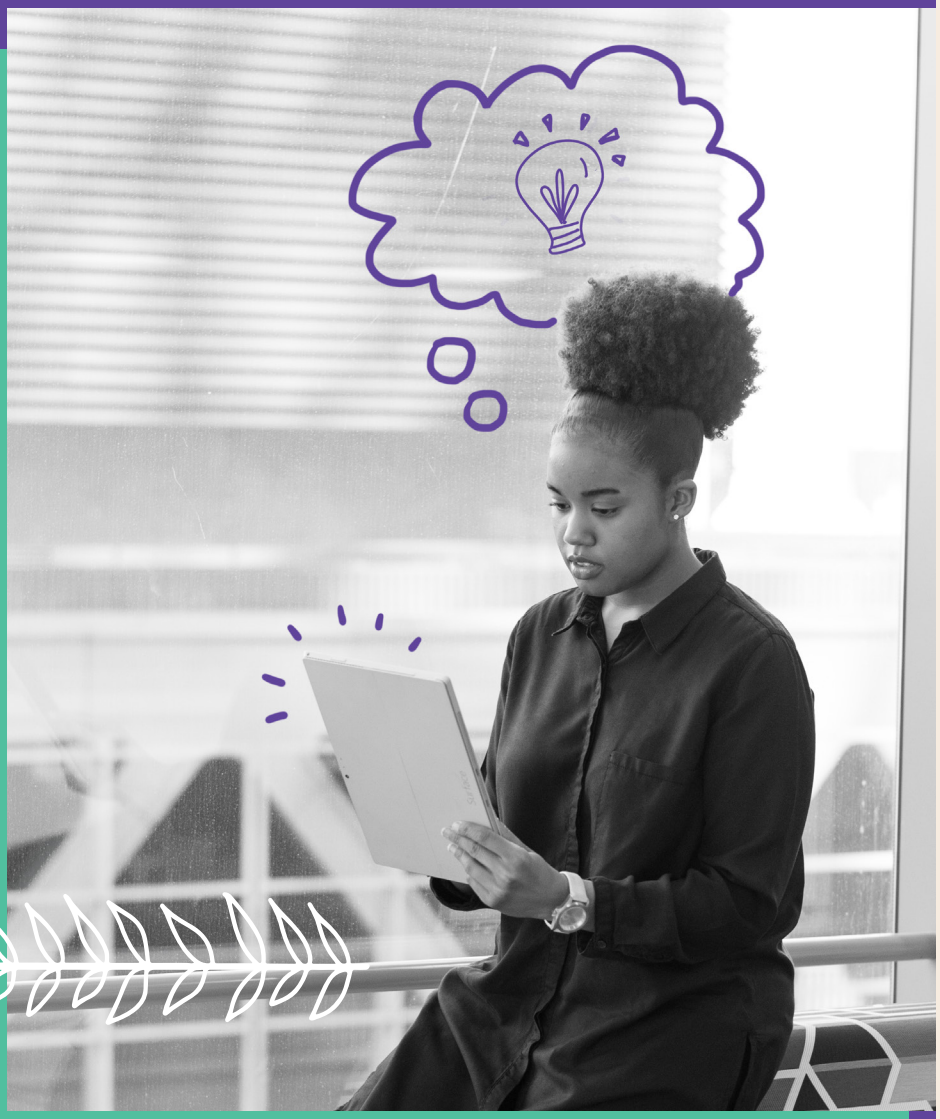
Community **Futures**
Community **Lore**

