

The Explanation Game

A routine for exploring causal understanding.

The routine focuses first on identifying something interesting about an object or idea:

I notice that...

And then following that observation with the question:

Why is it that way? or Why did it happen that way?

PURPOSE

What kind of thinking does this routine encourage?

This is a routine for understanding why something is the way it is. This routine can get at either causal explanation or explanation in terms of purposes or both.

APPLICATION

When and where can I use it?

You can apply it to almost anything: a pencil, cell phones, forms of government, historical documents, or events. Students can work in pairs or groups of larger size, even as a whole class. The explanation game can also be used solo. The first time the routine is used, the teacher may need to take an active role in scaffolding the conversation and modeling how to ask questions of explanation and clarification of others. Over time, students can begin to emulate the conversational moves and questioning they have seen modeled.

LAUNCH

What are some tips for starting and using this routine?

Begin with something “on the table”—an object like a cup or a compass; a document like a poem, or a picture; a historical event; a scientific theory, etc. The first person (this might be the teacher initially) points out an interesting feature of the object: “I notice that... That’s interesting. Why is it that way?” or “Why did it happen that way?” (or some similar why question). The other people in the group try to answer the question or at least to propose possible explanations and reasons. As these students share their ideas, the person asking the original question follows up by asking, “What makes you think so?” The group works together to build explanations rather than merely deferring to an outside source, the teacher, or a textbook to provide an answer.

Student questions and explanations become visible to the class as they are shared. Responses to the routine can also be written down and recorded so that there is a class list of evolving ideas. A few key issues or puzzles might then be chosen for further investigations. A conversation could also be recorded as a chart with four columns representing the key structures of the conversation:

1. The Observation that is initially made
2. The Question that comes out of that observation
3. The various Explanations/Hypotheses that the rest of group puts forth
4. The Reasons/Justifications that are given in support of the explanations

This thinking routine was developed as part of the Visible Thinking project at Project Zero at the Harvard Graduate School of Education. Explore the full PZ Thinking Routine Toolbox at pz.harvard.edu/thinking-routines.