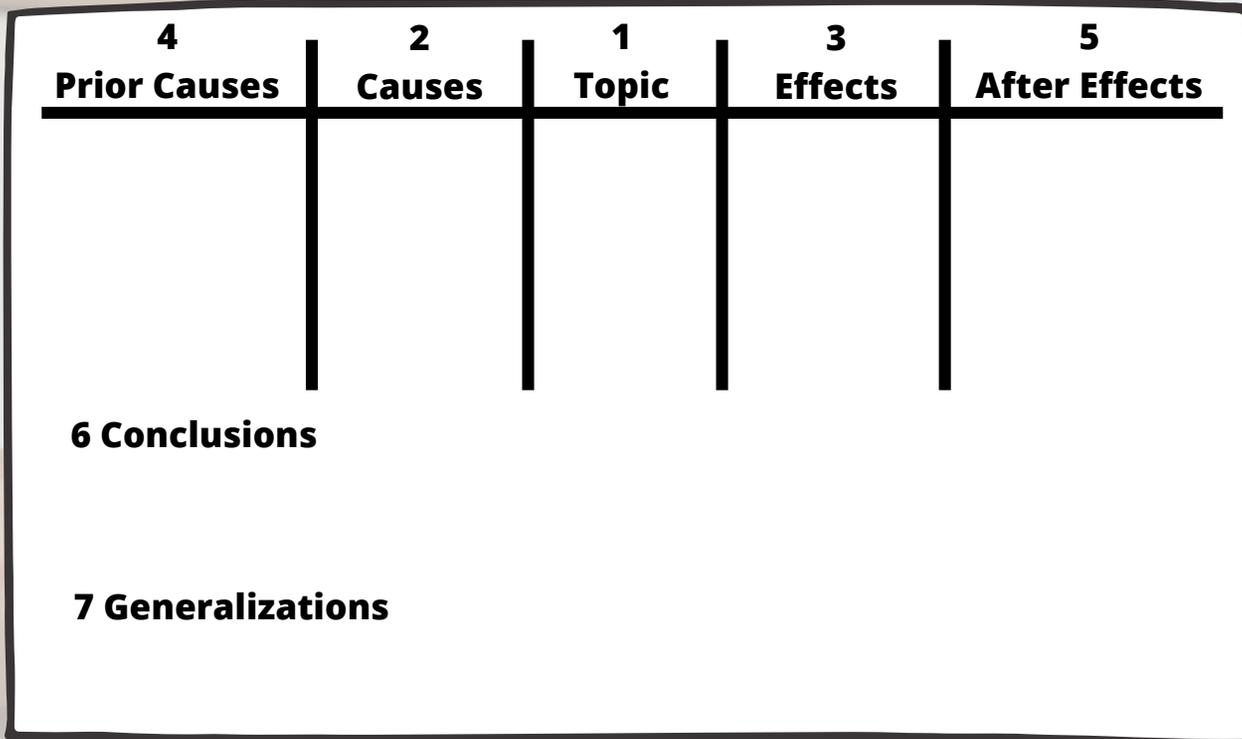


CAUSE & EFFECT

Deeply Analyzing to Identify Root Causes and Potential Consequences



Summary

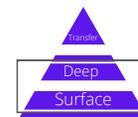
The cause and effect model is a cooperative learning method specifically designed to help students think more analytically. The method gives students structure to investigate a significant action, situation, condition, or conflict. Through a process of inference, students break down their topic into a number of pieces to better understand what they are analyzing. The process guides them through several stages where they hypothesize causes, effects, prior causes, and after effects. Then they draw conclusions and arrive at generalizations about behavior or actions in similar situations. The instructor is a facilitator, often asking set questions, not contributing to or commenting on the contributions except to ask follow-up questions. This method can be used in any number of disciplines: History, science, math, business, engineering, fine arts, and more.

Outcome



Analytical Thinking

Learning Level



Surface to Deep Learning

Instructional Difficulty



Intermediate Difficulty

Interaction



Mostly Cooperative Discussion to Extend Thinking

Prep: 15 - 30 minutes

Class Time: 60 - 90 minutes

Start Strong

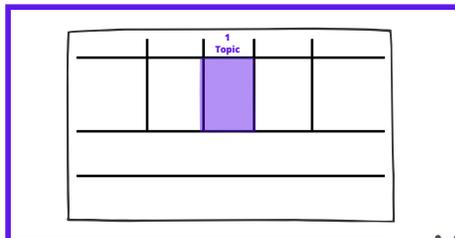
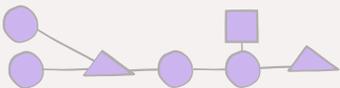
The ultimate goal of this method is to help students predict future events in a systematic way. It's important students spend time on each step, but how they discuss or analyze within that step depends on the objectives, which can be done in any number of ways: discussion, written work, roleplay, diagrams, and case study analyses are just a few. Having specific methods to guide students' interactions helps to deepen the learning. Ultimately, when you devote the time to start strong, you're setting the foundation for a more impactful learning experience in the end.

