A logical fallacy is a flaw in reasoning. Strong arguments are void of logical fallacies, whilst arguments that are weak tend to use logical fallacies to appear stronger than they are. They’re like tricks or illusions of thought, and they’re often very sneaky used by politicians, the media, and others to fool people. Don’t be fooled! This poster has been designed to help you identify some of the more common fallacies. If you see someone committing a logical fallacy online, link them to the relevant fallacy to school them in the intricacies of logical fallacies. yourlogicalfallacies.com/asmaam

strawman

Misperceiving someone’s argument to make it easier to attack.

By misrepresenting, over-simplifying, or completely distorting someone’s argument, you are giving them no chance to refute your response.

After WWII, most of us should understand that health and education are essential to our survival and that we take our country for granted. It is such an important issue that we cannot allow any deviations in this belief.

false cause

Assuming that a real or perceived relationship between things means that one of the causes of the other.

Many people believe rain attracts storms happening together as coincidental. In fact, when it rains, it is because there is moisture in the air which allows the water droplets to form.

Positing for a horse race, Ruby should have his temperature taken before going on the first leg. The usual method is the horse has an unusual temperature.

It is just as important to understand the conditions necessary for something to happen, as it is to understand the conditions necessary for something to happen.

slippery slope

Asserting that if we allow A to happen, then B will surely happen as well.

The problem with this reasoning is that it is only engaging with the fear at hand, and not fully addressing the issue of potential consequences. The classic example of a potential slippery slope is smoking, which can lead to cancer.

ad hominem

Attacking your opponent’s character or personal traits in an attempt to undermine their argument.

Ad hominem attacks have been limited for many years of attacking somebody or, by attacking their character, the argument they made becomes unimportant. When someone doesn’t respond to your argument, they merely cannot change the subject.

The only way to get into a debate with a politician is to use an ad hominem attack.

special pleading

Moving the goalposts or making up exceptions when a claim is shown to be false.

Special pleading refers to a situation where certain rules are not applied to others. For example, if a politician makes a claim about lowering taxes, they are allowed to do so, but the rest of us are not.

loaded question

Asking a question that has an assumption built into it so that it can’t be answered without appearing guilty.

Loaded questions are a way of asking a question in such a way that there is no escape from a ‘yes’ answer. Once the question is asked, the response is already predetermined.

silly gambler

Believing that ‘run’ occurs to statistically independent phenomena such as roulette wheel spin.

This seemingly definite belief has been refuted many times, and as is the belief of the world of the world. Things are often not as they seem, but they are not always as they seem.

appeal to popularity

Aspiring to popularity or the fact that many people do something as an attempted form of validation.

The fallacy is that the fact that it is popular means that it is true. It is often used in an attempt to form a decision on a subject.

A similar example is the belief in the effectiveness of herbal medicines. Even though these medicines have been used for centuries, they don’t necessarily work.

appeal to nature

Making the argument that because something is natural is therefore valid, justified, inevitable, or good.

Many natural things are also considered good, and this is how our thinking works. The closer something is to being natural, the more valid it is, therefore, the more it should be trusted.

The main reason people use natural remedies is because they feel it’s better, and they overall feel better. From this, they now believe that a natural remedy is more effective.

begging the question

A circular argument in which the conclusion is included in the premises.

This logically illogical argument often arises in situations where people believe that a claim is true without any proof. For example, a politician may argue that the economy is strong because the unemployment rate is low.

The world of facts is not a self-contained system. We cannot prove that two events that seem to be connected are actually connected.

When asking people to post their own personal beliefs, you can only have their opinions on their own beliefs.

anecdotal

Using personal experience or an isolated example instead of a valid argument, especially to dismiss statistics.

If you offer much more power to people’s belief on anecdotes, an anecdotal example can be used to support almost any argument.

Using anecdotal evidence means that you are allowing the facts to be decided by a single story.

Any experience or example should be used as part of a larger argument, and not as the only argument.

the texas sharpshooter

Cherry-picking data clusters to support an argument, or finding a pattern to fit a preconceived notion.

This fallacy is often used in political debates, where a politician will choose a statistic or example that supports their argument, while ignoring the rest.

The makers of Superfood Supplement claim that drinking smoothies will make you healthier because it has more antioxidants. This is cherry-picking, as the smoothie contains fruit, which is already good for you.

middle ground

Saying that there is some middle ground, often between two extremes.

Many times, the truth is somewhere in between. It is often the case that people are not extremes. They are the people that are in between extremes.

When discussing something, it is important to understand the full range of possibilities.

For example, if you were to say that the Earth is flat, you could be considered a flat earther. However, if you were to say that the Earth is round, you could be considered a globe.

Preventing a claim to be necessarily wrong because a fallacy has been committed.

It is extremely common to make a claim that is false but can be defended by a logical fallacy. It is often difficult to see through a logical fallacy and argue that it is false.

The problem with this thinking is that logical fallacies are not necessarily wrong. It is possible to be wrong and still use a logical fallacy.

personal incredulity

Saying that because one finds something difficult to understand, it therefore is not true.

Subjects such as biology and evolution are processes that are slowly understood. This is often the case with many scientific topics.

The problem with this thinking is that it is often based on a personal opinion.

burden of proof

Saying that the burden of proof lies with the person making the claim, but with someone else to disprove.

In most cases, the burden of proof lies with the person making the claim. However, there are exceptions to this rule, such as in criminal cases.

The problem with this reasoning is that it often allows for weak evidence to be accepted.

appeal to emotion

Manipulating an emotional response in place of a valid or compelling argument.

Appeals to emotion include manipulations like fear, guilt, love, and hate.

The problem with this reasoning is that it often manipulates people’s emotions, rather than their reasoning.

powerful syllogism

Saying that one should be wary of ‘artificial’ medicines like antibiotics.

Many people believe that antibiotics are bad for you, but natural remedies are much better.

The issue with this reasoning is that natural remedies are not always effective.

guilt by association

Appealing to popularity or the fact that many people do something as an attempted form of validation.

The problem with this reasoning is that it often uses other people’s actions to justify your own actions.

without evidence

Saying that because something is ‘natural’ it is therefore ‘good’.

The problem with this reasoning is that it often uses naturalness as a justification for something.

The problem with this reasoning is that it often uses ‘naturalness’ as a justification.

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