



STEM Education Works®

# THE **STEM**ENGINEER'S GUIDE TO PROBLEM SOLVING VOL. 2

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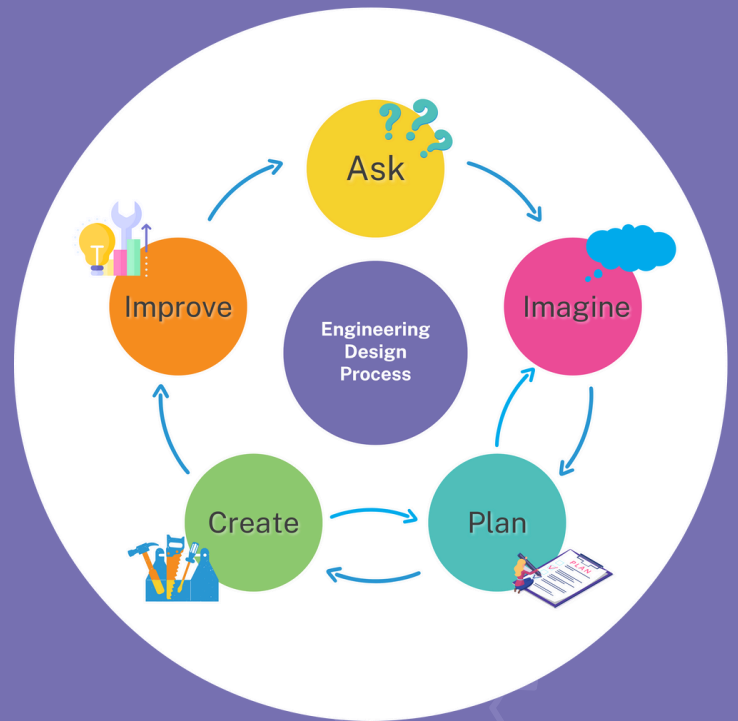
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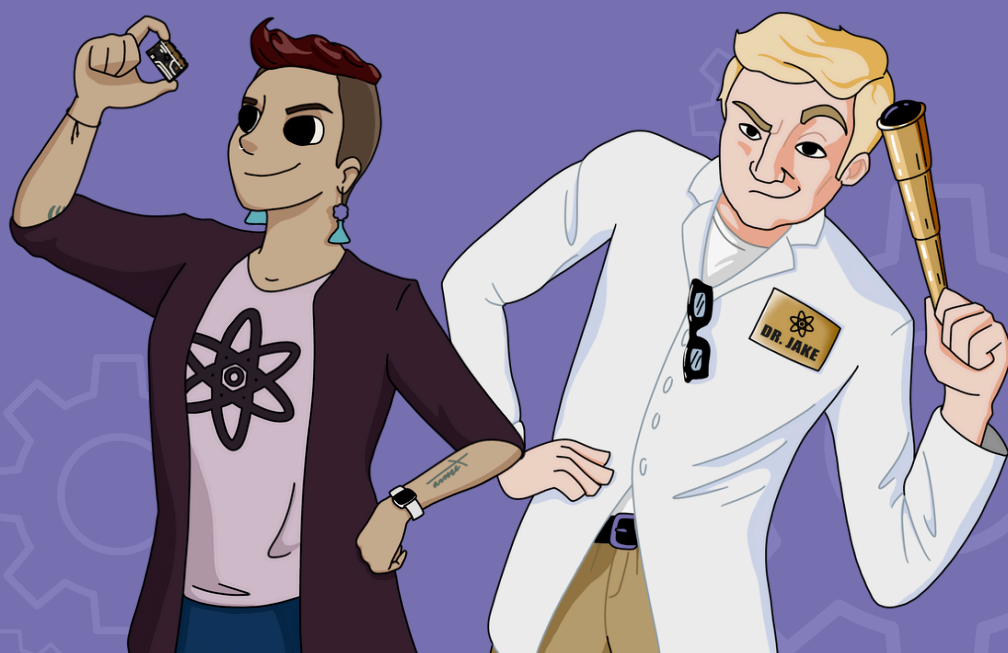
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# Welcome

WELCOME, STEMENGINEER! THIS GUIDE WILL TAKE YOU THROUGH THE STEPS ENGINEERS USE TO TURN IDEAS INTO REALITY. YOU'LL WORK THROUGH PROBLEMS AND DISCOVER SOLUTIONS TO EXPLORE THE WORLD OF STEM.



