

Lesson 7: Teacher Resource for Logical Fallacies & Analysis Skills

Five Essential Logical Fallacies

1. Ad Hominem

Definition: Attacking the person making the argument rather than addressing the argument itself

Why it's problematic:

- Irrelevant to the truth of the argument
- Shuts down productive discussion
- Often used when someone can't address the actual point
- People are not their positions (positions change with different info & experience)

Student-friendly examples:

- "You can't trust Sarah's idea about the school schedule because she's always late"
- "Why should we listen to him about environmental issues when he drives an SUV?"

How to address it: Focus on the idea, not the person: "Let's look at the actual proposal about the schedule change..."

2. Straw Man

Definition: Misrepresenting someone's position to make it easier to attack

Why it's problematic:

- Doesn't address the real argument
- Shows disrespect for the other person's actual position
- Prevents genuine engagement with ideas

Student-friendly examples:

- **Original:** "We should have healthier lunch options"
- **Straw man:** "So you want to ban all food that tastes good"
- **Original:** "We need better study spaces in the library"
- **Straw man:** "You think the current library is completely useless"

How to address it: Steel-man instead - present their argument in its strongest form

3. False Dichotomy (Either/Or)

Definition: Presenting only two options when more possibilities exist

Why it's problematic:

- Oversimplifies complex issues
- Forces choices that may not be necessary
- Ignores creative solutions or middle ground

Student-friendly examples:

- "Either we allow phones in class or students will never learn to focus"
- "You're either with us or against us"
- "We have to choose between academic excellence or student wellbeing"

How to address it: "What other options might we consider?" or "Are there ways to address both concerns?"

4. Appeal to Popularity (Bandwagon)

Definition: Arguing that something is true or right because many people believe it

Why it's problematic:

- Truth isn't determined by popularity
- Majority can be wrong
- Doesn't provide actual evidence for the claim

Student-friendly examples:

- "Everyone cheats on this assignment, so it's okay"
- "All the popular kids dress this way, so you should too"
- "Most people believe this, so it must be true"

How to address it: "What evidence supports this position, regardless of how many people believe it?"

5. Slippery Slope

Definition: Arguing that one action will inevitably lead to extreme consequences without evidence

Why it's problematic:

- Assumes inevitable progression without proof
- Creates fear based on speculation
- Prevents consideration of reasonable policies

Student-friendly examples:

- "If we allow students to retake tests, soon no one will study for anything"
- "If we start with a later start time, eventually school will be optional"
- "If we allow this dress code change, soon students will wear anything"

How to address it: "What evidence suggests this progression is inevitable?" or "How might we prevent negative outcomes while still making this change?"

Teaching Fallacies Effectively

Sequenced Approach

1. **Define clearly** with simple language
2. **Provide obvious examples** that students can easily identify
3. **Practice identification** with neutral examples
4. **Discuss how to respond** constructively
5. **Apply to real situations** students might encounter

Making It Relevant

- **Use school-based examples:** Homework policies, dress codes, schedule changes
- **Avoid political examples:** Keep focus on reasoning skills, not partisan issues
- **Connect to their experiences:** Social media arguments, family discussions, peer conflicts

Common Student Reactions

"But this person really is wrong/bad":

- Response: "That may be true, but attacking their character doesn't address whether their argument is sound"

"Everyone does believe this, so it must matter":

- Response: "Popular beliefs can be worth considering, but they need to be supported by evidence, not just by their popularity"

"But this really could lead to bad things":

- Response: "It might, but we need evidence that it will, and we can often prevent negative outcomes with good planning"

SLEW Framework Deep Dive

S - SURPRISE (Show you're not what they expect)

Purpose: Break down preconceptions and create openness

Specific techniques:

- **Ask genuine questions:** "I'm curious about your perspective on..."

- **Admit uncertainty:** "I don't know much about this - could you help me understand?"
- **Show complexity:** "I usually agree with [their side] but I have questions about..."
- **Listen to frustrations:** Let them express concerns without immediately responding
- **Avoid stereotyping:** Don't reduce them to a predictable category based on their position - engage with their actual reasoning, not your assumptions about "people like them"

Student applications:

- Family dinner conversations about school or social issues
- Disagreements with friends about plans or preferences
- Online discussions about topics they care about

L - LEARN (Understand their view AND examine your own)

Understanding Others:

- **Steel-manning:** Present their strongest argument
- **Star-manning:** Acknowledge their good intentions
- **Ask about experiences:** "What led you to this view?"
- **Look for internal logic:** How do their beliefs connect?

