# DESIGN YOUR OWN SURVEY

Members of the Human Machine Interface-User Experience (HMI-UX) sub-team use research to understand the consumers before creating a prototype. One of the many research tools they may use is a survey to understand the wants and needs of consumers.

## Step ① 1

Start with selecting your topic. EcoCAR Mobility Challenge teams often research user's knowledge of the vehicle features or their preferences. Now it is your turn to choose what you would like to research.

Research Topic:

_____
_____
_____
_____
_____
_____
_____

## Step ② 2

What do you want to measure? When considering the user experience, you can measure their knowledge of something, what they like and dislike, or choose your own measurement!

Area to measure:

_____
_____
_____
_____
_____
_____

## ③ 3

Next write your questions! Remember you need to include response options. For this activity, choose four responses for each questions.

Questions & Responses:

_____
_____
_____
_____
_____
_____
_____
_____
_____

*If you need more space use the back of this sheet

## ④ 4

Internet surveys often have more to them than just questions! Fill out the blanks below to help you create the rough draft of the survey.

Name of Survey:

_____
_____

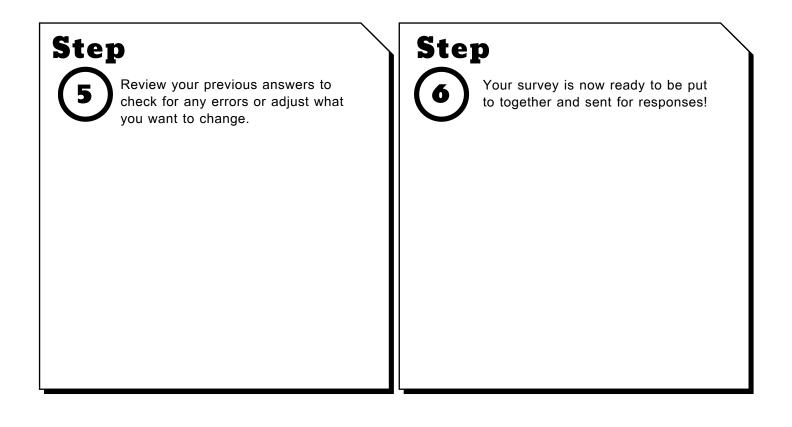Welcome Message:

_____
_____
_____
_____

Thank You Message At the End:

_____
_____

# DESIGN YOUR OWN SURVEY

Members of the Human Machine Interface-User Experience sub-team use research to understand the consumers before creating a prototype. One of the many research tools they may use is a survey to understand the wants and needs of consumers.

## Step

**5** Review your previous answers to check for any errors or adjust what you want to change.

## Step

**6** Your survey is now ready to be put to together and sent for responses!



**AVTC®**

ADVANCED VEHICLE TECHNOLOGY COMPETITIONS

# DESIGN YOUR OWN SURVEY

Your students will be guided through the creation of a survey to understand consumer wants and needs. Your students will gain surveying skills, data analysis skills, and critical thinking skills like the skills HMI-UX sub-team members gain in the EcoCAR Mobility Challenge.

## Materials Needed:

- Each student or group should have their own copy of the worksheet
- For the optional activity:
  - Google Account to use on Google Forms
  - Computer or Electronic Device with Internet Access

## Learning Goals:

- Students will gain skills in survey development, learn how to study user preferences as HMI-UX sub-team members do, and practice reading basic data.

## Teaching Directions

**Step 1**
Students will select a topic to research. Possible suggestions include:
What do people listen to during a drive? (radio channels, streaming services the user controls, podcasts, etc.)

**Step 2**
Students will select what to measure. This can be simple or advanced, depending on your classroom needs. Example: measuring what users prefer about their selected audio entertainment

**Step 3**
Next, students will write the questions for their survey. They will provide at least four multiple-choice options per question. The best questions in surveys avoid yes or no answers. Encourage students to dig deeper and allow for more variance of responses by creating at least 4 open-end responses per question. Students are encouraged to use the back of the page to write additional questions.

**Step 4**
Students will then create a title for their survey, a welcome message, and a thank you message.

**Step 5**
Students will edit and proofread their work.

**Step 6**
The survey is complete and ready to distribute. You may use the optional activity to lead students in gaining responses to their survey on Google Forms. You may also have students have other students complete their survey.