07

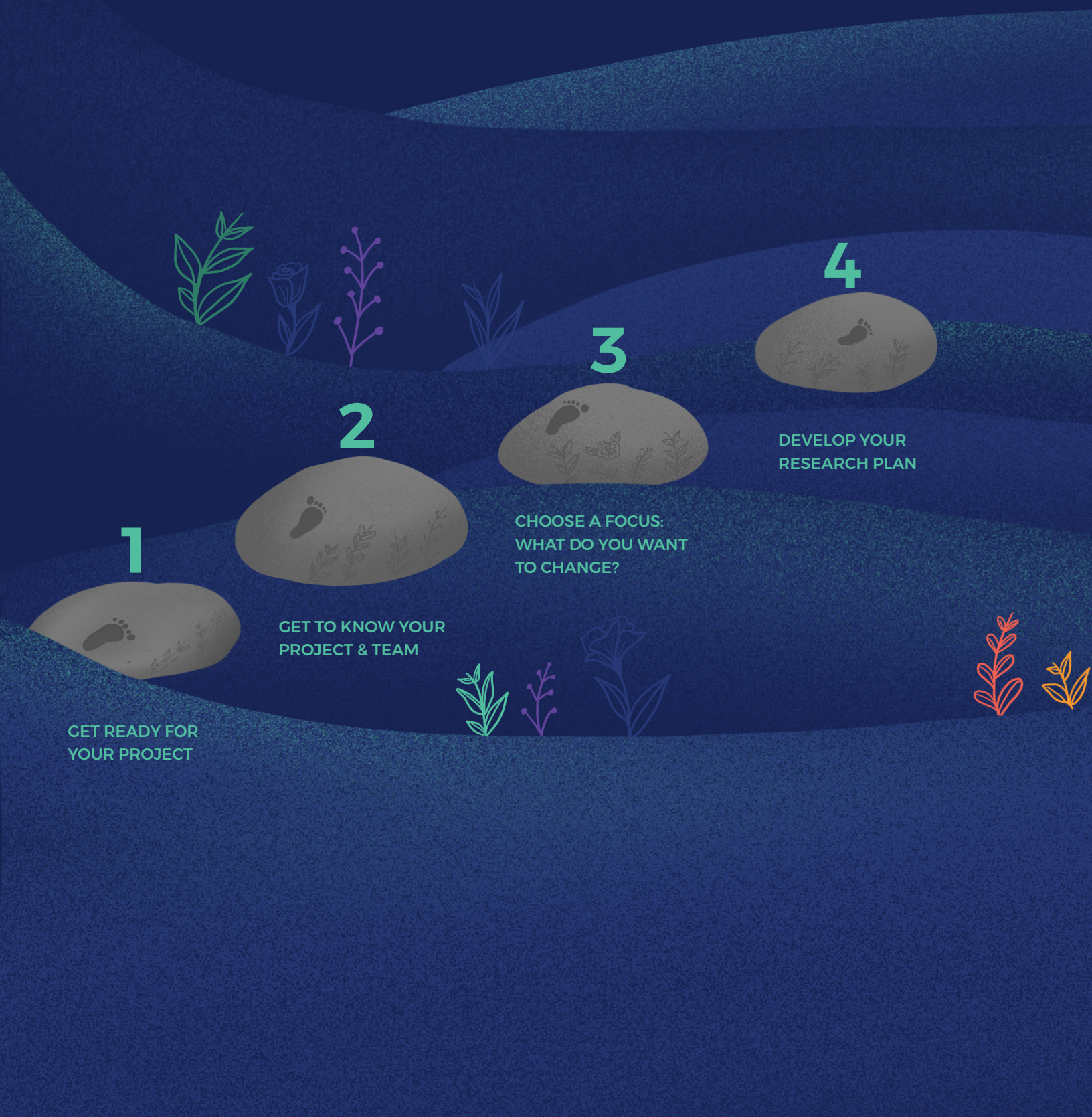


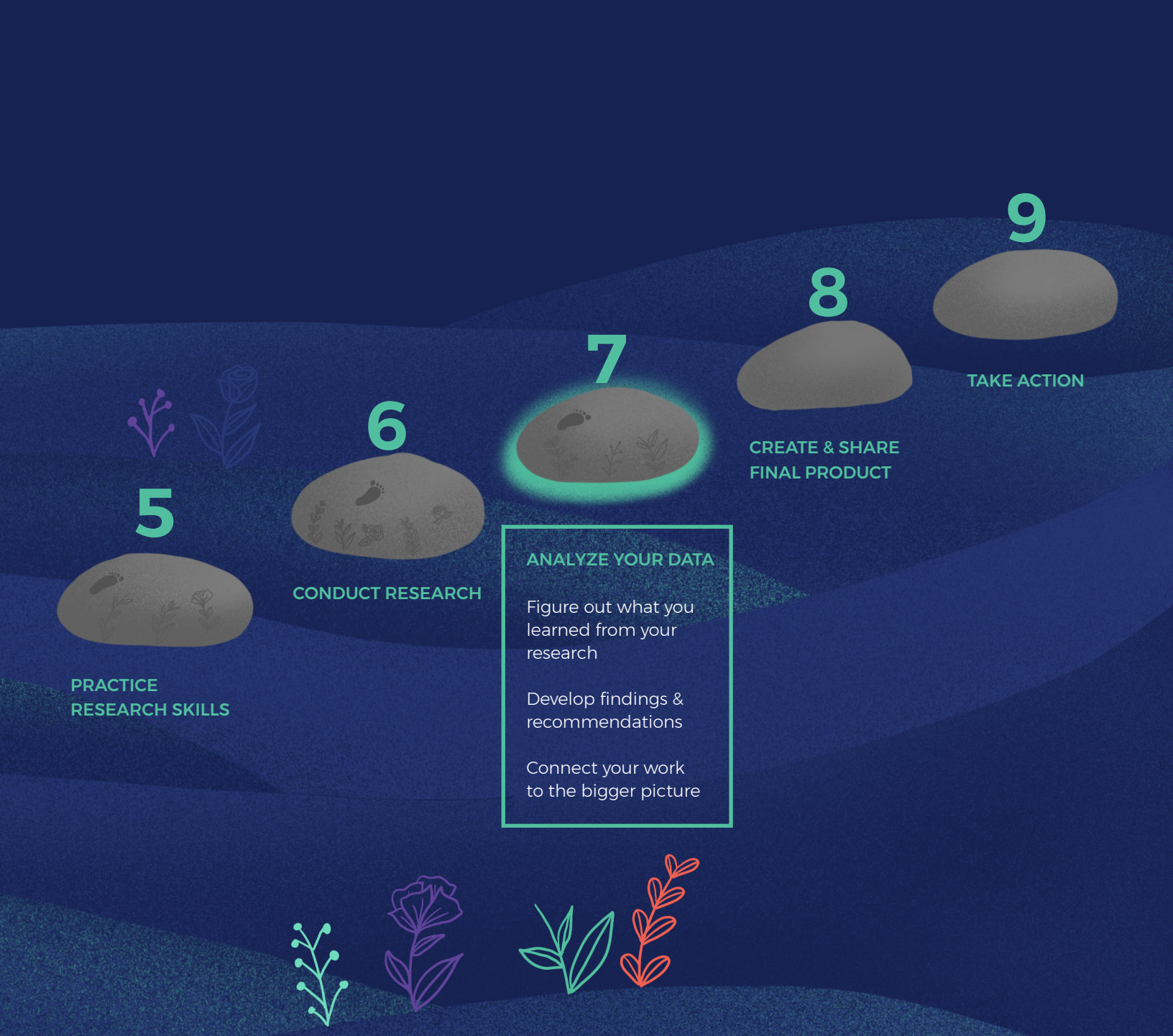
Stepping Stone 7

in the CFCL Youth Participatory Action Research Series

Analyze Your Data

Stepping Stones




5
PRACTICE
RESEARCH SKILLS
6
CONDUCT RESEARCH
7
ANALYZE YOUR DATA
Figure out what you learned from your research
Develop findings & recommendations
Connect your work to the bigger picture
8
CREATE & SHARE
FINAL PRODUCT
9
TAKE ACTION