Why it Matters

Analysis is about breaking something down into pieces and examining those pieces to better understand patterns and relationships. As students break down their focus into several pieces, they are able to manipulate that information more effectively. This process of organizing information helps them identify causal models, improves pattern recognition, and develops critical thinking skills while the cooperative structure also increases engagement.

Change it Up

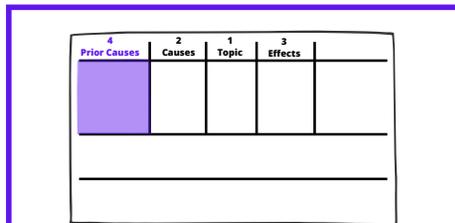
Rather than a graphic organizer, try having the students create their own flow charts and compare the differences among groups at the end of the process. You can use posters and post-its, whiteboards, virtual whiteboards, or just plain paper. Keeping the discussion tactile keeps engagement up.



1 CHOOSE ANALYSIS FOCUS



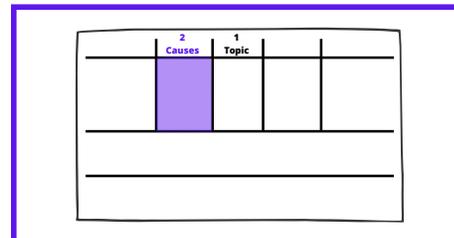
- Provide students with a specific **data set, topic, action** or **problem** to be analyzed along with supporting information (articles, videos, etc.). They can also choose their own focus as a class or group, and find their own supporting information through research.
- In groups, have the students discuss the chosen focus for analysis.
- If the students are using a graphic organizer, have them write the data or topic in the center of the whiteboard, tablet, etc.
- It is often helpful to have them summarize or make a bullet list of key points in this center box to reference in the process.



4 PRIOR CAUSES & SUPPORT



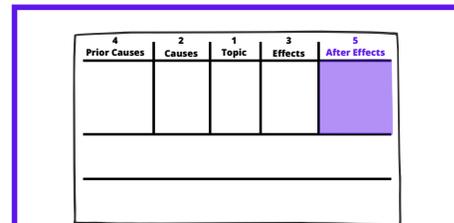
- Again in groups, have students list all the causes of each cause, or the **prior causes**.
- This is the stage where students really begin to look at **root issues** or **deeper aspects** of their focus. They begin to infer from their sources and hypothesize where an action truly starts. Make sure to provide sufficient time for students to discuss the prior causes deeply.
- As before, have the groups provide support for their hypotheses and record it; however, keep in mind that at this stage they may not have as much support as they are inferring from information in previous steps and their own experience.



2 CAUSES & SUPPORT



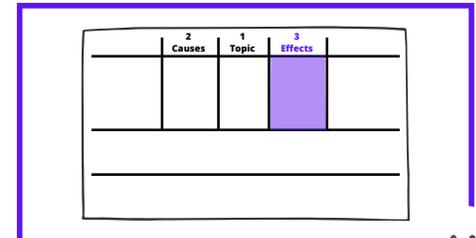
- In groups, have students list all the **causes** relevant to the focus.
- Provide sufficient time for students to **discuss the causes deeply**. Often students are able to identify a few causes and feel ready to move on. Probe them and encourage them to keep looking and discussing.
- Have the groups **provide support** for their hypotheses and record it. This helps to ensure students rely on facts—not assumptions—by referencing their sources.



5 AFTER EFFECTS & SUPPORT



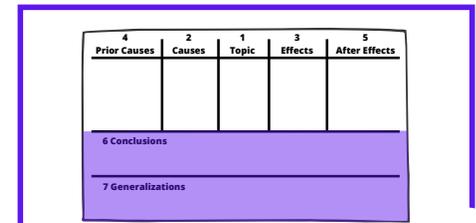
- Also in groups, have students list all the effects of each effect or the **after effects**.
- Similar to the previous stage, students use their reasoning to infer from their sources and hypothesize what potential long-term consequences or after effects may result from the focus. Make sure to provide sufficient time for students to discuss the after effects deeply.
- As before, have the groups provide support for their hypotheses and record it.
- Avoid having students just develop conjecture but encourage them to rely on the information at hand to develop clearer hypotheses.



3 EFFECTS & SUPPORT



- In groups, have students list all the **effects** relevant to the focus.
- Provide sufficient time for students to **discuss the effects deeply**. Similarly to brainstorming causes, often students are able to identify a few and feel ready to move on. Probe them and encourage them to keep looking and discussing.
- Again, have the groups **provide support** for their hypotheses and record it.



6 CONCLUSIONS & GENERALIZATIONS



- Give students time to look over the entire whiteboard or chart and make **conclusions** about the situation under study. They may make conclusions about behavior of the people involved, an action within a lab experiment, etc. based on their observations.
- As a separate step only after conclusions are made, have students make **generalizations** about their observations. Generalizations are conclusions expressed in general terms or not specific to the topic or people involved. How might people in similar situations behave? Or how might this experiment relate to others? End with a large class discussion.