# DESIGN YOUR OWN SURVEY

Your students will be guided through the creation of a survey to understand consumer wants and needs. Your students will gain surveying skills, data analysis skills, and critical thinking skills like the skills HMI-UX sub-team members gain in the EcoCAR Mobility Challenge.
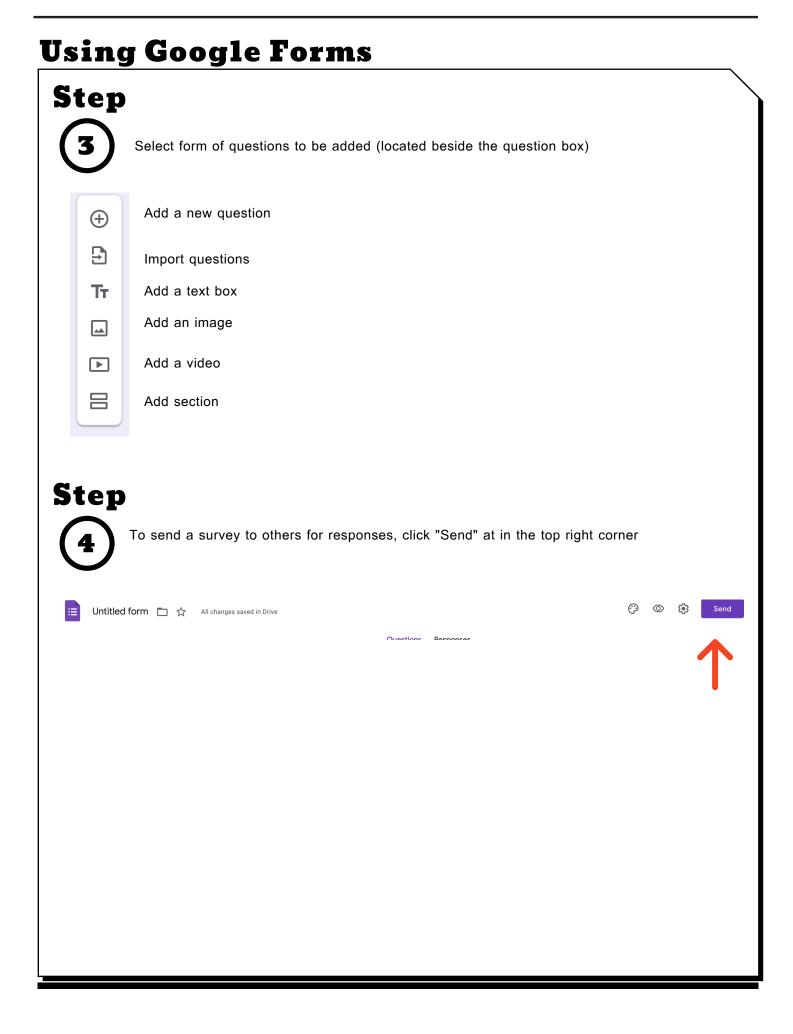
## Using Google Forms

Google Forms can help students to bring their survey to life and gather real data from their peers! Students can gain valuable knowledge of Google Forms (such as obtain data on their survey such as percentages of responses and easily distribute their survey to their peers by using the free program.)

Google Forms also allows students to receive instant data and graphs on their responses. Depending on your course structure, you can expand upon the data analysis to understand percentages and response rates.

## Guide

### Step

**1** Click "Blank" form under the start a new form welcome menu

# Teacher's Copy

## Step

**②** Add a title and welcome message in the first block



## Step

**③** Add questions

# Using Google Forms

## Step

**3** Select form of questions to be added (located beside the question box)

⊕  Add a new question

⊟  Import questions

T⊤  Add a text box

🖾  Add an image

▶  Add a video

☰  Add section

## Step

**4** To send a survey to others for responses, click "Send" at in the top right corner

📋 Untitled form 📁 ☆   All changes saved in Drive                    🎨  👁  ⚙  **Send**

Questions   Responses

⬆

Student Name: _____  Teacher: _____

Class: _____  Date: _____

# DESIGN YOUR OWN SURVEY *Example*

## Step

**1** Start with selecting your topic. EcoCAR Mobility Challenge teams often research user's knowledge of the vehicle features or their preferences. Now it is your turn to choose what you would like to research.

Research Topic:

*What do people listen to during a drive? (radio streams, streaming services the user, controls, podcasts, etc.)*

## Step

**2** What do you want to measure? When considering the user experience, you can measure their knowledge of something, what they like and dislike, or choose your own thing to measure!

Area to measure:

*What makes the user's audio entertainment their choice? (Why do they like Spotify over the radio? )*

**3** Next write your questions! Remember you need to include response options. For this activity, choose four responses for each questions.

Questions & Responses:

*1. How often do you listen to audio in your vehicle?*
*a. daily*
*b. weekly*
*c. monthly*
*d. never*

*If you need more space use the back of this sheet

**4** Internet surveys often have more to them than just questions! Fill out the blanks below to help you create the rough draft of the survey.

Name of Survey:
*User's Listening Preferences*

Welcome Message:
*Thank you for taking this survey. You will be asked a series of multiple-choice questions. This will be anonymous.*

Thank You Message At the End:
*Thank you for taking the survey!*

# DESIGN YOUR OWN SURVEY

Members of the Human Machine Interface-User Experience sub-team use research to understand the consumers before creating a prototype. One of the many research tools they may use is a survey to understand the wants and needs of consumers.

## Step

**5** Review your previous answers to check for any errors or adjust what you want to change.



## Step

**6** Your survey is now ready to be put to together and sent for responses!





**AVTC®**

ADVANCED VEHICLE TECHNOLOGY COMPETITIONS