The background features a white canvas with several large, colorful circles in teal, lime green, orange, and pink. Some of these circles have smaller circles inside them, creating a nested effect. Dashed lines in various colors (teal, green, yellow) arc across the page, connecting different elements. The text is centered in a dark blue, serif font.

# CS-LISTEN

## Equitable Computer Science in your School Meeting 7

This material is based upon work supported by the National Science Foundation under Grant No. 1923406.



# Weekly CPR Check In





# Sharing Prompt of the Day:

- © What was something really fun you did during the last month?



UC San Diego's  
Consent & Assent forms

Are all your forms  
turned into your  
teacher?

Understanding the Problem

1. Choose a  
Research  
Question

2. Determine  
the methods

3. Design  
tools

4. Collect  
Data

5. Conduct  
Analysis

**CS-LISTEN  
Student  
Co-Researchers  
(SCR)  
Cycle**

**You  
are  
here!**





GOAL:  
Finalizing  
research tools



# Week 6 Recap

- Congrats you started making your data collection tools.
- Finish those today. And make a step-by-step plan exactly how you'll use them.

# Finalizing Research Tools







## Continuing on with instrument construction...

- ★ Review the tools your Student Co-Research Team drafted last time.
- ★ Do you need to add more questions, compare the questions to the RQ, revise?
- ★ Make sure you look at the tips for creating good questions on [slide 13](#).
- ★ Refine the questions you create against the “tips”.
- ★ Look at all the drafted questions together.
  - OPTION: Have students place a Star/Sticker/Post-it next to those that are definite keepers,
    - Place (a different kind of marker) next to questions that students are unsure about keeping. Does that question need to be refined/revised or dumped?

# Tips: Good survey questions are

- ❖ **CLEAR** and specific
- ❖ **NOT TOO PERSONAL**
- ❖ Questions people will respond to **TRUTHFULLY**
- ❖ Questions people **KNOW** the answer to
- ❖ A **SINGLE** question, not “two questions in one”
- ❖ Avoid **BIASED** or leading language



# Links to Slide Deck Support Videos and Hints to Help Teams Design for Different Methods

[Survey Design Essentials Video](#) – slide 15

[Examples of Likert Scales](#) – slide 16

[Semi-structured Interviews Video](#) – slide 17

[Google Forms Best Practices: Top 7 Tips and Tricks](#) – slide 18

[Google Forms: How to directions](#) – slides 19–24 (link goes to slide 19)

Optional:  
Rewatch all  
or part of  
the Tips for  
Creating  
Good Survey  
Questions

(4 minutes)

## **SURVEY DESIGN ESSENTIALS**

Seven tips for good survey questions

**KENNETH FERNANDEZ** | Elon University

# Examples of Likert Scales (5 point scale recommended)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                      |                    |                            |                 |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|--------------------|----------------------------|-----------------|----------------------|
| <div> <div>Very Interested</div> <div>5</div> </div> <div> <div>Somewhat Interested</div> <div>4</div> </div> <div> <div>Neutral</div> <div>3</div> </div> <div> <div>Not Very Interested</div> <div>2</div> </div> <div> <div>Not at All Interested</div> <div>1</div> </div> <div> <div>Very Much Like Me</div> <div>5</div> </div> <div> <div>Somewhat Like Me</div> <div>4</div> </div> <div> <div>Neutral</div> <div>3</div> </div> <div> <div>Not Much Like Me</div> <div>2</div> </div> <div> <div>Not at All Like Me</div> <div>1</div> </div> <div> <div>Very Happy</div> <div>5</div> </div> <div> <div>Somewhat Happy</div> <div>4</div> </div> <div> <div>Neutral</div> <div>3</div> </div> <div> <div>Not Very Happy</div> <div>2</div> </div> <div> <div>Not at All Happy</div> <div>1</div> </div> <div> <div>Almost Always</div> <div>5</div> </div> <div> <div>Sometimes</div> <div>4</div> </div> <div> <div>Every Once In a While</div> <div>3</div> </div> <div> <div>Rarely</div> <div>2</div> </div> <div> <div>Never</div> <div>1</div> </div> | Response Set | 1                    | 2                  | 3                          | 4               | 5                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Frequency    | Never                | Rarely             | Sometimes                  | Often           | Always               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Quality      | Very poor            | Poor               | Fair                       | Good            | Excellent            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Intensity    | None                 | Very mild          | Mild                       | Moderate        | Severe               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Agreement    | Strongly disagree    | Disagree           | Neither agree nor disagree | Agree           | Strongly agree       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Approval     | Strongly disapprove  | Disapprove         | Neutral                    | Approve         | Strongly approve     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Awareness    | Not at all aware     | Slightly aware     | Moderately aware           | Very aware      | Extremely aware      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Importance   | Not at all important | Slightly important | Moderately important       | Very important  | Extremely important  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Familiarity  | Not at all familiar  | Slightly familiar  | Moderately familiar        | Very familiar   | Extremely familiar   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Satisfaction | Not at all satisfied | Slightly satisfied | Moderately satisfied       | Very satisfied  | Completely satisfied |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Performance  | Far below standards  | Below standards    | Meets standards            | Above standards | Far above standards  |

