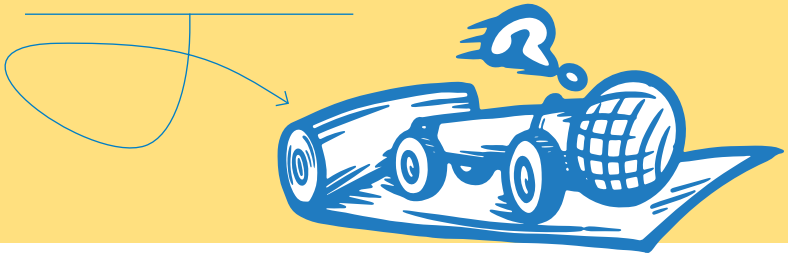
The Driving Question Project Guide

intel FUTURE SKILLS

PROJECT OVERVIEW:

Use empathy to improve the behind-the-wheel experience for drivers and passengers.



Project Intro Video: Driving Questions

Inspirational Video: Design Thinking – The Emma Watch

PROJECT CATEGORY:
Design

DIFFICULTY LEVEL:
Beginner

TIME RANGE:
30 - 45 minutes

ESSENTIAL SKILLS/ MINDSETS THAT YOU MAY LEARN:
Design Thinking
Human-Centered Design
Empathy
Communication
Prototyping
Iteration
Collaboration

TOOLS AND MATERIALS:
- Paper and Writing Utensil
- Rectangular Piece of Aluminum Foil (around 4" x 6" in size—"heavy-duty" foil works best)

AT HOME SUBSTITUTIONS:
- If you don't have aluminum foil, you can substitute notebook or construction paper, but you may also need glue or tape to fasten the torn pieces while you prototype. Modeling clay and Play-Doh make for fun substitutes as well!

MATERIAL PURCHASE LINK:
http://tiny.cc/Intelbuylist

Project Steps

Dream It!

Whether you're the driver or the passenger, we've all had vehicular experiences—both good and bad! In this project, your challenge is to interview another person about their experiences, and then design something to improve their time behind the wheel.

1. Watch the Intro and Inspire-To videos to master your understanding of design thinking and the challenge before you. [:06]

2. Think about your own experiences driving or riding as a passenger. What do you enjoy most? What do you find most challenging? Do any stories come to mind? Jot down your thoughts. [:04]

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Draw It!

3 Share your vehicular experiences, and then listen to your partner's. [:06]

Each person gets 3 minutes to discuss their driving and/or passenger experiences. While the partners listen to each other's stories, they should jot down their observations. These will come in handy in the Build It section.

Build It!

4 Using only your notes and your piece of aluminum foil, design something that will make the driver or passenger experience more enjoyable for your partner. [:08]

Your original prototype could be a wearable, part of the vehicle, or anything else! Based on your partner interview, how can you design to meet their needs?

Share It!

5 Take turns presenting the prototypes you and your partner made for each other! [:04]

Expand It!

Keep the design thinking going! Push your initial prototype even further by trying some of these ideas.

- Ask your partner some follow-up questions. Dig deeper to find out what is most enjoyable or frustrating about their experiences, and why. Use what you discover to create another version of your prototype. Go "beyond the foil" this time.
- Take a drive! Take note of any habits, comments, and behaviors you observe in the car. How might you transform your observations into an invention that can help others?
- Pitch your prototype in a Shark Tank-style venue. Vote on a marketable idea, and design the next prototype together. Be sure to "test out" your future prototype with users and get their feedback!

GAINING EMPATHY:

We often try to solve others' problems before we identify their true needs, but resist the urge to jump straight to a solution. Having empathy means slowing down and listening to others. It requires patience, active listening, and asking questions. So, enjoy getting to know someone different from you. This will help you get outside your own frame of mind and question any assumptions you may have. You'll then have a springboard for designing both for and with others in mind!

As you talk, share the things you love about driving a vehicle or riding as a passenger. Are there any childhood experiences that shaped your impressions? What are some "pinch points" about being a driver or passenger that you have experienced (i.e., things that made your time in the car less-than-desirable)?

Listening Tips: While you observe, note your partner's positive driving and riding experiences, and their negative ones. Resist the urge to talk, unless you need to ask clarifying questions while your partner shares. Add another minute to the clock if you need more information from your partner.

DASH OF DESIGN:

Design thinking helps people begin with the user's needs in mind. Watch our video to learn how you can use design thinking to make a better end product!
tiny.cc/inteldesignthinking

TIPS:

- Review your notes and doodle some design ideas first.
- A rapid prototype will help you understand how the final product might look or function. Perfection doesn't matter!
- Aluminum foil is a wonderful prototyping material. It can be quickly bent, torn carefully, and shaped to form whatever you need. Scoring and details can be added with your writing utensil.

HELPFUL RESOURCES

- The Design Thinking Process: **youtube.com/watch?v=_r0VX-aU_T8**
- The d.school Design Thinking Bootleg: **dschool.stanford.edu/resources/design-thinking-bootleg**

NEED MORE HELP AND INFORMATION?

Visit the website at **intel.com/futureskills** | Contact us at: **intelfutureskills@intel.com**

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