Arguments are presented to persuade someone of a particular view. Credible evidence is an important component of informed, persuasive arguments. When credible evidence is not available, the one presenting the argument often defaults to using other devices to sway thinking, such as logical fallacies. Logical fallacies are common errors in reasoning that undermine the logic of an argument. Fallacies can be illegitimate arguments or irrelevant points and are often identified because they lack evidence that supports their claim.

Students need to be aware of these fallacies to present their own viewpoints and engage in open inquiry effectively. One must avoid making fallacious arguments and identify fallacious arguments presented by others to productively engage in open inquiry and constructively disagree with the perspective.

This resource outlines common logical fallacies that students may have experienced in their own interactions or those in their social networks. Towards the bottom of the resource, there is a list of additional logical fallacies that students can research and suggestions for activities that can be adapted for high school or college students.

Common Logical Fallacies

Ad Hominem

Ad Hominem means "against the man". *Ad Hominem* is when you attack the personal characteristics of the person you're debating instead of attacking the argument the person is making. In political debates, this is known as "mudslinging".

Example:
Candidate 1: "I'm for raising the minimum wage to $15 an hour."
Candidate 2: "You're for raising the minimum wage, but you're not even smart enough to run a business."

Candidate 2 attacked the intelligence of Candidate 1 rather than the merits of the minimum wage policy proposed.

Anachronistic

Anachronistic is when you judge something from the past by today's moral standards. This fallacy is often committed when concepts and ideas are misappropriated in time.

Example:

"The statue of Abraham Lincoln should be removed because he did not sufficiently show that black lives matter."

The person making this argument uses modern-day standards of the Black Lives Matter movement to judge Lincoln's decisions during the Civil War.

Anecdotal

Anecdotal is when you use personal experience to make an argument instead of evidence. Arguments that rely heavily on anecdotal evidence overlook that one (possibly isolated) example can't stand alone as definitive proof of a greater premise.

Example:

"Basketball players are generally tall." "*Actually...* I know of this guy who was 5'9" and made it to the NBA..."

A basketball player who is 5'9" can exist, but that player does not refute the evidence that most basketball players are taller than 6'.

Appeal to Authority

Appeal to Authority is when you argue that if one credible source believes something, it must be true.

Example:

"My science teacher says that washing your hands is the most effective way to combat a disease. She is a biology teacher, so it must be true. Any evidence saying otherwise must be false."

The biology teacher may be correct, but additional evidence should be sought before concluding.

Appeal to Emotion

Appeal to Emotion is also known as *ad misericordiam*, which in Latin means "argument to compassion."

Appeal to Emotion is when you appeal to the compassion and emotional sensitivity of others when these factors are not strictly relevant to the argument. You make a claim based on sympathy or empathy instead of just or logical grounds. This is a "pathos" appeal and is very common in commercials and is a common tactic of politicians.

For example:

"Sarah did not want to eat all of her food on her plate. To get Sarah to eat her food, her mom told her to think of all the starving children in the world who do not have food at all."

Sarah eating all the food on her plate does not affect whether children elsewhere will go without food.

Bandwagon

Bandwagon is when you present what most people or a group of people think to persuade another to think the same way. By claiming "everyone is doing it," you are appealing to the popularity of something to validate it.

Example:

"Everyone that I've spoken with thinks that raising the minimum wage will help workers, so we should raise the minimum wage."

Support among the general population for a policy does not mean it is an effective policy.

Circular Argument/Reasoning

Circular Reasoning is when you begin with a claim you are trying to conclude with and when you restate your argument rather than prove it.

Example:

"Eric is a good communicator because he speaks effectively."

The conclusion is that Eric is a good communicator, but no evidence has been presented to support this claim. Saying he is an effective speaker is the same as saying he is a good communicator.

False Dichotomy

False Dichotomy is when you simplify an argument by reducing it to two sides. An argument is presented as having only two sides when there are actually more. This is also called "either/or" fallacy or "black/white" fallacy—for example, you are either with us or against us.

Example:

"If you are against the war, then you don't support our troops."

This argument does not acknowledge that one can be against going to war and support troops.

Hasty Generalization

Hasty Generalization occurs when you rush to a conclusion before you have all the facts. Your argument is then based on insufficient or biased evidence.

Example:

"I heard that teenagers vandalized the park downtown last night. Teenagers are so irresponsible and destructive."

The person claims that *all* teenagers are irresponsible and destructive because of one incident and the actions of a *few* teenagers.

Motte and Bailey

Motte and Bailey is when you conflate two positions that share similarities, one modest and easy to defend (the "motte") and one much more controversial (the "bailey"). You advance the controversial position; then, when challenged or asked for evidence, you retreat to the less controversial position.

Example:

Activist: "Homeless people should have the right to shelter, food, and health care. They should be given an apartment for free, a monthly supply of food for a year, and free medical care for a year."