# Semi-structured interviews in 4 minutes

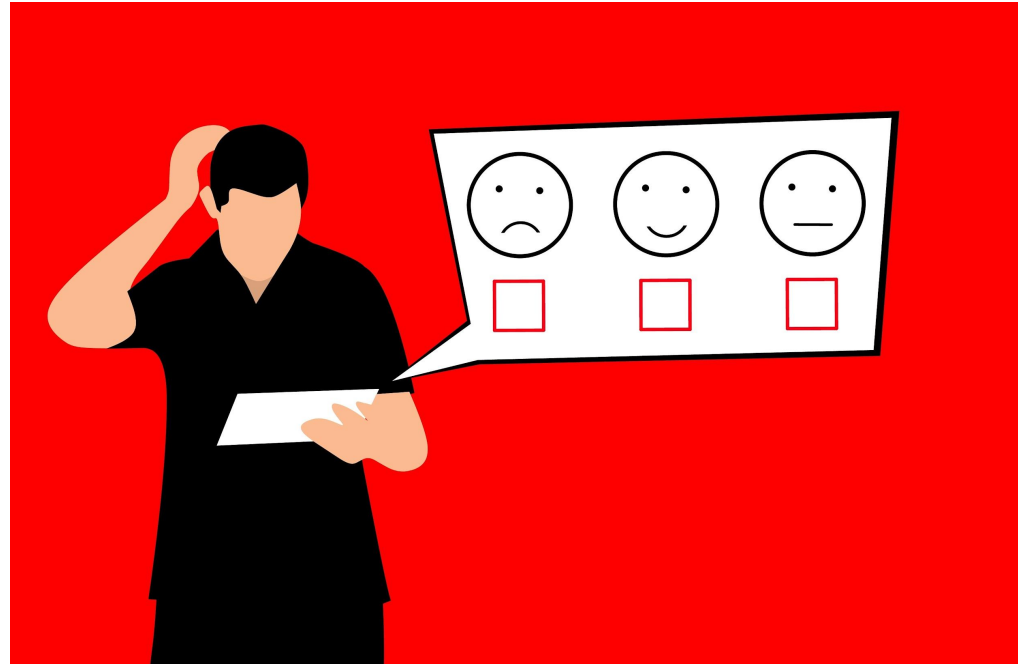
Review this if your team  
decided to do interviews.



**HOW TO CONDUCT A  
QUALITATIVE RESEARCH  
INTERVIEW**

# Google Forms Best Practices: Top 7 Tips & Tricks

- Explore types of questions
- Divide your questions into Sections
- Use skip Logic/Branch Questions
- Customize your survey!
- Piloting (check settings)
- Use bit.ly to shorten your loooong Google url
- Check responses immediately!



# Explore different types of questions!

The image shows a web-based survey form editor interface. At the top, there are two tabs: "QUESTIONS" (active) and "RESPONSES". Below the tabs, the main area is divided into two sections. The top section, titled "Form description", contains a text input field. The bottom section, titled "Question", contains a text input field and a list of options. The first option is "Option 1", and the second option is "Add option or [ADD 'OTHER'](#)". To the right of the "Question" section, there is a vertical menu of question types. The "Multiple choice" option is selected and highlighted. The other options in the menu are "Short answer", "Paragraph", "Checkboxes", "Dropdown", "Linear scale", "Multiple choice grid", "Date", and "Time". On the far right, there is a vertical toolbar with icons for adding new questions, text formatting, image insertion, video insertion, and a list of question types.

QUESTIONS RESPONSES

Form description

Untitled Question

☐ Option 1

☐ Add option or [ADD "OTHER"](#)

Question

☐ Option 1

- Short answer
- Paragraph
- Multiple choice**
- Checkboxes
- Dropdown
- Linear scale
- Multiple choice grid
- Date
- Time



# Divide your questions up into Sections

Asking a lot of questions can overwhelm your participants.