Stepping Stone 7

Analyze Your Data

It's time to make meaning out of all the data you collected! Through careful analysis, you will uncover the stories embedded in your data and develop your project's findings and recommendations.

Analyze your data to discover themes and trends in your research results

- Resource 7.1: Sample Agenda (planning your data analysis process)
- Activity 7.2: Analysis Fictionary (defining key terms and concepts)
- Activity 7.3: Guiding Questions for Data Analysis (creating questions to focus your analysis)
- Activity 7.4: Theme Creation for Qualitative Data (analyzing data from focus groups/interviews/observations)
- Activity 7.5: Organizing Qualitative Data (organizing data from focus groups/interviews/observations)
- Activity 7.6: Quote Scavenger Hunt (finding powerful quotes in your results)
- Activity 7.7: Movie Matrix (analyzing and organizing survey data)

Stepping Stone Tips

- While digging through large amounts of data can be challenging and frustrating, this stage can also help team members feel greater ownership over their work.
- Remember - you are not only responsible for your own voice now, but also the voices of all of your research participants! Make sure your findings and recommendations are unbiased and clearly supported by your data.

Time Commitment: 3 – 5 sessions.

Identify what you learned from your research and what you think should happen as a result of your work

» Activity 7.8: Round Robin Finding Findings (explaining what you discovered through your research)

» Activity 7.9: A B C What We Want – Developing Recommendations (creating suggestions for change based on your findings)

Tell a story that connects your research to the "bigger picture" of your issue and your community

» Activity 7.10: Analyze-It Kit (formulating a powerful story about your research issue)

7.1 SAMPLE AGENDA

Making Meaning, Making Change

Note: This day-long agenda can be broken up into multiple shorter sessions. We encourage you to adapt these lesson plans to fit your program structure, resources and needs.

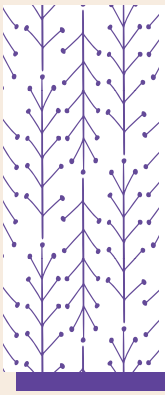
Facilitator Agenda
Date/Time

Goals
» To learn concepts and terms of data analysis
» To train leading coordinators in implementing data analysis activities
» To build skills to develop findings and recommendations

Agenda	Time
Welcome & Overview » Welcome everyone back. Welcome new folks » Go over goals and agenda for this training	10:00 – 10:05
Check-in » Go around room and say names, group you're representing, and what you're doing for the summer	10:05 – 10:15
Using Online Survey Tools: Data Entry	10:15 – 10:40
Analysis Fictionary: Data Analysis Terms	10:40 – 11:00
The Movie Matrix: Understanding Data Analysis	11:00 – 11:30
Analyze-It: Guiding Questions » Complete the guiding questions	11:30 – 11:45
Break	11:45 – 11:55
Round Robin: Finding Findings » Look at survey results example » Use example to develop findings	11:55 – 12:40
A B C What We Want: Developing Recommendations	12:40 – 1:10
Data Analysis Q & A	1:10 - 1:20
Plus – Delta Training Evaluation	1:20 – 1:25
Close Training Section	1:25 – 1:30
Lunch » Eat and get your specific project questions answered	1:30 - 3:00
Mid-Project Evaluation	3:00 - 4:00
Close	4:00

7.2 ACTIVITY

Analysis Fictionary



Objectives
- Learn data analysis concepts
- Define data analysis terms

Time Needed
20 minutes

Materials
- Flip chart paper
- Markers
- Data analysis terms and definitions
- Paper
- Pens

Introduction

In this activity, your team will learn and define data analysis terms and concepts. It's also a fun way to learn definitions to difficult, but important, concepts.

Instructions

- Pass out 6 small slips of blank paper to each participant. The facilitator should have a slip of paper for each vocabulary term with its actual definition written on it.
- Say one of the data analysis terms to the participants
- Ask them to come up with a definition for that word and write it on their slip of paper
- Everyone should turn in their slips of paper to the facilitator
- The facilitator will read each slip aloud and participants will try and guess which definition is the real one

