

REASONING TO THE BEST EXPLANATION

SNAPSHOT

Students write down an unexpected fact about themselves on a sticky note and pass it to the person on their left. Each student then brainstorms logically possible explanations of the fact he or she has received. Through this activity, students learn to distinguish the best or most likely explanations from all the logically possible ones.

SPOTLIGHT

This activity is a fun way to bring philosophical reasoning to bear on everyday thought processes, such as those that are engaged when we meet new people for the first time and learn interesting facts about them. It helps students develop subject-specific intuitions by showing them that though there are literally countless logically possible explanations of various facts and phenomena, our intuitions about the most *likely* explanations often point us in the right direction. Used as a quick write activity before a discussion on a topic as abstract as theories of God's existence, this lesson plan can make philosophical reasoning feel more accessible and help students see that the sort of reasoning the topic requires is the kind they already employ in day-to-day life.

LESSON PLAN

Goals:

Students learn to:

- reason to the best explanation, by distinguishing merely logically possible explanations from good or likelier ones.
- identify resemblances between this sort of philosophical reasoning and the kind of reasoning they employ in their daily lives.
- appreciate that a very intuitive form of reasoning warrants more consideration than they may previously have given it.

Class:



Philosophy of Religion

Background:

This activity was introduced mid-semester, when students were learning to fine-tune arguments regarding the existence of God. They read authors who explained our universe in different ways. Some posited the existence of God, others a multiverse theory. Others argued that such a universe finely tuned for life needs no explanation. The activity helped students see that we often think strange facts call

WAYS TO ADAPT

Reasoning to the best explanation is a skill that is particularly central to philosophy, but it is invaluable for nearly every other discipline as well, making this a worthwhile activity to introduce into nearly any classroom. Whether the class is one on math or science, literature or art history, students will benefit from developing intuitions about which explanations for some fact or development or phenomenon are the most likely ones. This will benefit, among other things, students' ability to filter from an abundance of potentially relevant information (e.g. articles, data, archives, etc.) on any particular topic to help them focus on the most pertinent sources for various research projects.

for explanation and that we have intuitive ways of reasoning about which explanations are the best.

Procedure - Before Class:

The instructor brings in colorful sticky notes. She thinks of her own example of a fun fact about herself, along with several possible explanations of it.

Procedure - During Class:

1.  Students write down a weird or random fact about themselves on a sticky note.
2. They pass their sticky notes to the left but do not explain them to their peers.
3.  **The instructor asks for volunteers to read the facts in their hands and to offer any logically possible explanations of them. She spurs their thoughts by offering wildly unlikely but logically possible explanations.** She repeats this several times with different students' facts.
4. For each of the facts discussed, the instructor asks students for a likely or good explanation of it. She asks them why they think their explanation is better than her implausible one. She explains that this is a way of seeing that some explanations are better than others and that we have an intuitive sense of what makes certain explanations better.

Procedure - After Class:

-  **The class discusses how insights from the activity apply to fine-tuning arguments.**

Materials:

Sticky notes and writing utensils

This activity was submitted by Heather Spradley.

A partner exercise alternative or supplement might go as follows:

- (1) Students write a weird fact about themselves on a sticky note.
- (2) They then turn to a partner and exchange sticky notes.
- (3) Partners interview each other to gather evidence that helps them formulate a plausible explanation of the other's fact.

This variation of the activity helps students see how even far-fetched facts can be traced back to plausible explanations through intuitive information-gathering processes.

THINGS WE LIKE

This activity is a great instance of teaching by example, or modelling. The instructor is producing, on the spot, examples of the sort of logically possible but absurd explanations she wants students to identify as implausible. She is also prompting students to come up with these types of explanations for the facts in their hands, forcing them to mentally organize explanations into more and less credible kinds and strengthening their intuitions about what each category looks like. Together, these features of the activity help solidify what may otherwise feel like an abstract lesson on a mysterious type of reasoning.

THINGS WE LIKE

This activity ends with an important opportunity for metacognition. Students can use the post-activity discussion to identify key takeaways they can apply to the course material, such as general pros and cons of this type of reasoning; what sorts of criteria make an explanation more or less plausible; how to identify and overcome blind spots; and possible ethical implications, such as how to overcome unjustified biases when reasoning in this way.