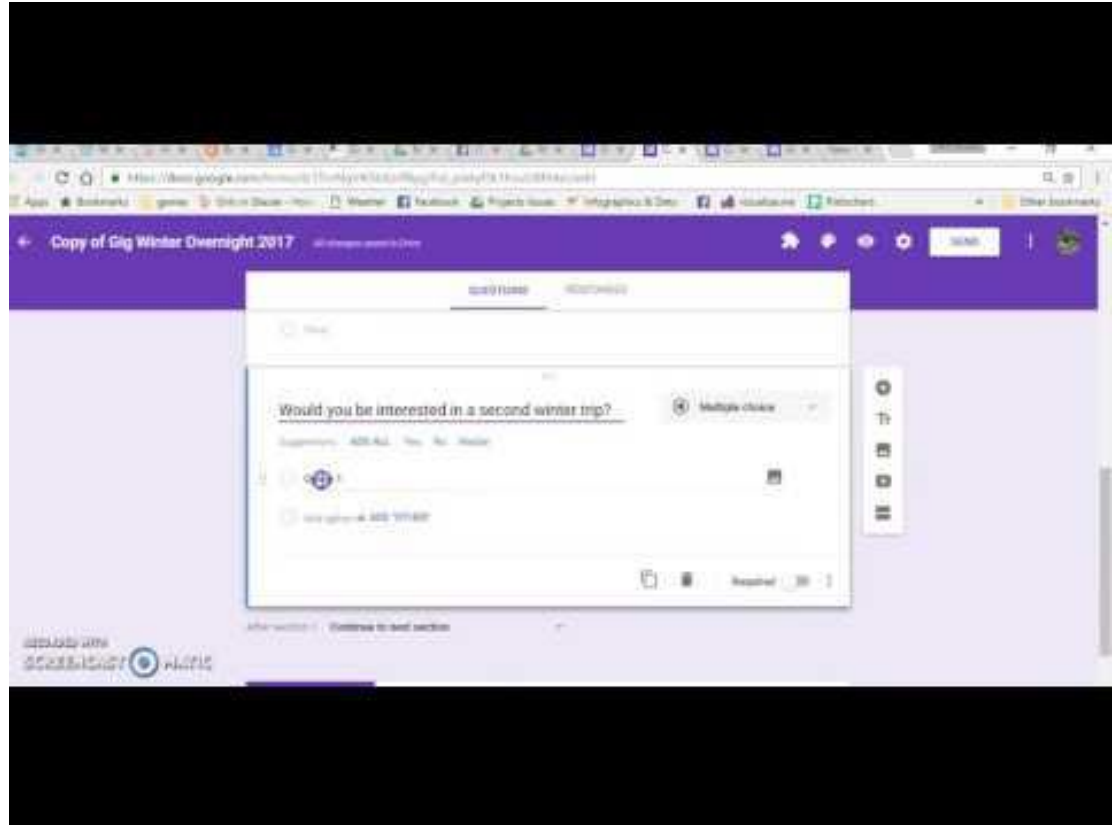
Dividing your questions into different sections can ease their survey-taking experience. Making Sections is important if you use Skip Logic questions (see next slide).

The screenshot displays a survey form editor interface. At the top, there is a question with a radio button and the text "Gluten-free". Below this, a section titled "After section 1" is visible. A context menu is open, showing four options: "Continue to next section", "Go to section 1 (Event registration)", "Go to section 2 (Untitled Section)" (which is highlighted), and "Submit form". The background shows a section titled "Section 1" with a sub-section "Untitled" and a description field labeled "Description (optional)". On the right side, there is a vertical toolbar with icons for adding questions, text, images, video, and a menu icon.

# How to do Skip Logic Questions

Depending on the participant's answer, you can make the question skip to different sections.

This video shows how easily!