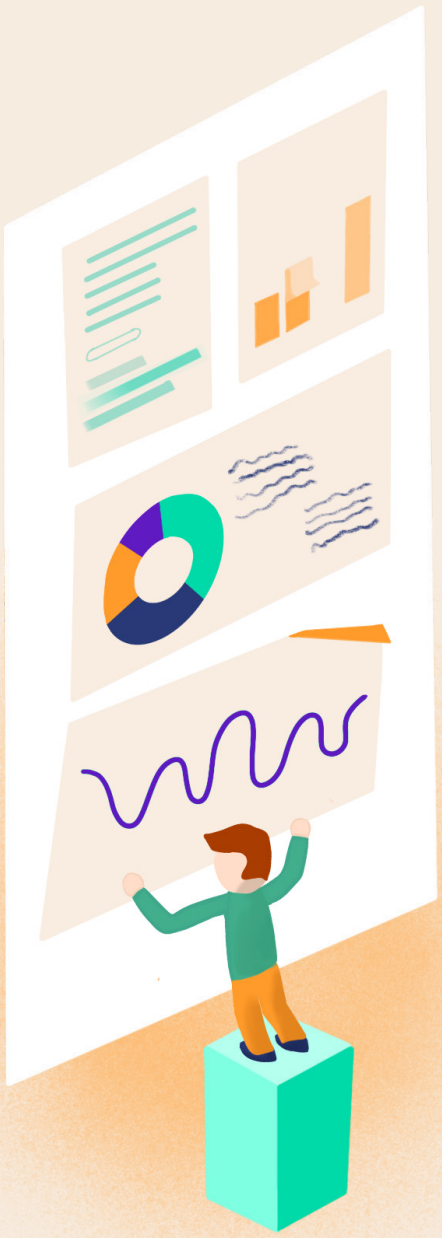
Debrief

The facilitator should write all the words on a flip chart as the game progresses. Once the participants have guessed the definition of a word, ask and record on the flip chart:
- Have you heard this word before? Where? How was it used?
- What do you think this word means in terms of research? Why is it important for us to know this term while working on our research project?
- Anything else about this word? (You can ask youth to use it in a sentence)

Ask if there are any questions about the words and offer examples where needed.

Key Vocabulary

with Definitions



Bias:

» When researchers' opinions and experience affect the project's ability to compile accurate and impartial information about other people's experiences

» Researchers must work hard to minimize its effects by understanding their own feelings/opinions (i.e. biases) and trying to limit their impacts on the research design, data collection and analysis processes

Data Set:

» All the information (data) that are gathered for a research project

» Information can be organized into subgroups – smaller batches of information collected (data) that are easier to handle by categorizing them

Finding:

» A key point that you learn based on analysis of data collected. They often answer key research questions that were defined at the beginning of the process

Recommendations:

» Suggestions for future action, based on research findings

7.3

ACTIVITY

Guiding Questions for Data Analysis

Objectives
- Focus and guide analysis of the data
- Ensure analyses are aligned with research question

Time Needed
10 - 20 minutes

Materials
- Flip chart paper
- Markers
- Guiding questions for each group

Introduction

These guiding questions will help your team focus their analysis and guide their process by reorienting them to the themes and questions they've identified as central to this project.

Instructions

- Break group up into 2 – 3 teams.
- Give them markers and flip chart paper and have them brainstorm their answers to the following questions (fill in the blanks to tailor it to your research project):

- Group 1:
  - What was our primary research question?
  - What things having to do with _____ did we look at to answer our research question?

- Group 2:
  - After looking at all the data we collected, what do we want to be able to say about _____?

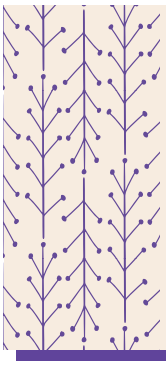
- Group 3:
  - What do we want to do with this information when we are done?

Debrief

Have groups share out and add to each others' answers. You will continue to look at these answers as you move through the data analysis process.

7.4 ACTIVITY

Theme Creation for Qualitative Data



Objectives

» Begin the process of organizing and analyzing your qualitative data
» Find and highlight the emerging themes from your data collection

Time Needed

60 minutes

Materials

» Raw data (focus group/interview/observation notes)
» Focus group/interview recording(s)
» Flip chart paper
» Markers

Introduction

At this point in the research process, you have collected a lot of information. To identify the most significant data for your analysis, you need to begin by organizing all of the information. One of the easiest ways to start is by developing themes. Themes are trends or patterns that you see emerging throughout the data. You probably already have some in mind from developing your research tool.

Instructions

» Start by asking the team for their definition of a theme. When you hear the word "theme," what do you think of? (record their answers on the flip chart)
» Explain that you are going to brainstorm themes in their data.
  - When thinking about your focus groups/interviews/observations, what are some of the key points that come to mind that are common across multiple data? (record their responses)
  - Imagine that you are presenting your research. What main ideas will you want to get across to your audience? How do you sum those up in one word or category? (record responses)

Debrief

Your team should come up with 5 – 7 themes.

» If you have brainstormed more than 7, you probably want to refine and prioritize the list. Work with the group to identify:
  - What themes go together?
  - What do the themes actually mean?
  - What themes are missing?
  - What is not actually a theme, but a point within a theme?

As you move forward with data organization and analysis, let the team know you can also include an "other" or "miscellaneous" category for points that don't fit in one of the main themes, as well as points that are only supported by a relatively small amount of evidence.

Keep the themes handy, you'll need them for the next steps in data analysis.

7.5 ACTIVITY

Organizing Qualitative Data

Objectives
- Continue organizing and analyzing your qualitative data
- Find and highlight quotes that illustrate evidence that is most relevant in answering your research question

Time Needed
60 - 90 minutes

Materials
- Raw data (focus group/interview/observation notes)
- Focus group/interview recording(s)
- Organizing Qualitative Data: Theme Matrix chart
- Sticky notes
- Markers and pens

Introduction

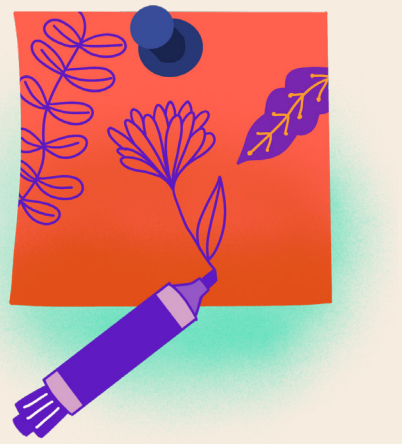
As part of developing themes, you need to also share the evidence to support them. In this activity your team will sort through their mountains of notes to find the most compelling, relevant, important quotes, ideas and statements.

