need to tackle.

Does this argument successfully meet the burden of the government team?

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions over carbon capture technologies** in achieving carbon neutrality.

The PRO team must prove why **governments specifically should prioritize biotechnological solutions over carbon capture technologies** in the pursuit of **carbon neutrality.**

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions over carbon capture technologies** in achieving carbon neutrality.

The PRO **does not need to prove that**: climate change is real, that carbon neutrality is needed, or that biotechnological solutions are good or carbon capture technologies are bad.

Their role is to simply show: *why biotechnological solutions should be prioritized over carbon capture technologies by governments.*

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions** over carbon capture technologies in achieving carbon neutrality.

The CON side needs to show *why governments should NOT prioritize biotechnological solutions over carbon capture technologies in achieving carbon neutrality.*

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions over carbon capture technologies** in achieving carbon neutrality.

This topic has **2 clear concepts that need to be compared** which means **both teams need to engage with both the biotechnological solution burden and the carbon capture technology burden.**

In other words, **a team shouldn't pick one technology and ignore the other**. Both need to be part of the case and compared.

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions over carbon capture technologies** in achieving carbon neutrality.

Good argument for PRO: A dollar invested in biotechnological solutions leads to **a greater decrease of CO_2 emissions** compared to a dollar invested in carbon capture technologies.

Argument that needs further development: Biotechnological solutions decrease CO_2 emissions.

Burden of Proof

Tournament motion: **Governments should prioritize biotechnological solutions over carbon capture technologies** in achieving carbon neutrality.

Good argument for CON: Carbon capture technologies will be more effective at decreasing CO_2 than biotechnological solutions.

Argument that needs further development: Carbon capture technologies are affordable.

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** training new doctors.

The PRO side needs to prove **why developing countries specifically** should **prioritize investing** in AI healthcare **over** training new doctors.

Few keywords need to be covered (for both teams): developing countries, prioritize investing, AI healthcare OVER training new doctors.

Burden of Proof

Tournament motion 2: **Developing countries** should **prioritize investing** in AI healthcare **over** training new doctors.

The **CON** side needs to prove **why developing countries specifically** should **NOT prioritize investing** in AI healthcare **over** *training new doctors.*

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** training new doctors.

Good arguments would *include comparisons between the advantages and disadvantages of investment by developing countries in AI healthcare over training new doctors.*

Burden of Proof

Tournament motion 2: **Developing countries** should **prioritize investing** in **AI healthcare** **over** **training new doctors.**

For example, for the CON team, instead of focusing only on why training new doctors leads to great results, they might want to show **why a dollar invested in new doctors would bring better results for developing countries than a dollar invested in AI healthcare** (both on the short and long term).

Burden of Proof

Tournament motion 2: **Developing countries** should **prioritize investing** in AI healthcare **over** training new doctors.

Teams can explain **why on their side, comparatively more lives will be saved, or the likelihood of better healthcare will be higher, or why on their side more people will have access to healthcare.** They can argue how the quality of healthcare, access to healthcare and healthcare results would be greater on their side.

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** **training new doctors.**

Teams can use comparative metrics like: **life expectancy** (why people will live longer on their side), **access to healthcare** (how many people will be able to receive proper care), **quality of healthcare.** These comparisons should be done in the context of **developing countries** in particular.

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** **training new doctors.**

Why specifically **developing countries?** What **makes them unique?**

Why **prioritize investing one over the other?** How should we determine **what to prioritize?**

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** **training new doctors.**

Why specifically **developing countries?** What **makes them unique?**

Why **prioritize investing in one over the other?** How should we determine **what to prioritize?**

Burden of Proof

Tournament motion 2: **Developing countries** **should** **prioritize investing** in AI healthcare **over** **training new doctors.**

What are the **comparative odds of success?** How **likely are we to do better** if we invest in AI healthcare versus training new doctors?

Important note: this debate is all about explaining why one investment should be prioritized over the other, by developing countries specifically.

Robustness of Arguments

An argument can be defined in two ways:

- it is a causal chain with logical steps that go **from an accepted assumption to some sort of a conclusion**.

- it is a **mechanical** description of a process (a → b → c → d → impact)

When we assess the **strength of an argument**, we are mainly asking ourselves:

- **how plausible is it** (this depends on the strength of logic);

- **how important is it** (this depends on speaker's own justification)

Tracking the Debate

- Judges need to be **able to follow a debate closely and identify issues that will decide the debate as they were presented in the debate**.

- Teams will **often outline issues themselves** as the debate progresses.

- Teams need to show that: **on balance, their side is comparatively more right, than their opponents**. In other words, all debates are about showing why one team's case is in comparison to what the other team provides, more relevant, more important, more plausable or more truthful.

Judging the Debate

Two important principles of making the right decision:

- **Treat each debate as its own: it is important, that you enter each debate with an open mind.** Your preconceptions on what the debate should look like should be set aside, your first and most important responsibility is to **judge the debate at hand**;

- **Resolve debates in the following steps:**
  1) determine **which issues(clashes) formed in the debate**,
  2) determine which team **won which clashes**,
  3) determine which **clashes were most important**;