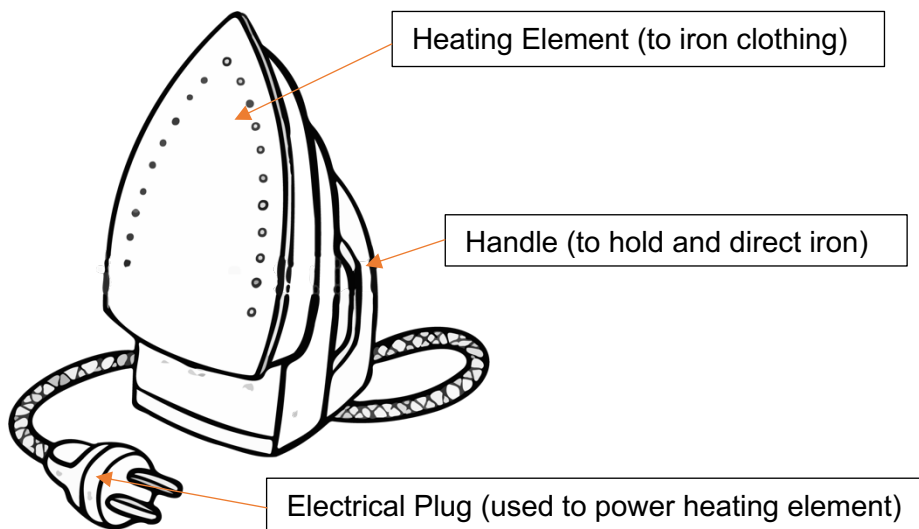




Now it's your turn to think about safety. Walk around your house or classroom, identify a household appliance or everyday object. Draw the item and identify its components. Then think about and identify possible safety concerns and components within the item that reduce the safety hazard (see the back of the worksheet for an example).

Share your photos with us on Instagram @ecocarchallenge #safetywithecocar

## Worksheet Example: Iron



### Safety hazards:

- Shock from electrical wiring
- Burn from heating element
- Dropping of iron onto foot

### How the item limits these hazards:

- Shock from electrical wiring: electrical parts not exposed to user, plug and wiring covered in plastic.
- Burn from heating element: heating element only on one surface of the iron and the handle is on the opposite side, there is a heating element light indicator to notify user it is on.
- Dropping of iron: handle to hold item comfortably

## Summary

Every EcoCAR team is making many changes to their Chevrolet Blazer to improve fuel efficiency and develop autonomous features for the vehicle. As a result, the new features and systems that connect into the vehicle need to be reviewed to ensure the new connections work the way they are intended by the team. This is where systems safety comes in.

Systems safety is an essential part of the EcoCAR team and everyday life. In the EcoCAR Mobility Challenge, each subteam connects with the System Safety Lead to review all projects for potential failures. Once failures are identified, the subteam works with the System Safety Lead Engineer to find solutions to create safer systems.

**Example:** Potential failure of radars and sensors for adaptive cruise control. System Safety helps to identify how this could happen and develop solutions to reduce the potential for failure.

Systems Safety is integral for every team as it allows them to review and adjust potential failures in their designs to prevent catastrophic failures.

The teams review all of their systems for potential failures, just like you can in your everyday life. Think about the products you use, or objects you see on your walk to school, what are some ways these products and objects can fail? And what do you think the companies that produce these products have done to prevent failures?

The more we think about how products we use can fail, we are thinking about safety and if we can think about how they fail, we can find solutions to prevent failures making our world safer.