

Activity: Fishbone Diagram

(60 minutes)

Overview

A fishbone diagram is a visual map of the problem you are trying to tackle. By combining the experiences and different perspectives of participants, you first uncover the complexity of the problem focus area, and then lay out its different features as distinct areas of study. This process will help your team generate a shared understanding of the causes and sub-causes of the problem focus area, thereby creating a smaller, more targeted focus as you begin to think about the best places to seed improvement work.

Objective

Through a guided session of brainstorming and sharing, participants will create a map of the root causes of their identified problem focus area.

Number of Participants

- Groups of approximately six to eight participants. This should include everyone on your team, but may also include other stakeholders—such as administrators, fellow teachers, or parents—whose perspectives may be helpful for creating a holistic understanding of the problem.
- You should select one facilitator and one recorder from among the participants.

Prerequisites

- You must have both a team and a problem focus area selected.
- You should explore the possibility of including other stakeholders (see above) in this session if they offer experience and perspectives that can contribute to your team's thinking. If there are stakeholders who are unable to contribute to the team on a regular basis but whose experience and input should be honored, this is a good activity to include them in.

Materials

- Markers
- Sticky notes
- *Solutions Parking Lot* (see page 25)
- Space for sorting ideas (chart paper, a white board, or six blank sheets of paper; see the *Fishbone Brainstorming Template* below for ideas about how to help team members structure their brainstorm)

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Guiding Questions

- What are the different causes of the problem focus area my team is aiming to address together?
- How can we break down larger problems into more manageable pieces?
- How do the causes of the problem focus area connect to our school context?

Facilitation Notes

1. Introduction and Framing (3 minutes)

- Welcome participants and review the objective and guiding questions of the activity.
- Remind participants that this activity is built around open discussion of a problem they all face, and that trust is a key ingredient in the process. To get the most from the activity, everyone must feel safe to express his or her opinion.
- (Optional) Explain that this activity is part of a larger process that leaves deciding on solutions to the problem to a later step. Benefiting from this activity requires sustained focus on the problem before solutions are introduced. It is natural and unavoidable that when insights into a problem occur, ideas for solutions will arise. Tell them that when they begin to experience what improvement scientists refer to as “solutionitis”—the tendency to jump ahead to quick solutions—the ideas will be written down by the recorder in the *Solutions Parking Lot* (on page 25) so that they can be revisited later. Alternately, you might nominate one person to be a “solutions editor” to flag suggestions which only offer solutions, and then help the group rephrase them into questions that identify the assumptions and causes behind them.

2. Framing of Problem (5 minutes)

- Start by giving all participants a summary of the problem focus area the team will be working on. Be sure to include the reasons for focusing on this problem.
- Tell participants that they are there because they have something to contribute to the team’s understanding of the problem and its causes.

3. Brainstorm Causes (10 minutes)

- Tell participants they are going to brainstorm all the possible causes for this problem focus area. The goal of this part of the activity is to write down at least three to five thoughts about why this problem exists.
- Remind them that they will be describing the problem focus area as well as the system of causes that create it. They should focus on describing these as they actually exist, rather than an idealized view of how the system ought to work.
 - Hand out sticky notes to each participant, including the facilitator and recorder.
 - Have participants write each cause on an individual sticky note.

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4. Share (25 minutes)

- Tell participants that they are going to share their brainstormed causes with the group.
- Remind them that the focus of this part of the discussion is the causes of the problem, not solutions, and when they hear a solution they should call it out for the recorder to write down in the *Solutions Parking Lot* (see page 25).
- Ask for a volunteer to read a single cause out loud and hand the note to the recorder, who will place it on the diagram. Ask if other participants wrote similar causes, and have them read their causes aloud and give the notes to the recorder to create a cluster of similar ideas. When a cluster is complete, ask another participant to share another cause and repeat the process.

NOTE: *As participants continue to share in this manner, allow the recorder to lead participants as they relate similar ideas and sort the causes into clusters on the diagram. Naming factors outside of a school’s locus of control is a common occurrence; listen for this, and if it occurs, ask them to rephrase so that the cause is connected to something you can influence. For example, if a participant mentions that “word problems are written in language that is simply beyond my ELLs’ understanding,” you might ask them to rephrase it to directly connect it to the problem. Changing the cause to “ELLs struggle to identify the task in word problems,” or “providing adequate scaffolding for ELLs to access grade-level word problems takes too much planning and class time” are more specific and more actionable because they are now within the locus of control of the school.*

- Continue until all causes are charted.

5. Refine Diagram (15 minutes)

- Remind participants that the fishbone is a living document that can and should be revised over time as they continue to deepen their understanding of the systemic causes of the problem. It is expected that the first iteration of the fishbone will be incomplete, and participants should feel comfortable questioning and adding to it as they learn. However, to summarize the work of this session and to enable the team to use the fishbone diagram in its work, the next step of the process is to look over the ideas and collectively settle on a working version of the diagram.
- Ask participants to look over the clusters and lead them through a naming of each category. As they work to attach names to each a cluster, they may find that some causes may need to be split into pieces or consolidated. Use the following questions to guide you:
 - Will breaking this cause into components further clarify how the system behind the problem functions?
 - Are these separate concepts? If we combine them, is any understanding lost?
 - Is this cause within the focus area that we can influence? If not, how does it connect to a school practice we can control?