Instructions

- Draw the Theme Matrix on a flip chart.
- Ask youth to have their notes in front of them. They can work in their focus group/interview/observation teams or work individually (whichever makes most sense).
- Explain the Theme Matrix.
  - These are the themes we created last time, plus an "other" or "miscellaneous" category (see Activity 7.4: Theme Creation)
  - For each theme there is a:
    - Plus sign (+) for positive statements
    - Negative sign (-) for negative statements
    - Delta sign (Δ) for statements that speak to change
    - V sign (V) for statements that indicate vision of a solution
- Ask researchers to look through their notes. When they find a quote or idea that feels compelling, ask them to:
  - Write it on a sticky note.
  - Decide if the statement is positive, negative, about change or a vision of a solution (see sample chart)
  - In the corner of their sticky note, mark:
    - The theme that it falls under,
    - What kind of statement it is (i.e. positive, negative, etc.), and
    - The focus group/interview/observation it came from.
    - Place your sticky notes on the Theme Matrix.

Debrief

You will use this chart during data analysis so make sure it is thorough and readable. The facilitator should type up the chart so you can use typed copies for analysis later.



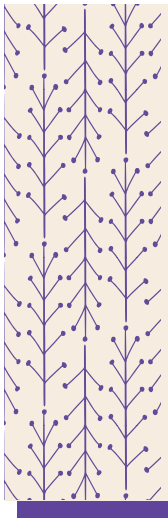
Organizing Qualitative Data: Theme Matrix

Sample Flip Chart:

	THEME #1: School	THEME #2: Community
+	» We have a neighborhood school!	» This neighborhood is a great place. It's just overlooked. It's the heart of the city!
–	» Our middle school is too small and students will not be prepared for high school	» "This community is underserved."
Δ	» "We should have a high school because I don't want to go all the way to a different district."	» Bring awareness to others about the SOMA neighborhood
V	» Create a bigger middle school with teachers that can connect with youth to teach you more	» All programs and organizations in neighborhood need to work together – combine programs to get bigger space – grow these programs

7.6 ACTIVITY

Quote Scavenger Hunt



Objectives

» Find quotes in the qualitative data that will help develop or illustrate research findings
» Understand the power a meaningful quote has to connect the people who participated in the research with the audience

Time Needed

60 - 90 minutes

Materials

» Raw data (focus group/interview notes)
» Focus group/interview recording(s)
» Flip chart paper
» Markers and pens

Introduction

Quotes are a powerful tool for putting a "human face" on research findings. By hearing the words of the people who participated in the research, the audience is better able to understand or even identify with the findings. In this activity, your team will listen to recordings of their interviews or focus groups in order to find quotes that embody relevant points.

To prepare, listen to the recordings of the focus groups or interviews. Mark key sections and know where they are on the recordings before meeting with youth researchers.

Instructions

Part I. Define what makes a good quote.

» Look at examples of quotes (good and bad). Discuss which ones are good and why.
» Brainstorm a list of what makes a good (relevant) quote. Some ideas include:
  - It is moving
  - It is a complete sentence or thought
  - It is clear and concise (doesn't run on forever)
  - It supports a finding (or multiple findings)
  - It makes you feel something (i.e. powerful, inspired, mad, sad, etc.)

Part II. Divide group into teams. Explain the following process:

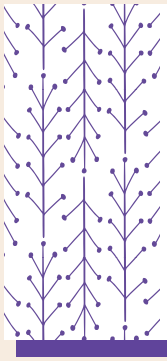
- The Quote Scavenger Hunt is about to begin!
- We probably won't have enough time to listen through the entire recording, so I will play sections of the recording(s) from your focus groups/interviews.
- As you listen to the recordings, remember what we said makes for a good quote.
- When you hear something that fits the criteria, "ring your buzzer" (or bang on the table) and I'll call on you.
- When I call on you, tell us the good quote that you heard. If it matches at least some of our criteria, I will give your team a point.
- If it doesn't fit, I will let the other team try and come up with a quote that they've heard that can earn them a point.
- To determine the winning team, you can continue the game until a certain amount of time passes and then see who has the most points. Or you can play until one of the teams reaches a certain number of points and is declared the winner.

Part III. Review quotes.

- Write quotes on flip chart paper as researchers come up with them.
- Have the group identify the top 3 – 5 quotes.
- Is anything missing?
- What do these quotes mean? What are people saying? (This is the beginning of data analysis. Chart what researchers say and save responses for the next phase of work.)

7.7 ACTIVITY

Movie Matrix



Objectives

» Learn how to organize quantitative data
» Learn how to analyze quantitative data
» Learn how to develop findings with supporting data

Time Needed

45 minutes

Materials

» Movie Matrix template written on flip chart paper (see attached examples)
» Stickers
» Markers

Introduction

This is a fun way to use popular culture to learn about quantitative data collection and analysis.

