The Design Guild seeks to create experiential learning opportunities that transcend the traditional classroom and engage the entire community in STEM & design work.

HOW TO PARTICIPATE:

As a class, small group, or individual, school teachers & staff work with students in a design challenge. Or, if you would like to participate at home, your child can use the resources provided to guide them in identifying a problem and creating a solution.

STEP 1: Getting Started and Developing Empathy

The Design Guild focuses on Design Thinking, a human-centered, problem-seeking, problem-solving approach to finding answers for many of the world's issues. To begin, watch these videos to learn more about design thinking in general and how to develop empathy for people experiencing this issue.

STEP 2: Finding Your Problem

Recreate this chart to find a problem important to you. Pick a place you go to or a situation you've been in. **Think about:** Who are the people who interact in that setting? What problems do they face? After you settle on a general problem or issue to solve, learn as much as you can about it.

Setting	Characters	What Problems Occur?
• Park or playground	• Kids • Moms • Animals	• Little kids playing with trash on the ground. • Animals eating the trash • Graffiti on equipment • Broken / damaged / no play equipment

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STEP 3: Choosing Your Focus

Narrow your focus by answering the following question: How might we (make a change) so that (the people involved can benefit) in order to (long term improvement)?

- Example: **How might we** reduce waste in the school cafeteria **so that** students can have access to more food when they need / want it **in order to** avoid going hungry?

Or try this sentence instead: I want to solve the problem of___ for the following (type of) people: ____

- Example: I want to solve the problem of food waste for hungry students at school.

STEP 4: Get Thinking

Now it's time to come with as many ideas as you can! Good ideas, crazy ideas, impossible ideas, even ones that aren't so great! Once you've done some fun and wild thinking, pick a few ideas you might want to build. Click on the QR code for a video to get you started.

STEP 5: Build, or Prototype, Your Idea!

A prototype is a model, or other representation of your idea. Gather all those recycled materials, the broken toy in the back of the closet, or those weird knick knacks in the junk drawer Using whatever you can find, create a model of the solution to your problem! Watch the video to learn more.

STEP 6: Get Your Prototype Ready to Enter the Student Design Guild @ the Innovation Center

Prototype Requirements:

- Each prototype must fit on an 18 by 12 piece of construction paper and be free-standing.
- Each prototype must have an introductory poster. Please include the following:
  - First Name
  - School & Grade
  - Prototype Title
  - Problem you are solving
  - Some description or explanation of your prototype. This can be a written paragraph, a labeled diagram, a QR code to a video of you describing how it works, a stop motion video showing how it works, or any other way you want to show your design! The sky's the limit→ have fun sharing your work with others.

STEP 7: Submit Your Prototype to the Design Guild

- RSVP your spot by Tuesday, April 30th.
- Send an email to: brohm_kristen@svvsd.org.
- In the Subject Line, write SUBMISSION
- In the email include the following information:
  - Student First Name and Last Initial
  - School & Grade
  - Name of Prototype.

STEP 8: Deliver Your Prototype to the Design Guild @ the Innovation Center

- Teachers, parents, and students can set up prototypes at the Innovation Center on
  - Monday, May 6th between 2 pm and 6 pm
  - Tuesday, May 7th between 8:30 and noon

STEP 9: Come and HAVE FUN!

- Show up on Tuesday, May 7th from 4:30- 6:30 pm to play, learn and explore with the St. Vrain Community.
- STEM Stations, Student Design Guild Prototypes and Parent Tech Talks are all part of the fun.
- Be sure to collect your prototype PRIOR to leaving Tuesday evening. We will NOT be able to store them overnight at the IC.

Need help identifying a problem?!

Put on your inventor's hat and stretch your imagination with the **Future Engineers Pet Challenge!** This organization is having a competition for students in grades 2-8. Do you have a pet? What problems do you notice your pet has with play time and their toys?

The Challenge: Design a new pet toy for a cat or dog for the Invention Challenge: Toys for Pets!

The winning entry not only stands to win a grand prize of $5000 but also holds the potential to be manufactured, contributing to STEM education.

To enter the competition, simply submit a name for your pet toy, along with up to two images showcasing your design and a brief written summary explaining its concept in 200 words or less. Entries due March 19, 2024.

To enter this design into the design fair, just follow the rules for submission, steps 6-8, on the student design guild flier!

Have fun!