# STEP ONE

## ASK

Identify a problem in your community or daily life. Write a brief description of the challenge you want to solve.



# STEP TWO

## IMAGINE

Brainstorm and explore creative solutions. Generate multiple ideas for how to solve the problem. Sketch each idea and write a short description.



# STEP THREE

## PLAN

Choose the best solution and create a detailed plan or blueprint of your chosen solution. Include materials, measurements, and steps for building it.

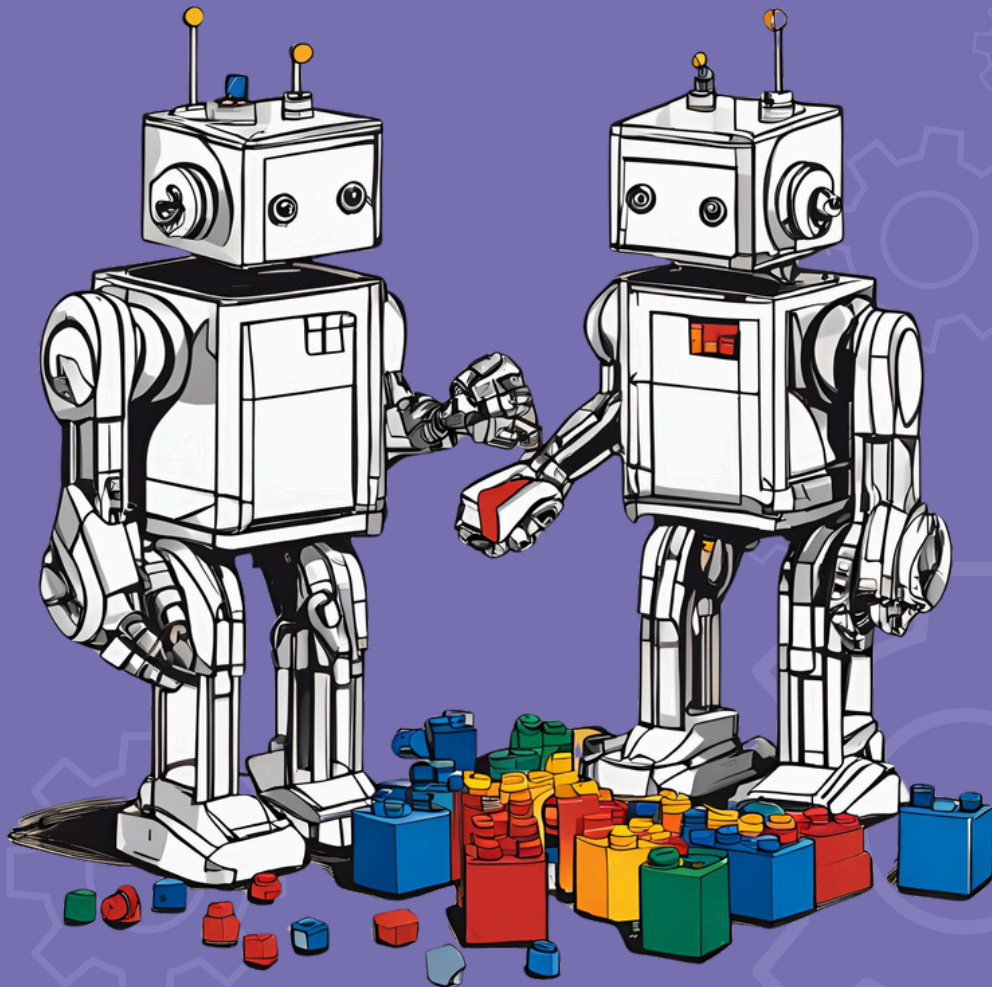




# STEP FOUR

## CREATE

Construct a prototype using your plan and available materials, such as cardboard, plastic, or 3D printing. Document the process with photos or notes.