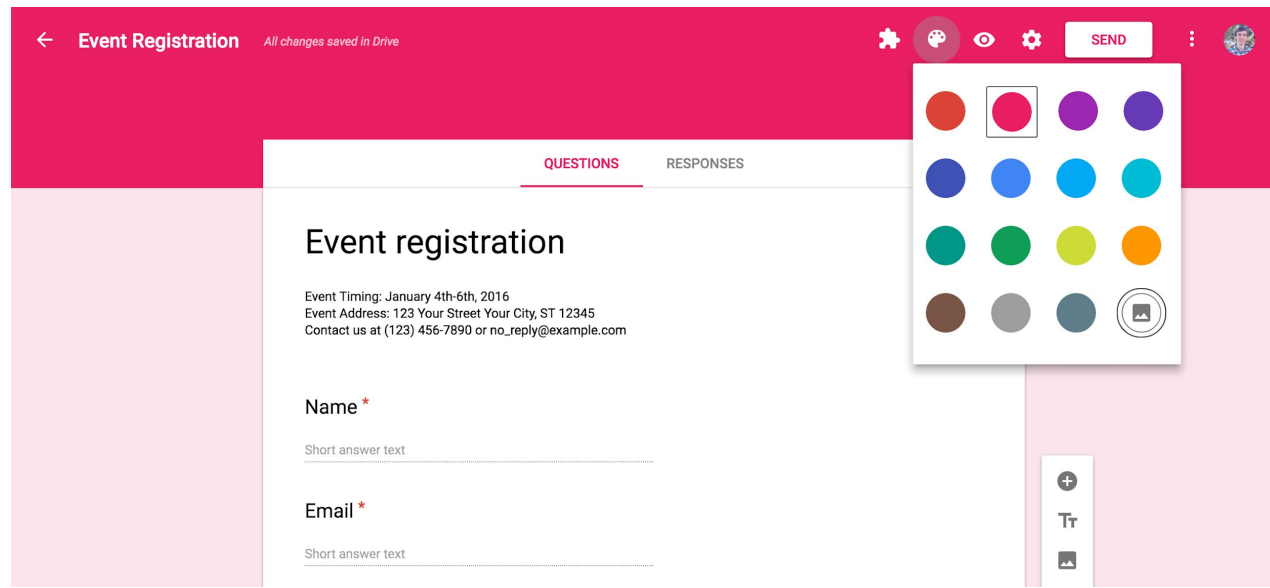


# Customize your survey!

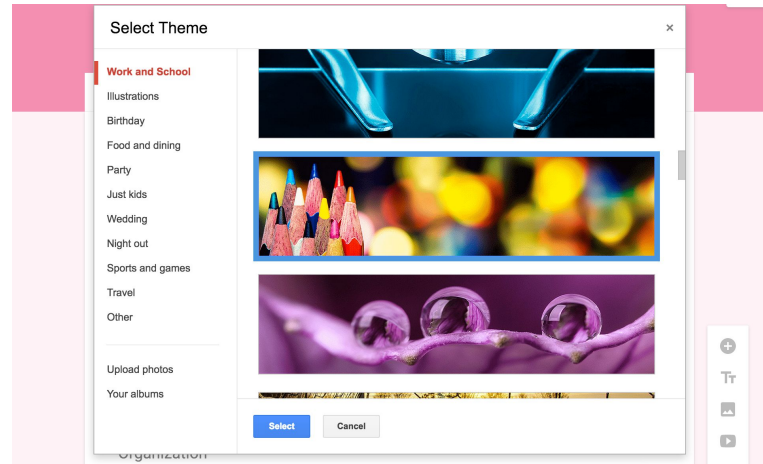
Edit the header and color of the form.

You pick a custom color.

Change the header image from Google Form library or use your own! (1600 x 400 px.)



The screenshot shows a Google Form titled "Event Registration" with a custom pink header. The header text "Event Registration" is in white, and a subtitle "All changes saved in Drive" is in a smaller font. The form has two tabs: "QUESTIONS" (active) and "RESPONSES". The form content includes event details: "Event Timing: January 4th-6th, 2016", "Event Address: 123 Your Street Your City, ST 12345", and "Contact us at (123) 456-7890 or no\_reply@example.com". There are two required text input fields: "Name" and "Email", both labeled "Short answer text". A color picker overlay is visible in the top right corner, showing a grid of 16 color swatches. The top right of the header has icons for settings, a chat bubble, an eye, a gear, a "SEND" button, and a user profile icon.