Instructions

» Create the template flip chart (see sample). Your team will use this matrix to answer the research question, "What is our team's favorite movie?"
» Ask your team to brainstorm indicators that define a good movie. How do you know that a movie is good and what do you base your opinion on? See sample flip chart #1 for possible indicators.
» Once you have brainstormed indicators, now brainstorm movie titles. Ask youth to agree to 3 to 4 movies that most or all of them have seen because they will be rating the movies based on the indicators they have created. See sample flip chart #2 for an example of a movie title brainstorm.
» Next ask the youth to rate the movies from 1 (being poor) to 5 (being excellent) for each indicator. You can use stickers, or markers to rate. See rating sample flip chart #3.
» Ask youth to tally the scores. Your team has created a data set and organized the data using a matrix.

Discussion Questions

» Based on the data set what is your team's favorite movie?
» What data support this finding?
» What else seems important to talk about?
» What do you notice from this data?
» What is it telling us?
» What other findings can you develop from this matrix?
» Did this matrix accurately reflect your team's opinions?

Debrief

On a separate sheet of flip chart paper write down your team's findings and supporting data.

» Underline and point out the findings and the supporting data.
  - What is the difference between a finding and a piece of supporting data?
  - Is there anything else you'd say about this finding? Can you go deeper or are there data that you can use to enhance what you're saying?
  - Why is this finding important?

Movie Matrix Flip Chart Template & Samples

Flip Chart Template

INDICATORS

MOVIE TITLES				

Sample Flip Chart #1: Indicators Brainstorm

INDICATORS

MOVIE TITLES	ACTING	STORY	CINEMATOGRAPHY	MUSIC

Sample Flip Chart #2: Movie Title Brainstorm

INDICATORS

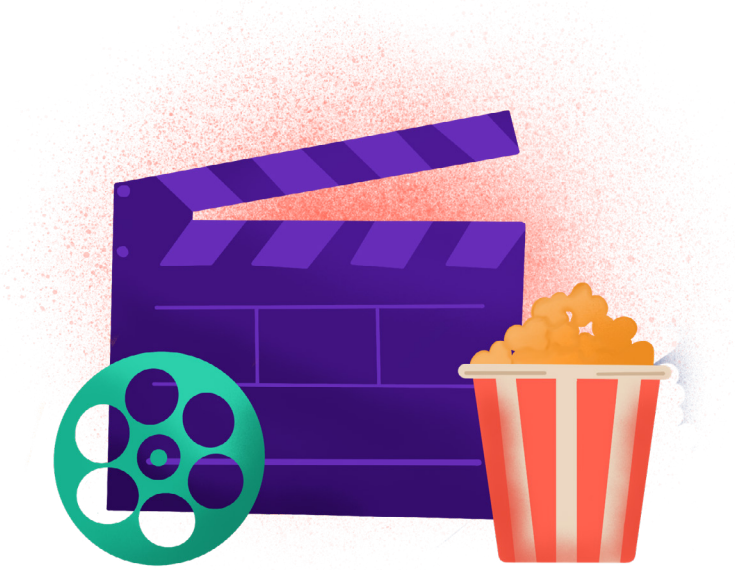
MOVIE TITLES	ACTING	STORY	CINEMATOGRAPHY	MUSIC
Black Panther				
Titanic				
Wonder Woman				

Sample Flip Chart #3: Rating (Scale: 1 = poor, 5 = excellent)

	INDICATORS			
MOVIE TITLES	**ACTING**	**STORY**	**CINEMATOGRAPHY**	**MUSIC**
Black Panther	5, 4, 5, 4, 3	3, 4, 5, 4, 3	2, 3, 4, 5, 3	5, 4, 5, 4, 5
Titanic	3, 5, 3, 2, 5	4, 3, 3, 2, 4	2, 3, 2, 3, 2	
Wonder Woman	4, 5, 5, 4, 5	4, 5, 4, 5, 4	2, 3, 3, 2, 4	3, 4, 4, 3, 4

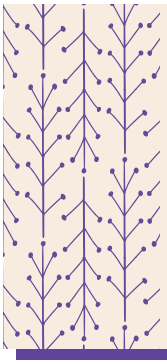
Sample Flip Chart #4: Tally

	INDICATORS				
MOVIE TITLES	**ACTING**	**STORY**	**CINEMATOGRAPHY**	**MUSIC**	***TOTAL***
Black Panther	21	19	17	23	**80**
Titanic	18	16	12	13	**59**
Wonder Woman	23	22	14		**77**



7.8 ACTIVITY

Round Robin Finding Findings



Objectives
» Analyze data set(s)

Time Needed
2 – 4 training sessions

Materials
» Flip chart paper (see attached example)
» Tape
» Markers
» Data set(s); filtered data set(s) (i.e. stats/quotes/themes broken down by gender, race, etc.)

Introduction

Data analysis is one of the most challenging and rewarding parts of the research process. Your team is able to make meaning from their data and take ownership over their project. This activity should be done after researchers have gone through the previous data organization and analysis activities and understand *findings* and *supporting data*.