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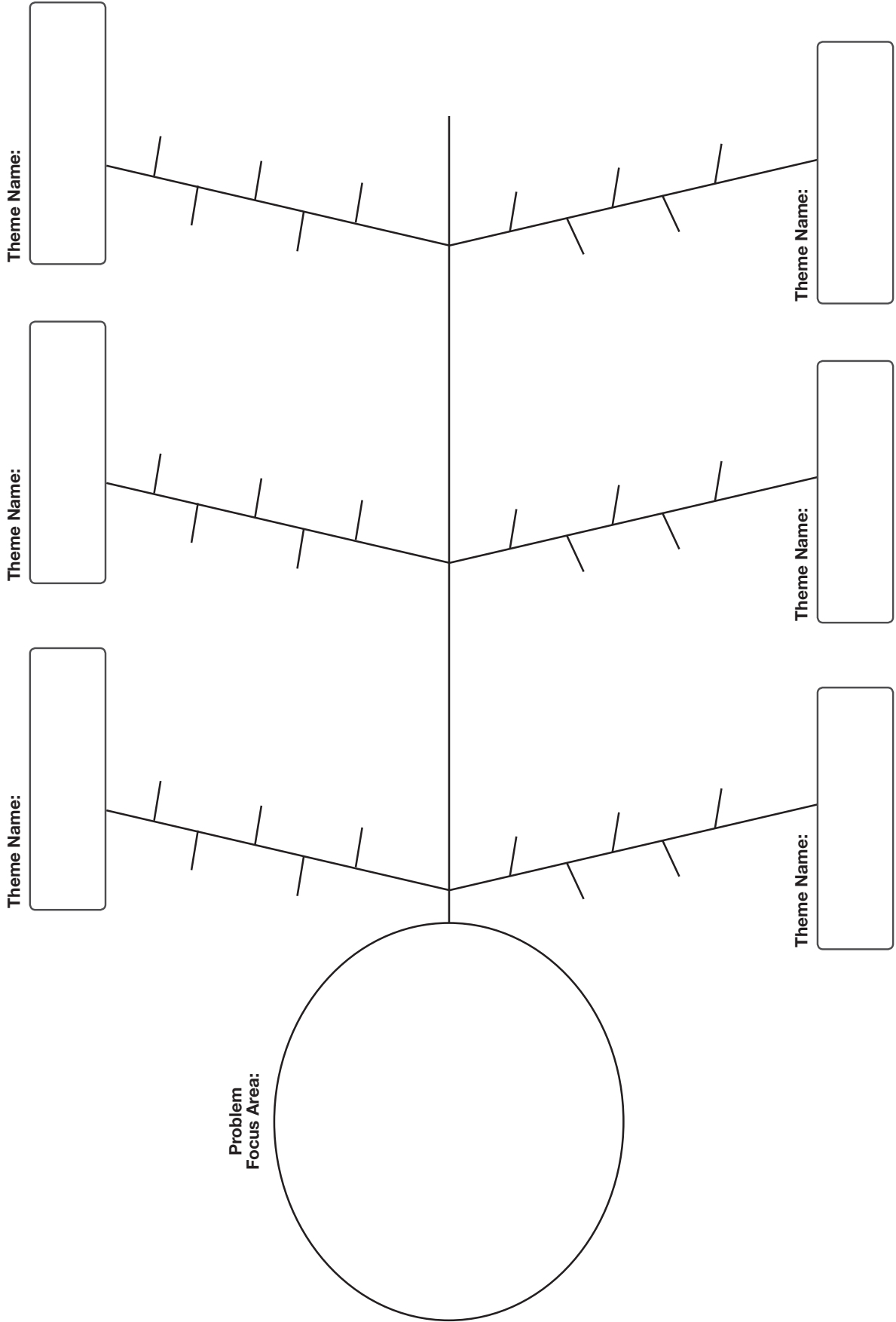
Activity: Fishbone Diagram *page 4*

- When all of the clusters have been named and the causes matched to them, thank the participants for their time and effort. Thank the recorder for assisting with the production of the completed fishbone diagram.
- Bring closure by asking participants to think back to their original sticky notes and review the diagram to share how their thinking has expanded.

6. Next Steps (2 minutes)

- Within the next 48 hours, while the memory of the activity is still fresh, either the recorder or facilitator can complete a new copy of the fishbone diagram using the template provided on page 23.
- The *Solutions Parking Lot* document should be saved for subsequent meetings. Both it and the fishbone itself will be valuable sources of information when you construct a theory for solving your problem (detailed in **Chapter Two: Creating a Theory of Improvement**).
- Use *Problem Statement Readiness Check* to guide next steps (see page 37).

Fishbone Diagram



Fishbone Brainstorming Template

Theme Name: _____	Theme Name: _____	Theme Name: _____
Theme Name: _____	Theme Name: _____	Theme Name: _____
Theme Name: _____	Theme Name: _____	Theme Name: _____

Solutions Parking Lot

It is inevitable that potential solutions will come up during a group discussion of problems and their causes. In order to recognize these ideas while keeping the discussion focused on the problem, the solutions should be parked here so that they can be used later, after the theory of action has been fully fleshed out on the driver diagram. At that point, the parked solutions can be connected to secondary drivers in the column on the right to facilitate a comparison of the merits of all the potential solutions at once.

Solution	Secondary driver(s) solution can link to