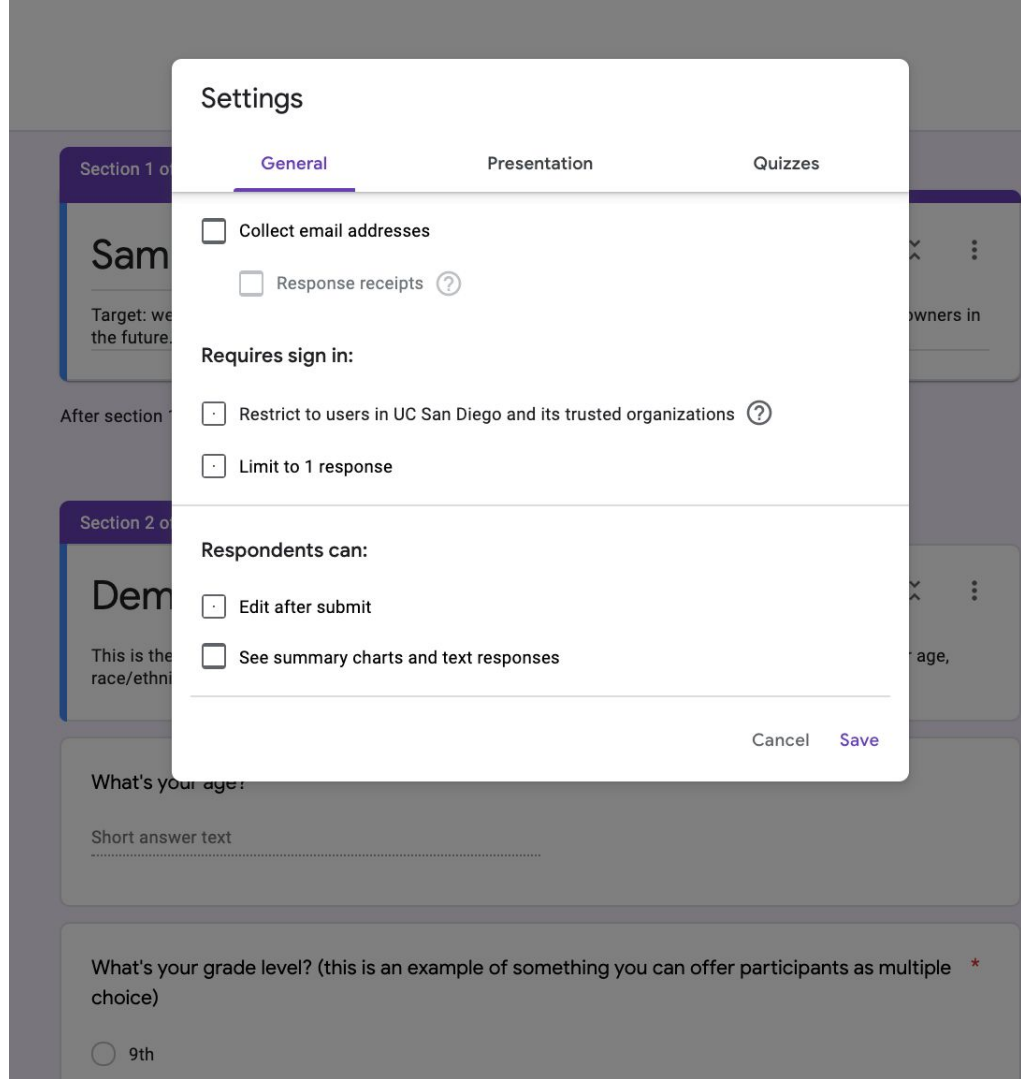


The screenshot shows the "Select Theme" dialog box in Google Forms. The dialog has a title bar "Select Theme" with a close button (X). On the left, there is a list of categories: "Work and School" (highlighted in red), "Illustrations", "Birthday", "Food and dining", "Party", "Just kids", "Wedding", "Night out", "Sports and games", "Travel", "Other", "Upload photos", and "Your albums". On the right, there are three preview images: a blue abstract image, a colorful bokeh image, and a purple image with water droplets. At the bottom, there are "Select" and "Cancel" buttons. The dialog is overlaid on a pink background.

# Done? Pilot your Survey!

Check your settings.

Make sure no boxes are checked that restrict user access.



The image shows a 'Settings' dialog box for a survey, with the 'General' tab selected. The dialog is overlaid on a blurred background of a survey editor. The 'General' tab contains the following options:

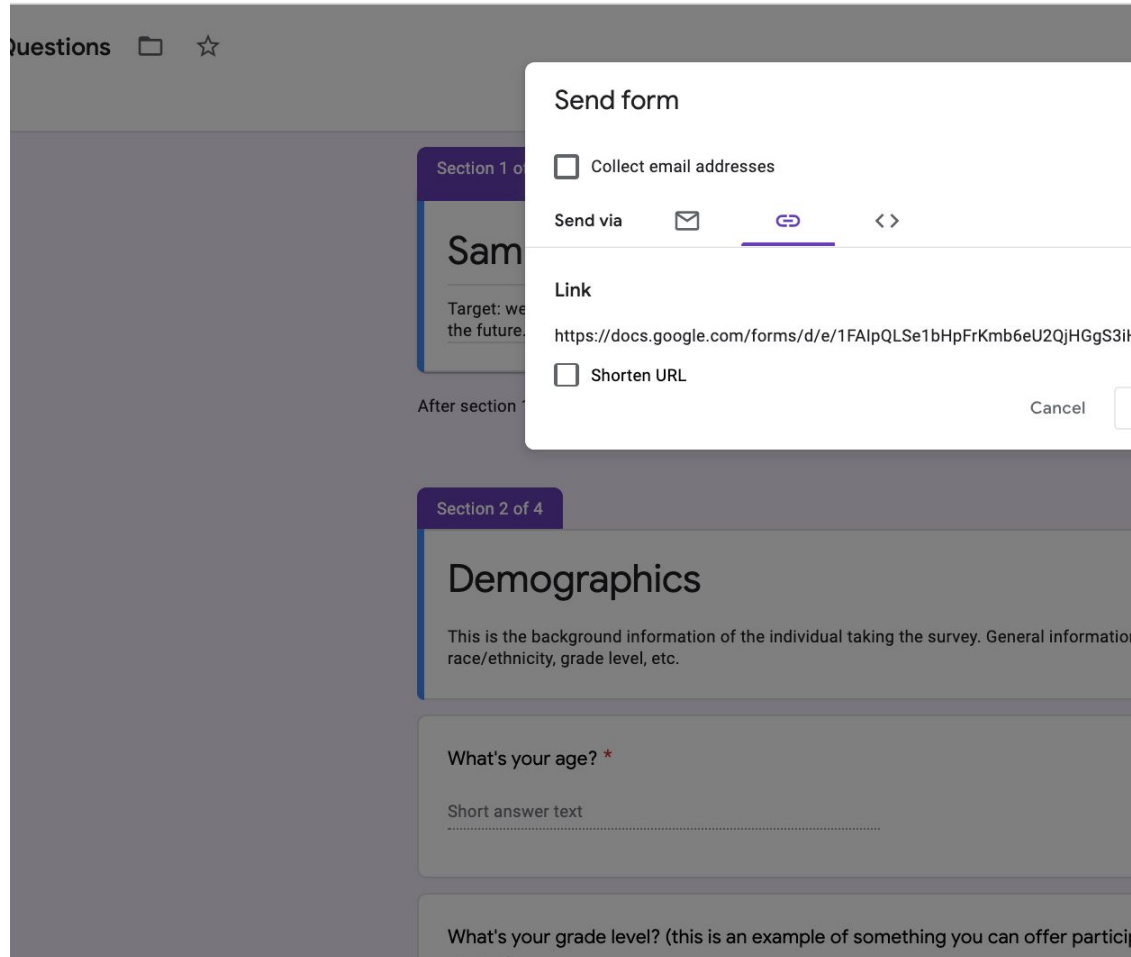
- ☐ Collect email addresses
- ☐ Response receipts ?
- Requires sign in:**
  - ☐ Restrict to users in UC San Diego and its trusted organizations ?
  - ☐ Limit to 1 response
- Respondents can:**
  - ☐ Edit after submit
  - ☐ See summary charts and text responses

At the bottom right of the dialog are 'Cancel' and 'Save' buttons. The background survey editor shows sections titled 'Section 1 of 2' and 'Section 2 of 2'. Section 1 includes a question 'Sam' with a target 'we the future.' and a question 'After section'. Section 2 includes a question 'Dem' with a target 'This is the race/ethni'. Below the dialog, a question 'What's your age?' is visible with a 'Short answer text' input field. At the bottom, a question 'What's your grade level? (this is an example of something you can offer participants as multiple choice)' is shown with a radio button and the text '9th'.

# Make sure you use the “Send link”

Pro Tip: Never copy the link on your address bar. (Depending on your setting, users can edit your survey!)

Instead, use the link Google Form gives you when you click on the “Send” button at the top right corner.



The screenshot shows the 'Send form' dialog box in Google Forms. The dialog has a title 'Send form' and three options: 'Collect email addresses' (unchecked), 'Send via' (with icons for email, link, and QR code), and 'Link' (selected). The 'Link' section shows a long URL: <https://docs.google.com/forms/d/e/1FAIpQLSe1bHpFrKmb6eU2QjHGgS3iH...> and a 'Shorten URL' checkbox (unchecked). A 'Cancel' button is in the bottom right. The background shows a form with sections 'Section 1 of 4' and 'Section 2 of 4'. Section 2 is titled 'Demographics' and contains a question 'What's your age? \*' with a 'Short answer text' input field.

