ENGINEERING NOTEBOOK

Design # 1

TeacherGeek

Name(s): Susie Q

Project: Wiggle-Bot Racer

ASK

What is the problem (what needs to be solved/made better)?

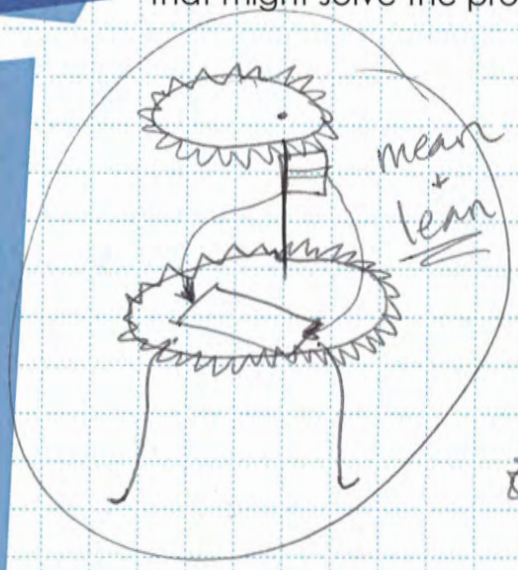
Make a fast Wiggle-Bot to win the race

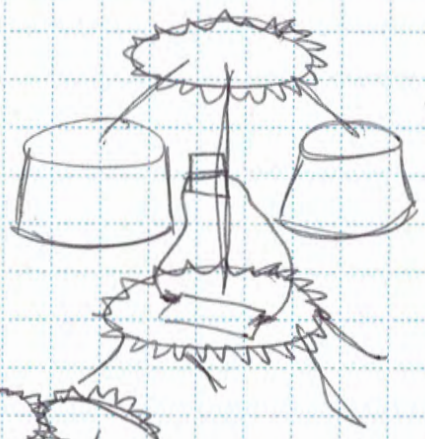
Research: How have others solved, or attempted to solve this problem? What are the constraints (things your design can not, or must, do or be)?

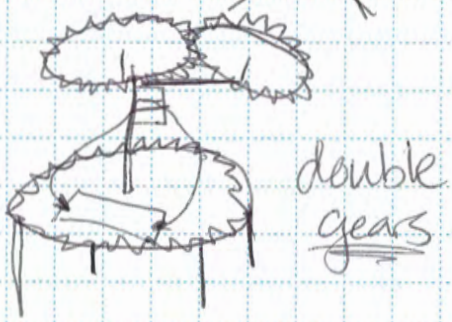
My wiggle-bot has to go fast down the track. Others have added feet or changed the rotation of components. I want my wiggle-bot to win!

IMAGINE

Brainstorm, sketch and describe possible solutions (different ideas that might solve the problem). Use extra paper, if needed.







Choose the best solution. Circle it. Why do you think it is best?

This design is lighter. I think it will go faster.

CONTINUE TO "PLAN" on page 2

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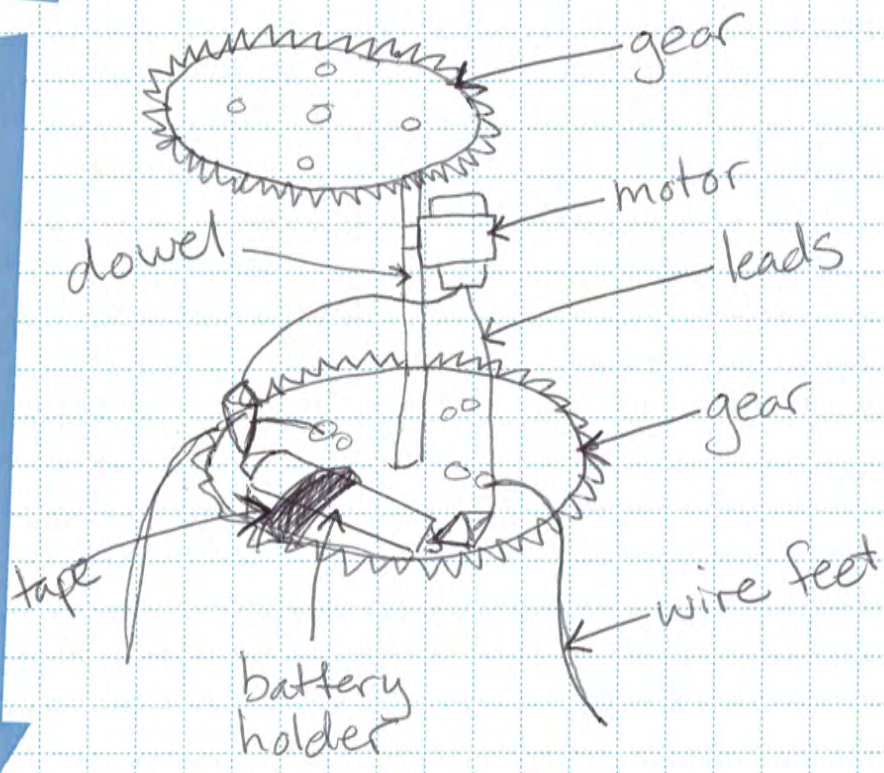
PLAN

