



STEM Education Works®

THE **STEM**ENGINEER'S GUIDE

TO PROBLEM SOLVING

VOL. 1

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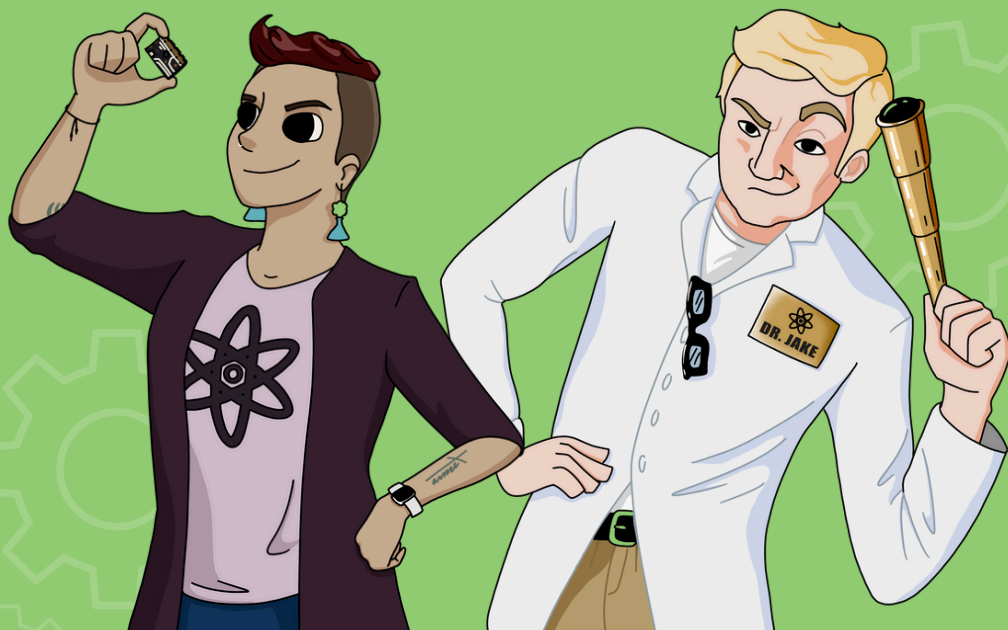
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Welcome

WELCOME, YOUNG STEMENGINEER! READY TO
EXPLORE THE WORLD LIKE A REAL-LIFE
ENGINEER? IN THIS GUIDE, YOU'LL LEARN HOW
TO SOLVE PROBLEMS AND CREATE NEW
THINGS LIKE AN ENGINEER!

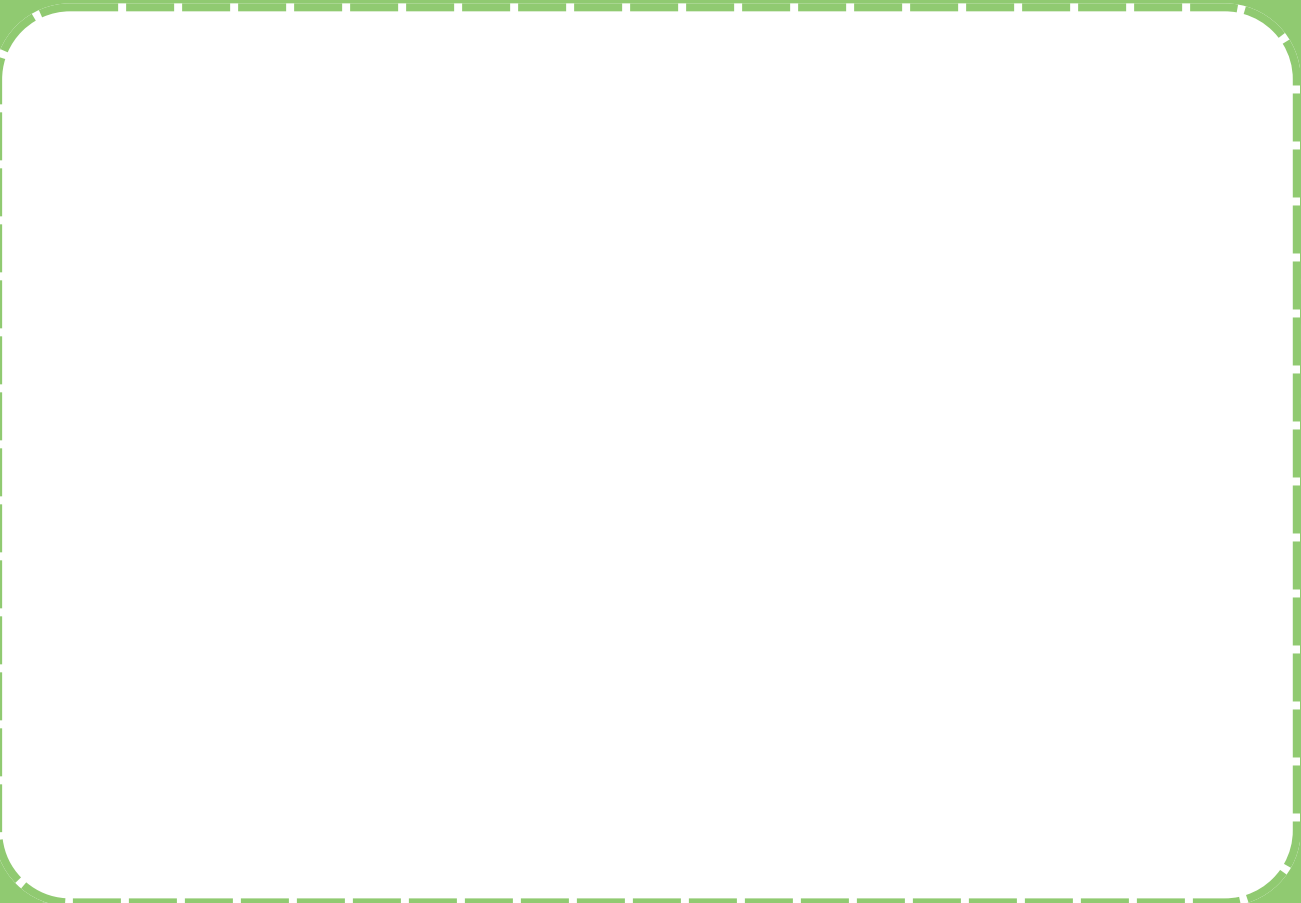


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STEP ONE

ASK

Define the problem you want to solve and identify the needs. Think of something you want to improve. Maybe it's a toy that could work better or a way to clean up your room faster. Draw a picture of the problem.



STEP TWO

IMAGINE

Brainstorm and explore creative solutions. Ask grown-ups or friends about your problem. Look around to see how others have solved it. Draw or write down what you find.



STEP THREE

PLAN

Now, make a detailed drawing or build a simple model of your solution using materials like paper, clay, or LEGO bricks. Choose the best solution and create a plan or blueprint.



STEP FOUR

CREATE

Choose the best solution from your plan and build a small version of it. You might need help from an adult to use some materials.



STEP FIVE

TEST AND IMPROVE

Try it out! Does it work the way you wanted? What could be better? Write or draw your observations.



STEP SIX

COMMUNICATE FINDINGS

Share your creation! Tell your family or friends what you made and how it works. You can even create a mini-presentation or video.

