

# UNIT 7

7-1

## WHAT HAVE WE GOT?

### Applying constraints

Now it's time for the team to look at the results of the brainstorming session.



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#### Listen

#### Check your comprehension ▶

- 1 ▶ What are the design team planning to do?
- 2 ▶ What constraints do they talk about?
- 3 ▶ What does Angie say about being practical?

Take a look at the script in the Appendix (page 85). Check your answers.



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#### Fluency practice ▶

- STEP 1** ▶ Read along with the CD.
- STEP 2** ▶ Choose a part. Who would you like to be? Seiji, Ben or Angie?
- STEP 3** ▶ Read your part aloud, along with the CD.
- STEP 4** ▶ Now try without the CD.

#### WORD AND PHRASE WIZARD



expensive

fit in a space

block

walkway

creativity

practicality

realistic

## Now it's your turn

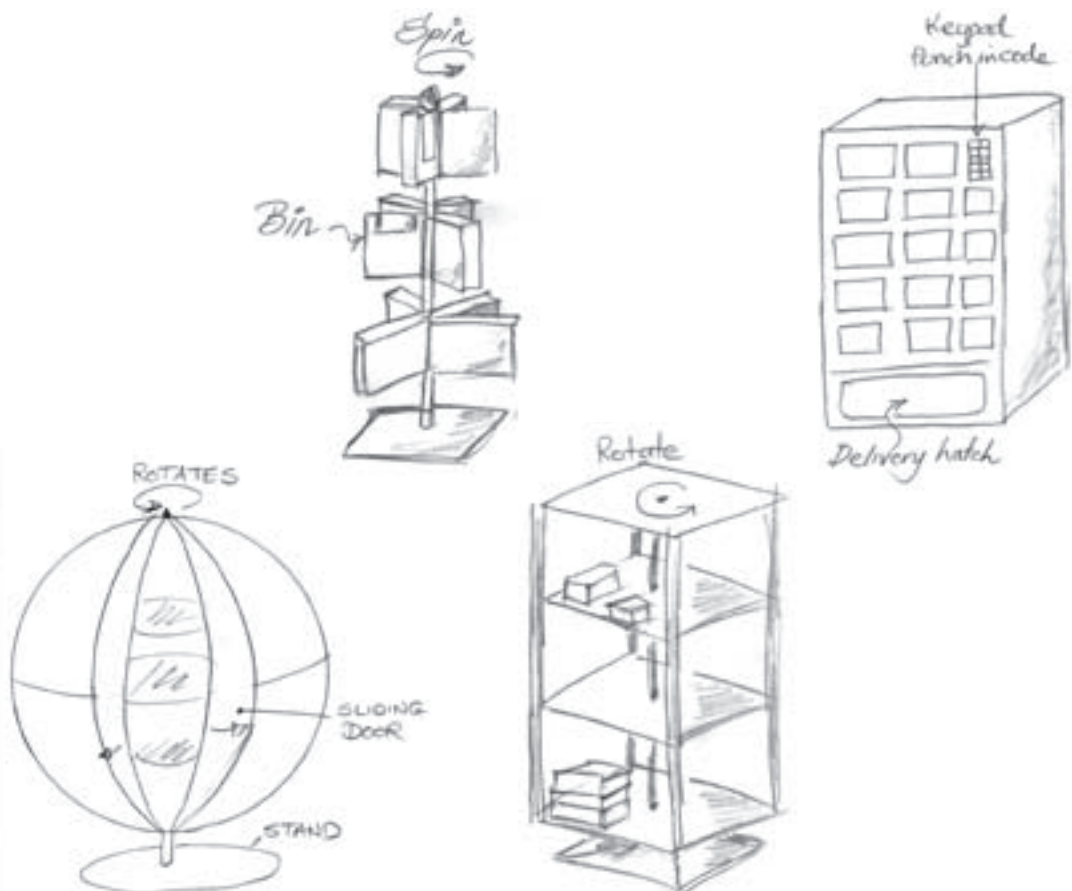


With a partner, or in a group.

Look at some of the sketches of the ideas Angie, Ben and Seiji had during their brainstorming session. Do you think they will work?

Prepare some reasons why you think the ideas may or may not work.

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## Are we making progress?



### Listen

### Check your comprehension ▶

- 1 ▶ Why is Angie worried?
- 2 ▶ What does Ben suggest?
- 3 ▶ Why does Angie suggest that instability is a safety issue?

Take a look at the script in the Appendix (page 86). Check your answers.



### Fluency practice



- STEP 1** ▶ Read along with the CD.
- STEP 2** ▶ Choose a part. Who would you like to be? Seiji, Ben or Angie?
- STEP 3** ▶ Read your part aloud, along with the CD.
- STEP 4** ▶ Now try without the CD.

### WORD AND PHRASE WIZARD



none of them will work

more or less

combine

stability

elements

safety issue

I get it!

Let's say

access way

## Here's the table that the design team drew up

IDEA constraint	vending machine style	hoppers	carousel	rotating bookcase	globe	sliding bookcase
volume required	<i>maybe no</i>	<i>maybe no</i>	<i>maybe no</i>	<i>maybe yes</i>	<i>maybe yes</i>	<i>maybe yes</i>
space available	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>	<i>OK</i>
keep access way free	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
ease of access to stationery	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
ease of manufacture	<i>no</i>	<i>no</i>	<i>maybe yes</i>	<i>yes</i>	<i>maybe no</i>	<i>yes</i>
possible cost	<i>high</i>	<i>high</i>	<i>medium</i>	<i>low</i>	<i>high</i>	<i>low</i>

## Now it's your turn

Rejoin your group and look at the ideas you had for the portable work station. Suppose that the constraints are that one person must be able to carry it. That it must fit on the back of a bicycle. It must not be too expensive. It can be collapsible, but it must be possible for one person to erect it as a workstation.

Discuss your ideas with those constraints and make a report to the class.

**Example** Our group thought that it might be possible to have a workstation in a suitcase, but we think that the suitcase might be too big and heavy.

Can you make a table like the one above?

IDEA constraint			
portable			
one person can carry it			
fit on the back of a bicycle			
one person can erect it			
not too expensive			

## Your design project

It's time to do some more work on your own design project. Start thinking about your design – sketch your ideas and think about how practical they will be. Check your ideas against the specifications and constraints in your design brief.