Draw the solution you choose. Include the details you will need to create it. Use extra paper, if needed.



CREATE

a) Build the solution you planned.
b) Test it. Make observations. Record results below, or on another paper.

Spins really fast, that's good. Feet helped for a while, then fell over. Not good.

IMPROVE

Did you solve the problem?
Yes? Great! Identify a new problem (a way to make your design even better).
No? That's OK. What did you learn that can help solve it in a new/different way?

No, I need to stop my wiggle-bot racer from falling over. It is top-heavy. I learned that adding feet helped, but also made it uneven.

I'm going to balance it out by adding more feet.

There is no perfect design (yep... your design can still be improved). Make it, faster, go father, stronger, more accurate, easier to use, more efficient, better looking, etc.

MAKE IT EVEN BETTER!!!
Grab a new Engineering Notebook Sheet.

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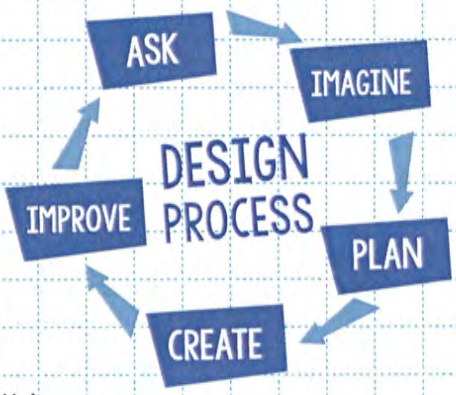
Design # 2

TeacherGeek

Name(s): Susie Q

Project: Wiggle-Bot Racer



ASK

What is the problem (what needs to be solved/made better)?

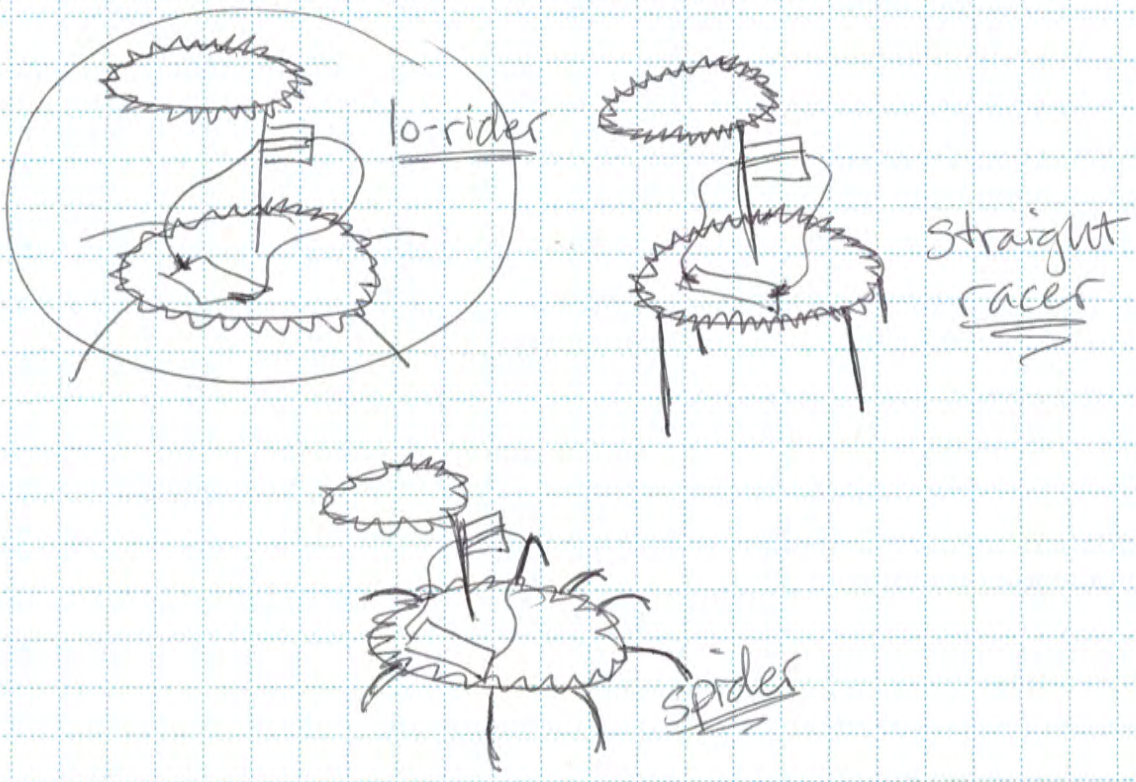
My first wiggle-bot fell over. I need to make it balanced.

