

Step 1

Description of the Step

Who owns this step?

Who else needs to be involved?

How long will it take?

Step 2

Step 3

Step 6

Step 5

Step 4



Data Infrastructure Activity

Role: SCRIBE/FACILITATOR

Objective

To construct a process by which a short survey can be completed by students in 6th grade math classes, the data managed and analyzed, and the information reported out to teachers.

Outcome

Create a process map that documents the process of collecting the data, managing it, analyzing it, and reporting it.

Activities

1. Identify who needs to be involved in which decisions
2. Figure out cadence of all activities
 - a. When/how often do data need to be collected?
 - b. When/how often do data need to be analyzed and reported?
3. After data are collected, decide what needs to happen
 - a. How are the data to be put together?
 - b. What sorts of requirements are there for storage and access?

Your Team

Your team consists of: One (or more) 6th grade teachers, a data manager from the district's central office, a data analyst from the central office, a research partner from a local university who developed the survey, and a scribe/facilitator who is in charge of creating the process map.

Note: There is more than one “correct” process. We provide each team member with *some* information, but you can make assumptions when necessary in order to complete your process.

Your Role

You are the **scribe/facilitator**. Your role is to help facilitate discussion, take notes as needed, and be the primary person creating the process map based on what the group determines. Your job is to keep everyone focused, facilitate conversations and decisions, and to generate the process map. You have been provided a blank template to help with the process map. (And please don't worry about the aesthetics of it!)

In addition to indicating which processes happen when, be sure to document the people who will need to be involved at each point in the process.



Data Infrastructure Processes



Data Infrastructure Activity

Role: ANALYST

Objective

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Your Role

- You are an **analyst** in the Accountability and Assessment Office in the district's central office

Goals

- Create a report that is useful for the teachers.

Constraints

- You have been allocated 8 hours/month for this project.
- Your best guess is that you'll need to borrow some hours from a future month to do the first piece of work; your supervisor has said that's ok.
- It will take at least a week to make the first report, but you predict it will take just half a week to create reports thereafter.

Resources

- You are very good at working with Excel and Tableau.
- You previously created a report that you can use as the template for this project.



Data Infrastructure Activity

Role: DATA MANAGER

Objective

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Your Role

- You are a **technology analyst** in the IT department in the district's central office.

Goals

- To determine when the survey will be taken by the students.
- To create a dataset from the SurveyMonkey data that is in Excel for the analyst to use.

Constraints

- You know that SurveyMonkey data can sometimes be messy and it may take you a while to clean it.
- You have been allocated 8 hours/month for this project.
- You know it will take you at least one week to create a clean dataset the first time, but you predict it will take half a week thereafter.

Resources

- You have experience working with SurveyMonkey and have a good hunch as to what will need to be done.
- You have recently completed a continuing education course on data security and privacy.



Data Infrastructure Activity

Role: RESEARCHER

Objective

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Your Role

- You are a **researcher** in the school of education at a local university.

Goals

- To have the survey that you developed fielded in as rigorous a manner as possible.

Constraints

- While you would love to use the data for research purposes, you know that your main goal is to help middle school students improve.
- To minimize the burden on the teachers who are fielding the survey.

Resources

- You have created the survey in SurveyMonkey and have found the instrument reliable and valid.
- You have a copy of the survey on the back of this page for reference.



Survey Questions

1. I'm really excited about taking my math class.

Extremely True *Very True* *Somewhat True* *Slightly True* *Not True At All*

2. What I am learning in math helps me in my real life right now.

Extremely True *Very True* *Somewhat True* *Slightly True* *Not True At All*

3. What I learn in math will help me in real life when I am done with school.

Extremely True *Very True* *Somewhat True* *Slightly True* *Not True At All*

4. Being a "math person" or not is something about you that you really can't change. Some people are good at math and other people aren't.

Slightly Disagree *Disagree* *Strongly Disagree*

5. When you have to try really hard in math, it means you can't be good at math.

Slightly Disagree *Disagree* *Strongly Disagree*

6. How confident are you that you can be successful in your math class?

A Great Deal *A Lot* *Somewhat* *A Little* *Not At All*

7. In your math class, how much do you feel like you belong?

A Great Deal *A Lot* *Somewhat* *A Little* *Not At All*

8. How comfortable are you asking your teacher a question when you're confused in math class?

Very Comfortable *Slightly Comfortable* *Neither Comfortable Nor Uncomfortable* *Slightly Uncomfortable* *Very Uncomfortable*



Data Infrastructure Activity

Role: TEACHER

Objective

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Your Role

- You are a 6th grade math teacher at a middle school.

Goals

- To learn if your change ideas affect growth mindset, sense of belonging, and values.
- To receive the analyzed data in report form quickly enough that you can act on it.
- To implement three more change ideas before the end of the semester.

Constraints

- You don't have the time to analyze the data yourself.
- You need at least a three week span for each change idea you have, and you'll want to survey students at the beginning and end of that span.
- You have 14 weeks remaining in the semester.

Recourses

- You have access to iPads for your class to take the survey on.
- You are just about to start implementing your first change idea, so now is the perfect time to collect data.

