



2 Brainstorm solutions.

Sketch some possible solutions to this problem.

Label the materials you would likely use.

Idea #1

Idea #2

Share your ideas with your partner. **Compare** your ideas. **Decide** which idea you think will work best. You might combine ideas from both for a new idea. **What did you decide?** Check one of these answers.



- My idea #1**
- My idea #2**
- My partner's idea #1**
- My partner's idea #2**
- A combined idea**

(if you choose a combined idea, draw the new idea in the box below or describe it with words.)



3 Create the solution you think is best.

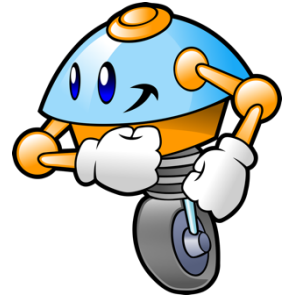
Check off the materials you used to build your solution.
Write in materials that you used which are not listed.

- | | |
|---|--|
| <input type="checkbox"/> Recycled materials | <input type="checkbox"/> Craft sticks |
| <input type="checkbox"/> Construction paper | <input type="checkbox"/> Scissors |
| <input type="checkbox"/> Cardboard | <input type="checkbox"/> Ruler |
| <input type="checkbox"/> Duct Tape | <input type="checkbox"/> Crayons |
| <input type="checkbox"/> Masking tape | <input type="checkbox"/> Markers |
| <input type="checkbox"/> Clear tape | <input type="checkbox"/> Colored pencils |
| <input type="checkbox"/> Glue | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Hot Glue | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Pipe Cleaners | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Paper scraps | <input type="checkbox"/> _____ |

How well did you and your partner work together to solve this problem? **Check off** which statement best describes your team work. **Then explain** your answer in the space provided.

- We worked well together.
- I did more work than my partner.
- It was hard to work together.
- I did most of the work myself.

4 Test your solution. Test your recycling sorter with recycled pieces. Keep making changes until you have the best solution. Be determined to make the best sorter possible!



Answer these questions once you have your solution working well. Does it....

- | | |
|--|--------|
| 1. Have at least 3 sorted areas for recycling? | YES NO |
| 2. Allow robot to put recycling in it easily? | YES NO |
| 3. Allow recycling to be removed easily? | YES NO |
| 4. Keep recycling contained from animals and weather? | YES NO |
| 5. Hold at least 4 recycled pieces at a time? | YES NO |
| 6. Use only allowed materials ? | YES NO |
| 7. Work well every time you try it? | YES NO |



5 Evaluate your solution.

Circle the picture that best explains what you think.

○ How do you feel about your sorter?



○ How useful is your sorter?



Use complete sentences to answer these questions about your solution.



What is the **best feature** of your **recycling sorter**? Explain

If you had more time or different materials, what would you do to **make your solution better**?

What was the **most difficult** part of this challenge?