Instructions

» Set up 4 – 5 stations around the room. Each station should have a labeled flip chart (see attached) and markers.
» Do an example as a large group:
  · **Ask:** What is one point that really sticks out to you that's common across your data?
  · **Write:** Write down their answer underneath "Finding." (It should be a complete sentence. It should not be one direct statistic, but a point that they have compiled based on different aspects of the data.)
  · **Say:** Now we need to support this finding.
  · **Ask:** What pieces of data support this finding? We need at least 2 or 3 pieces of supporting evidence.
  · **Write:** Write down each piece of supporting data under "Supporting Data." (In this section, include specific statistics; encourage youth to combine statistics, to look for the more complex picture, etc.)
» Break the team up into groups of 2 – 3 people. Send each small group to a different station.
  · At each station, the group should use their data set to come up with a new finding and at least one piece of supporting data.
  · If groups are having trouble, have them identify one theme from their research. Then, ask them to find a key point about that theme that surfaced in their data collection. (i.e. A theme could be junk food. What was said about junk food in the data? Then, what's the meaning there? What can you say about what your participants felt about junk food?)
  · Give teams a few minutes at each station. Then, ask teams to rotate to their left.
  · If they move to a sheet that already has a finding on it, they should look through their data set and find one or two more pieces of supporting data to add to that finding.
  · If they move to a blank sheet, they need to come up with a new finding and at least one piece of supporting data.

Helpful Hints

» If youth researchers want to look at their quantitative data based on gender or race or a specific question, etc., you may be able to filter the data using an online

survey tool so that they are only looking at that set of data.

» Good Questions
  - What strikes you about the data?
  - What's different than you thought it would be?
  - What is similar to what you expected?
  - What statistics really stand out?
  - Are these important to talk about? '
  - Are there contradictions?

» If youth get stuck or overwhelmed looking at the data, start by brainstorming some of the main themes that have emerged through their process. Then, ask each small group to choose a theme and develop one finding that corresponds to their chosen theme. You can also direct the group to the guiding questions in their Analyze-It Kit in Activity 7.10 where they can develop broader ideas about their research.

» Push teams to develop more complex findings. When they first start, they will most likely offer basic responses that they see in front of them. Encourage them to go deeper by asking questions.

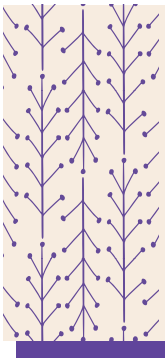
» If the team is having trouble identifying any supporting data for a finding, then the finding probably needs to be revised so that it is grounded in the data.

» Generally, teams develop 3 – 5 main findings. Some teams come up with 10 – 15 findings and then identify their top 3 – 5 so that their point is not lost!

Round Robin Finding Findings Sample Flip Chart

7.9 ACTIVITY

A B C What We Want (Developing Recommendations)



Objectives
- Develop suggestions for action based on data
- Identify any needs for more information

Time Needed
60 - 90 minutes

Materials
- Flip chart paper (see attached examples)
- Tape
- Markers
- Findings

Introduction

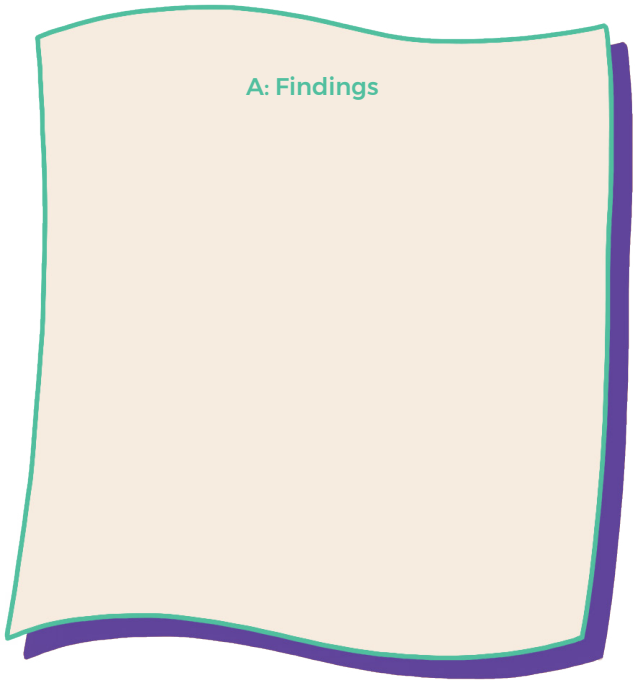
Now that you have identified the key findings, you need to create recommendations based on them. Recommendations are your suggestions for change and action that you will offer to key stakeholders, community members, and peers.