Research: How have others solved, or attempted to solve this problem? What are the constraints (things your design can not, or must, do or be)?

My wiggle-bot has to go fast so it can win the race. Others have added feet, changed the feet and added more feet.

IMAGINE

Brainstorm, sketch and describe possible solutions (different ideas that might solve the problem). Use extra paper, if needed.



Choose the best solution. Circle it. Why do you think it is best?

I think my spider design has too many legs and would get stuck. Lo-rider will be better, leaner.

CONTINUE TO "PLAN" on page 2

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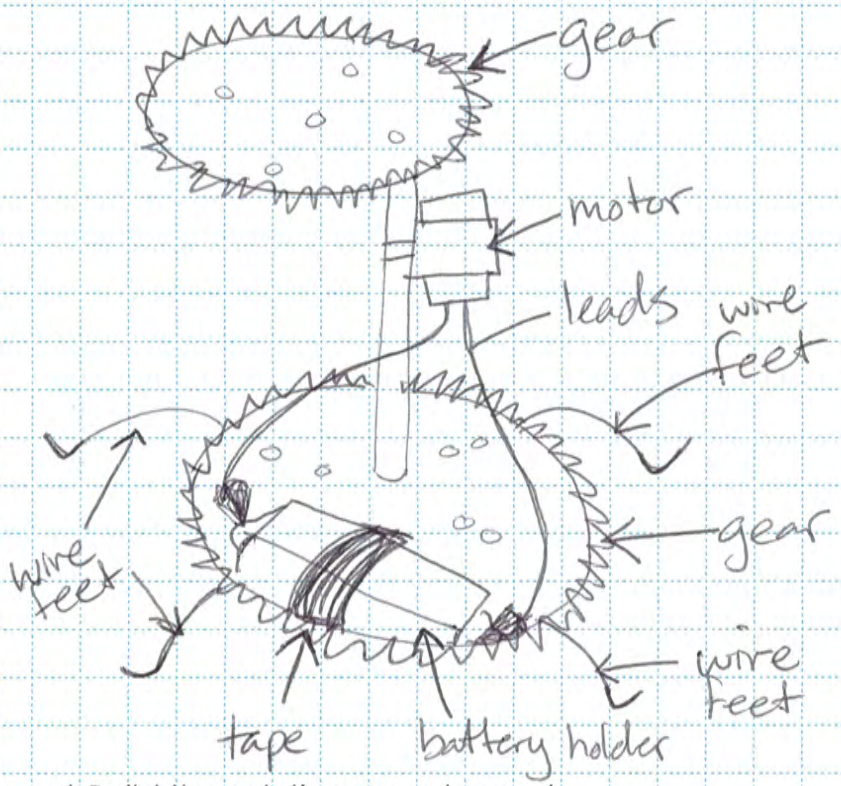
PLAN

Draw the solution you choose. Include the details you will need to create it. Use extra paper, if needed.



CREATE

a) Build the solution you planned.
b) Test it. Make observations. Record results below, or on another paper.

Keeping the wire feet shorter and lower to the ground, my wiggle-bot didn't flop over.

IMPROVE

Did you solve the problem?
Yes? Great! Identify a new problem (a way to make your design even better).
No? That's OK. What did you learn that can help solve it in a new/different way?

Yes! My wiggle-bot is balanced and didn't fall over as much. Now, I want to make it better by having it wiggle more forward, rather than spin.

There is no perfect design (yep... your design can still be improved). Make it, faster, go father, stronger, more accurate, easier to use, more efficient, better looking, etc.

MAKE IT EVEN BETTER!!!
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