# Wait! There's more!

Is your Google survey link too long? (Yes, always)

Use [bit.ly](https://bit.ly) to customize your link

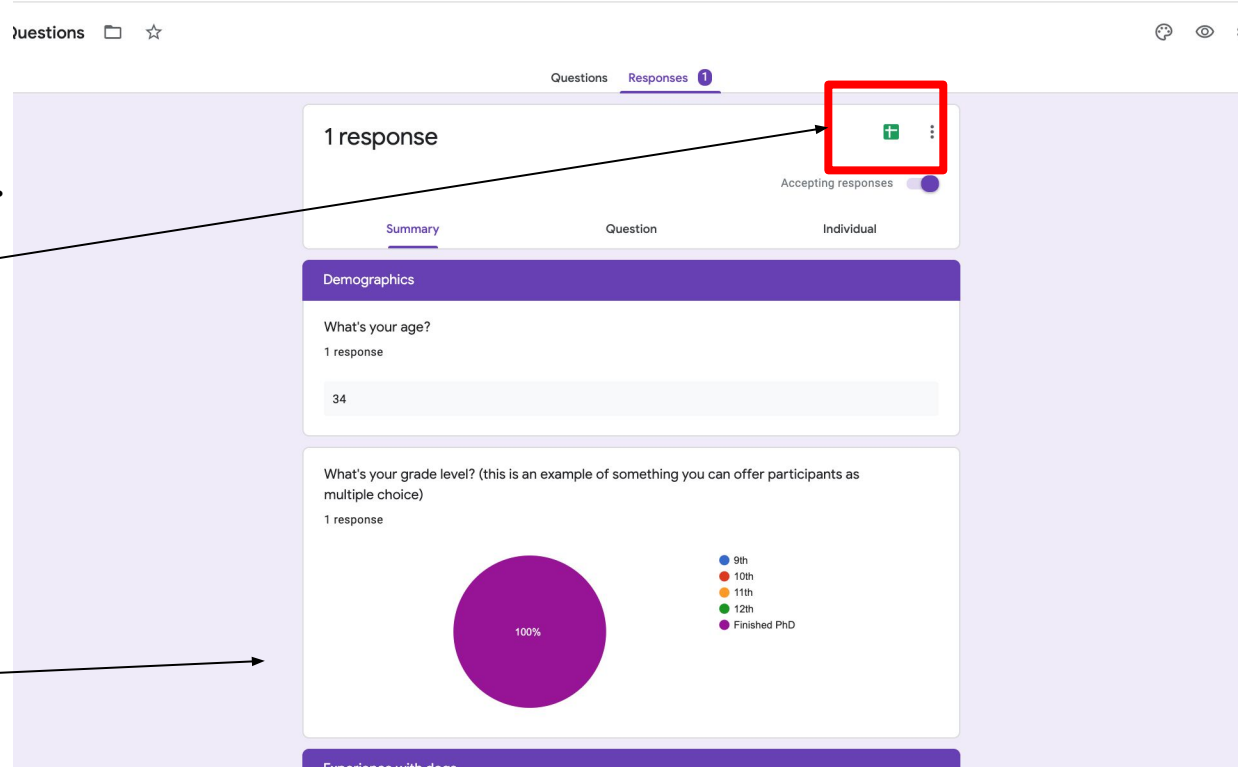
You can also gather and track “click” analytics if you make a bit.ly account



# Check Your Responses Immediately!

All data gathered are inputted into Google Sheets (like Excel). Click on the [Green Spreadsheet Button] to see!

Google Form also showcase snapshots visuals of your survey results



# Data Collection Plan: Step-by-Step Timeline

Week 7-8

**Collecting  
Data:**  
Implement  
action cycle and  
collect data

**EXAMPLE: RQ is:** *Why is computer science not talked about among 9th grade students?*

1. 03/04- SCR Teacher Lopez will send an email by Friday, March 4th to all 9th grade English teachers requesting that they give 10 minutes next week during their 9th grade English classes for the SCR team to give out a survey.
2. 03/08 – SCR teacher Lopez tells on March 8 the SCR team which teachers have agreed.
3. 03/09 – SCR team decided on March 9th which team members will go to which 9th grade English classes. Makes a schedule by name.
4. 03/10-03/11 – All SCR's who signed up to do so administer the survey in their assigned teachers' 9th grade English classes.