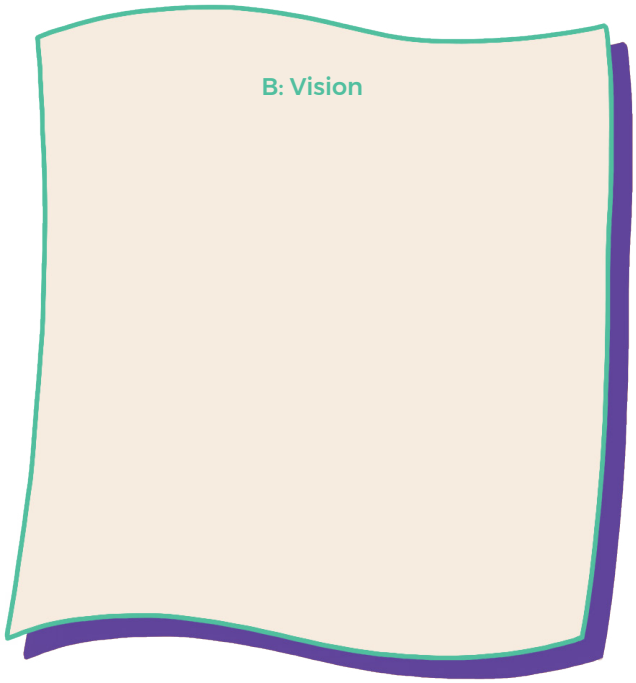
Instructions

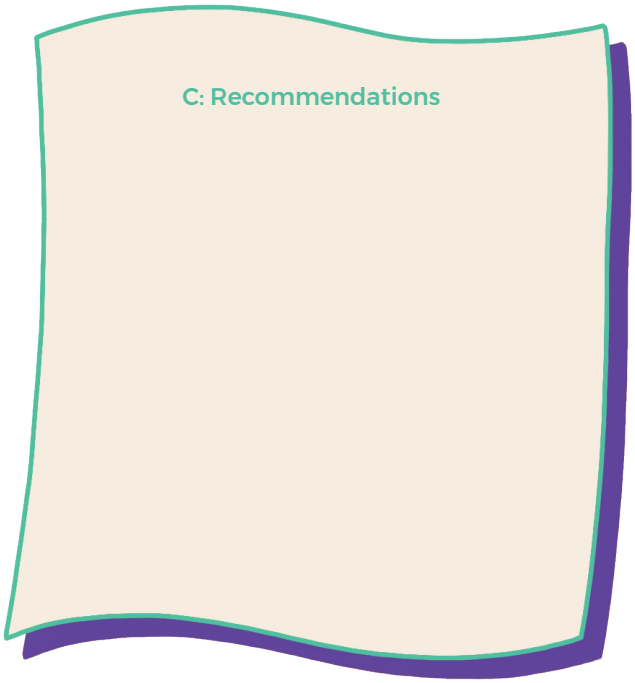
Hang up 3 pieces of flip chart paper (A, B, C) next to each other (see attached):

- **Chart A: Findings**
  - List your findings (without the supporting data) on the first flip chart. This is what you've learned about what's actually going on.
  - This can be done as a group, or you can do this prior to the meeting starting.
- **Chart B: Vision**
  - Have the team brainstorm what they want to see in the future based on the work they've been doing.
  - What kind of school or community do they envision if they could build on all of their findings?
- **Chart C: Recommendations**
  - These are the steps that you have to take to get from your findings (what is real) to your vision (what you dream of).
  - Are there different recommendations for different people? (i.e. Do we have specific recommendations for our school board or city council? For ourselves? For our community members? etc.)
- If you still have your results from the Real vs. Ideal activity done during Stepping Stone 3, it can be helpful to utilize them during this brainstorming session.
- You will list your recommendations in your final report and they will be a key part of your presentations.

A B C What We Want (Developing Recommendations) Flip Charts







7.10 ANALYZE-IT KIT

Introduction

The following guide will help your team process all the information they gathered from their research and utilize the results of their analyses from the previous activities to begin to formulate a compelling story about their research issue. Be sure to customize it by filling in the highlighted areas with your group's specific information prior to distributing the kit to your team members.

[Enter team's name here]

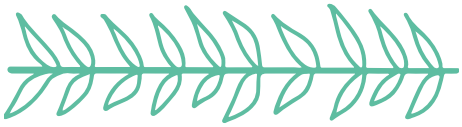
Analyze-It Kit

Hey **[enter team name here]**,

It's time to put together all the information you have gathered from your **[enter research tool here]** on **[enter research issue(s) here]**.

The following guide will help you process through all the information you gathered from your **[enter research tool here]**. You will use it to identify the most important and interesting data, draw conclusions from that information, and describe how this information tells a story about **[enter how research impacts sample here]**.

This is your opportunity to take the information you have gathered and make it a powerful tool that can result in real change!



Contents of Your Packet

» Instructions
» List of guiding questions
» Data set packet

Instructions

Step 1:
a) Read the entire instruction sheet.

Step 2:
a) Read over the guiding questions.
b) Answer the guiding questions to the best of your knowledge.
c) Review your answers to the guiding questions.

Step 3:
a) Read the data set packet.
b) List what you think are the top three key data findings.
c) Describe or list the data that support these key findings.
d) List what you can recommend to address these findings.
e) List ways in which these findings relate to one another.
(Hint - How does all this information tell a story together?)

Step 4:
a) Be prepared to share your findings with the group at your next meeting.

Guiding Questions

1. What was your primary research question?
2. What things having to do with **[enter research issue(s) here]** did you look at to answer your research question? *(Think about the types of things you asked people.)*
3. What do we want to be able to say about **[enter how your research issue(s) impact people here]**?
4. What do we want to do with this information when we are done?

Top Three Findings & Supporting Data

Finding #1

_____

Supporting Data:

1. _____

2. _____

3. _____

Finding #2

_____

Supporting Data:

1. _____

2. _____

3. _____

Finding #3

_____

Supporting Data:

1. _____

2. _____

3. _____

Recommendations to Address, Build Upon and/or Add More Information to Findings

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

How does this all fit together?

(What is the story you're trying to tell?)

About Community Futures, Community Lore

STEPPING STONE GUIDES

The CFCL Stepping Stone guides were developed based on the original work of the Intercultural Oral History Project/Tibet, the Intercultural Oral History Project/Nepal, Community LORE, Youth In Focus and the Putting Youth on the Map program at the UC Davis Center for Regional Change. Many, many individuals, communities and projects contributed over a period of more than twenty years to CFCL's approach to YPAR (youth participatory action research). For the full set of Stepping Stone guides, YPAR stories, background on the CFCL approach, and a list of project credits visit the website: ypar.cfcl.ucdavis.edu

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