



ENGINEERING CHALLENGE

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Engineers think, plan and create, and you can, too. Think about the problem below, and then design and create a prototype (model) of a solution. The model is not to scale and does not have to function, but it would be really cool if it did.

PROBLEM

Old Farmer John has an avocado tree on his farm. Over the years the tree has grown really tall; it now reaches 18 feet! Old Farmer John can't reach the avocados anymore to pick them. They are out of his reach, and he is six feet tall! What can you build to help Old Farmer John safely pick his avocados? No ladders -- that would be too easy!

MATERIALS

Find simple things around your house such as rubber bands, string, tape, paperclips, buttons, etc.

STEPS

- **THINK.** Brainstorm the problem. Write down ideas, sketch, talk it out with a friend or family member.
- **DESIGN.** Develop a blueprint. This is a drawing of what you intend to create. It should include details such as scale, information about attachments or connections, as well as materials that will be used.
- **CREATE.** Make a prototype (model). The prototype should be based on your blueprint. Remember, this is just a model and it does not need to be to scale.
- Share your process and creation with the world! Make a short video. Explain your thoughts. Describe the decisions you made, along with your justifications. Explain the model, and show how it solves the problem.