

# A Helping Hand Design Notebook

My Name \_\_\_\_\_

My Partner's Name \_\_\_\_\_

## 1 What is the problem?

State the problem in your own words. Use complete sentences.

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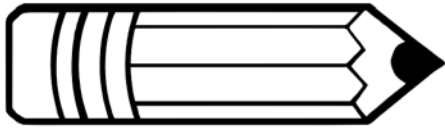
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## 2 Brainstorm solutions.

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.)*

A large rectangular box with a black border and a light gray dotted background, intended for drawing or writing.



### 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"/> Cardstock             | <input type="checkbox"/> Ruler           |
| <input type="checkbox"/> Cardboard             | <input type="checkbox"/> Crayons         |
| <input type="checkbox"/> Paper clips           | <input type="checkbox"/> Markers         |
| <input type="checkbox"/> Brass paper fasteners | <input type="checkbox"/> Colored pencils |
| <input type="checkbox"/> Masking tape          | <input type="checkbox"/> _____           |
| <input type="checkbox"/> Clear tape            | <input type="checkbox"/> _____           |
| <input type="checkbox"/> Glue                  | <input type="checkbox"/> _____           |
| <input type="checkbox"/> String or yarn        | <input type="checkbox"/> _____           |
| <input type="checkbox"/> Rubber bands          | <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 “helping hand” device. Keep making changes until you have the best solution. Be determined to make the best invention possible.



**Answer these questions once you have your solution working well.**

**Does it....**

- |  |     |    |
|--|-----|----|
| 1. Hold <b>at least 5</b> playing cards?                         | YES | NO |
| 2. Allow user to <b>place cards</b> in it easily?                | YES | NO |
| 3. Allow user to <b>remove cards</b> easily?                     | YES | NO |
| 4. Make it <b>easy to hold cards</b> without others seeing them? | YES | NO |
| 5. <b>Damage cards</b> in any way?                               | YES | NO |
| 6. Use only <b>allowed materials</b> ?                           | YES | NO |
| 7. Work well <b>every time you</b> try it?                       | YES | NO |



**5 Evaluate your solution.**

**Circle the picture that best explains what you think.**

- How do you feel about your invention?      😞      😐      😊
- How useful is your invention?      😞      😐      😊

Use complete sentences to answer these questions about your solution.



What is the **best feature** of your **helping hand**? Explain why you think so.

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

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

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