Good plans have **WHEN** (specific **DATES**) by when something happens; **WHO** is supposed to do it; **WHERE** it happens.



# Data Collection Plan: Step-by-Step Timeline

Week 7-8

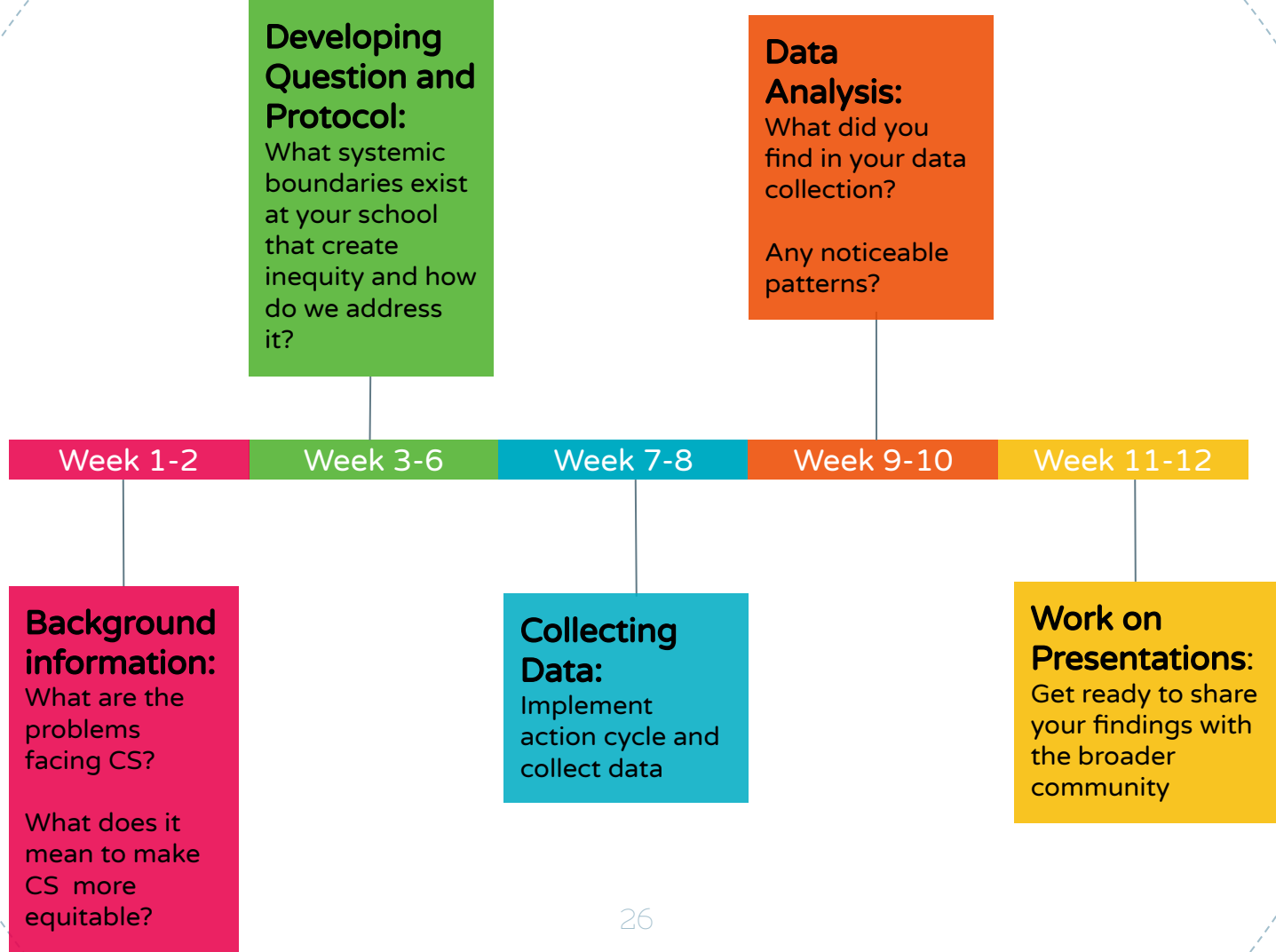
## Collecting Data:

Implement action cycle and collect data

Team RQ is:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Good plans have **WHEN** (specific **DATES**) by when something happens; **WHO** is supposed to do it; **WHERE** it happens.





**SAVE THE DATE!**

**May 18th**

**CS LISTEN UP Conference**

**(Location TBD)**

**4:30 pm - 7:00 pm**