# STEP FIVE

## TEST AND IMPROVE

Test your prototype and record its performance. What worked well? What needs improvement? Write a brief report.

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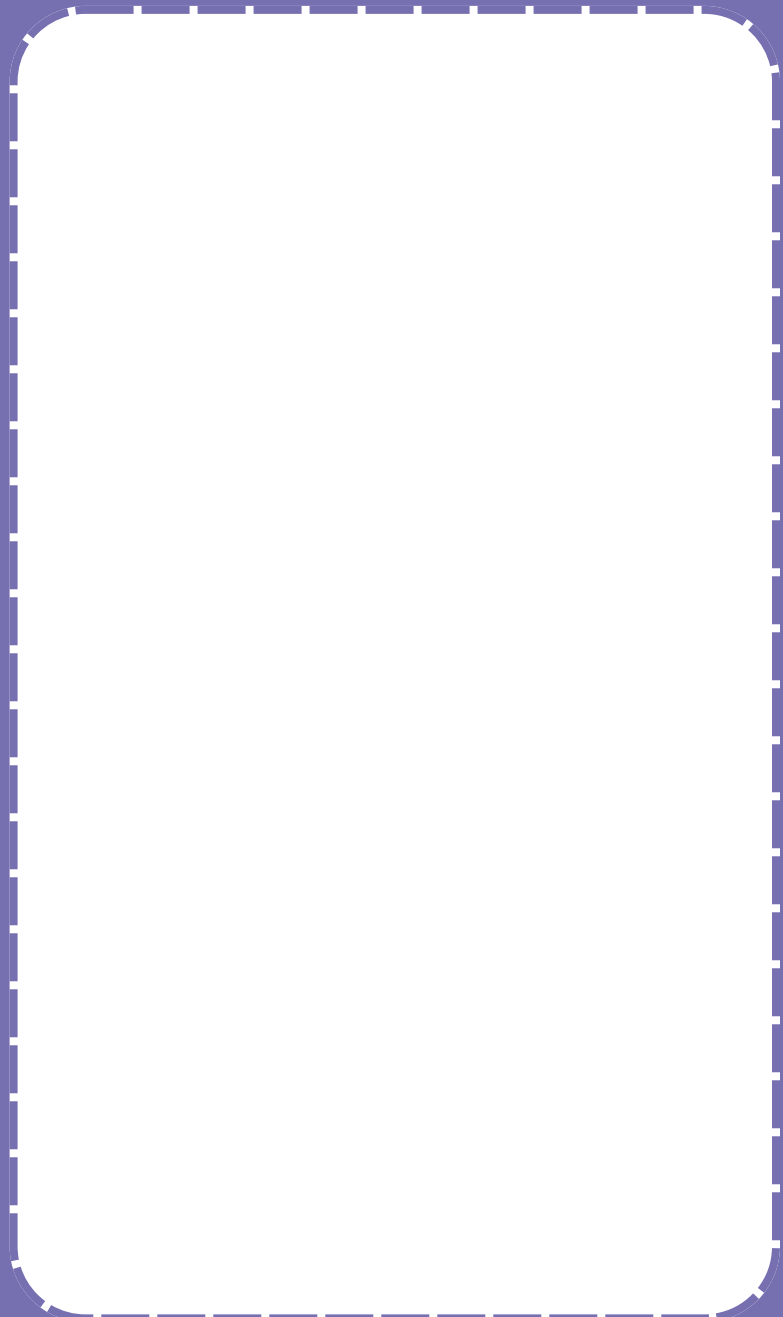
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# STEP SIX

## COMMUNICATE FINDINGS

Prepare a presentation or report to share your project with others. Include your research, design process, and test results.