Politician: "I can get on board with food and health care for a year, but I don't support giving people a free apartment."

Activist: "Then you don't believe in the right to shelter, food, and health care for the homeless."
The "motte" is the rights that the homeless should have. The "bailey" is the specific policy prescriptions.

Moving the Goalposts

Moving the Goalpost is when you add related propositions during an argument with just enough content altered to continue an argument or change the argument's terms during the argument. This is done to avoid losing the argument after the initial claim has been successfully counter-argued. Activists often do this to maintain support for (or outrage about) their issue of interest.

Example:

Activist: "Women will have equal rights when they are welcomed into the workforce."

Counter argument: "Women do hold many positions in the workforce as teachers, nurses, and other social service positions."

Activist: "Those aren't the same types of jobs as men have. Women won't have equal rights until they are employed in the same types of positions as men."

Counter argument: "Both men and women are directors of organizations and principals of schools."

Activist: "The proportion of men and women in those positions is not equal. Women won't have equal rights until all corporations hire the same number of women and men for leadership positions."

The activist started with a proclamation about what is necessary for women to achieve equal rights. When her claim was refuted, she moved onto another claim about what is needed for women to achieve equal rights.

Red Herring

Red Herring is when you focus on arguing for an irrelevant topic to distract the audience. This is done to avoid opposing arguments rather than addressing them.

Red Herrings were stinky fish used to throw hunting dogs off the scent and test them.

Example:
A reporter asks a politician about healthcare.

"Healthcare is an important issue in this country, just like national defense. During my four years as a senator, I helped increase our defense budget to protect citizens of this country."

The politician introduces the topic of national defense to distract the reporter from her original question about healthcare.

Slippery Slope

Slippery Slope is when you argue that if A were to happen, then B will happen, eventually leading to Z happening. In other words, the argument equates A and Z.

Example:
"If you don't let me go to the party, I'll be a loser with no friends. I'll never get a date and then die poor and lonely with five cats!"

This argument claims that by not going to one party, he will die poor and alone. But not going to a party does not necessarily lead to dying poor and alone.

Straw Man

Straw Man is when you attack a position that the other person does not actually hold, or when you try to weaken an opponent's actual position to discredit them by misrepresenting their argument.

Example:
Political candidate 1: "Private prisons should be closed because corporations should not make a profit from jailing people."

Political candidate 2: "So, you don't support workers? If you close private prisons, many people will lose their jobs."

Candidate 2 is trying to claim that Candidate 1 does not support worker's rights to discredit the argument for closing private prisons.

Often, *Ad Hominem* and *Straw Man* fallacies are intertwined.

Tu Quoque

Tu Quoque is also called "appeal to hypocrisy" and in Latin means "you too" or "you also."

Tu Quoque is when you answer criticism with criticism or turn an argument back around on the other person. You apply the logic that because someone has done something, that it justifies someone else doing the same thing.

Example:
Dad: "You can't quit baseball. Give it time and you will get better."
Child: "But you quit baseball, so I should be able to quit too."

The child is trying to argue that she should be allowed to quit baseball because her dad did rather than supporting why she should be allowed to quit.

List of Additional Logical Fallacies

Appeal to Ignorance

Appeal to Nature

Begging the Claim/Question

Burden of Proof

Card-Stacking

Correlation Not Causation Fallacy

Equivocation

Fallacy Fallacy

Gambler's Fallacy

Genetic Fallacy

Moral Equivalence

No True Scotsman

Post Hoc, Ergo Propter Hoc (aka Post Hoc)

Slothful Induction

Sunk Costs

Teach students about the 15 logical fallacies described in this resource. Once they have a grasp of the common logical fallacies, implement these activities.

1. **Split your class of students into groups.** Assign each group logical fallacies from the "list of additional logical fallacies." Instruct each group to research, define, and provide examples for the logical fallacies they are assigned like has been done for the other 15 fallacies described in this resource.

2. **Then assign each group logical fallacies from the 30 in this resource.** Instruct each group to create a card for their assigned logical fallacies—see here for an example of cards. Each card should:

   a. Depict an interaction they have witnessed in public discourse (in news media, on social media, etc.).

   b. Illustrate two people interacting, with one person using a logical fallacy in their argument with the other person. (Students may not use the examples provided in this resource.)

   c. Include a brief definition of the logical fallacy they are depicting.

Additional Tips

Provide students with a poster board that is the appropriate size to hang around the classroom. By displaying the cards in the classroom, students will be reminded of what to avoid and be aware of when engaging in discussion with others.

To avoid unnecessary controversy in the classroom, instruct students not to depict people they know. In general, remind students that the assignment's goal is not to make fun of people (this would be an ad hominem attack) but to learn how to spot logical fallacies. However, urge them not to shy away from depicting controversial issues being debated in the public square.

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