Examining Your Own Thinking: This is where perspective-shifting techniques become crucial...

Perspective-Shifting Techniques

SWAP VARIABLES

Purpose: Test if your position is based on principles or just personal benefit

How it works: Change key details and see if you still feel the same way

Examples for students:

- "If you think athletes should get priority registration, would you feel the same if debate team got priority instead?"
- "If you support this rule when it benefits your group, would you support it if it benefited a group you don't like?"
- "If your favorite teacher proposed this policy vs. a teacher you dislike, would your reaction be the same?"

Teaching tip: Help students see this isn't about changing their minds, but about understanding their own reasoning

SWAP WHO'S TALKING

Purpose: Recognize how our reaction can depend on who's speaking rather than what's being said

Examples:

- "Would I support this same idea if it came from someone I disagree with politically?"
- "Am I rejecting this because of who said it rather than evaluating the idea itself?"

TEST EXTREME CASES

Purpose: See if your principle works in all situations or needs refinement

Examples:

- "If I believe students should have more freedom to choose classes, does that apply to eliminating all requirements, even basic math and English?"
- "If I support free speech in school, does that apply to all speech in all situations, or are there reasonable limits?"

Teaching point: This often helps students realize their positions are more nuanced than they initially thought

E - ENGAGE & W - WIN (Redefine Success)

- **Focus on understanding**, not converting
- **Look for common ground** where possible
- **Plant seeds** for future reflection rather than expecting immediate change
- **Success = respectful exchange**, not "defeating" someone

Common Student Challenges

"But I Am Being Logical!"

Student concern: They don't see their own fallacies

Response:

- "We all use these sometimes - it's about becoming more aware"
- "The goal isn't perfection, but improvement in our reasoning"
- Practice with neutral examples first, then more personal ones

"This Person Really Is Wrong Though"

Student concern: Fallacy identification feels like it protects bad arguments

Response:

- "You can still disagree strongly - these tools help you do it more effectively"
- "Addressing their strongest argument makes your response more powerful"
- "You maintain your integrity regardless of how others argue"

"This Is Too Much Work for Simple Conversations"

Student concern: Techniques feel overly complicated

Response:

- "Like any skill, it becomes natural with practice"
- "Start with one technique at a time"
- "These skills help in important conversations - you don't need them for 'What's for lunch?'"

"This Person Really Fits the Stereotype Though"

Student concern: They want to dismiss someone's argument because the person seems to fit a predictable pattern.

Response:

- "Even if someone seems to fit a stereotype, engage with their actual argument, not your assumptions about 'people like them'"
 - "Remember: People aren't their positions - they might surprise you with their reasoning"
 - "Focus on what they're actually saying, not what you expect someone with their viewpoint to say"
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Connecting to Previous Lessons

Character Strengths Links

- **Intellectual honesty:** Examining your own reasoning carefully
- **Humility:** Being willing to acknowledge when you might be wrong
- **Fairness:** Giving others' arguments their due consideration
- **Wisdom:** Using good judgment in reasoning and discussion

Civil Discourse Foundation

- **Steel-manning:** Directly connects to fallacy avoidance
 - **Perspective-taking:** SLEW framework builds on earlier empathy discussions
 - **Respectful disagreement:** Logical analysis serves civil discourse goals
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Preparation for Lesson 8

Skills Integration

Students will need to:

- **Avoid fallacies** while making their own arguments
- **Identify fallacies** in others' arguments (gently)
- **Use perspective-shifting** to strengthen their positions
- **Apply SLEW framework** in real-time discussion

Setting Expectations

- "Tomorrow you'll put all these skills together in actual discussion"
 - "It will feel challenging at first - that's normal and expected"
 - "Focus on applying one or two techniques well rather than trying to use everything"
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Assessment Opportunities

During Fallacy Practice

- **Accurate identification** of fallacies in examples
- **Clear explanations** of why each fallacy is problematic
- **Constructive suggestions** for how to reframe arguments

During SLEW Practice

- **Genuine curiosity** in perspective-shifting exercises
- **Thoughtful application** of swap variables technique
- **Recognition** of their own potential biases or assumptions

Homework Review

- **Real-world examples** of fallacies with accurate analysis
- **Personal reflection** on perspective-shifting exercise
- **Evidence** of applying techniques to their own beliefs