



## Get ready!

- Before you read the passage, talk about these questions.
  - What helps you think creatively?
  - Why is creative thinking valuable in engineering?

## Reading

- Read this notice from an engineering journal. Then, mark the following statements as true (T) or (F) false.

- \_\_\_ The challenge is to create abstract ideas.
- \_\_\_ The NAE will check that ideas are original.
- \_\_\_ A group of engineers will criticize entries.

## Vocabulary

- Write a word that is similar in meaning to the underlined part.

- Get results that are existing in reality. \_ \_ n \_ \_ e \_ \_ e
- Think different than the usual manner. o \_ \_ f t \_ \_ \_ \_ x
- This is just a theoretical idea. \_ \_ s \_ \_ a \_ t
- Is this plan reasonable or achievable? \_ l \_ \_ s \_ \_ \_ e
- The scientific method is an accepted general practice. c \_ \_ \_ e \_ \_ i \_ \_
- GearCo's unique quality makes it successful. \_ r \_ \_ i \_ \_ \_ t \_ \_
- Scientists question the commonly-held ideas. \_ \_ r \_ \_

### National Association of Engineers (NAE) City Challenge

The annual City Challenge is back! It's time to test your powers of **innovation** and design a solution to a problem your city faces. The designs you create should break from the **norm** and defy **convention**. They should be **creative**, **out-of-the-box** designs that share your **vision** of the future!

We all know that every city has problems. City Challenge aims to solve those problems by bringing together the brightest engineers from all over the country. By tackling the issues that face us, we can make our cities better places to live. We're looking for **concrete**, **plausible** ideas that can be put into action, not just **abstract** notions!

All City Challenge entries are submitted electronically. Your idea's **originality** is subject to **verification**. All entries are judged by leaders in our field. In fact, **feedback** will come from that team. A cash prize will be awarded to the engineer whose design is chosen to be built. Good luck!

- Use the words from the word bank to fill in the blanks.

### word BANK

verification feedback creative  
innovation vision

- Ignore the results until we get \_\_\_\_\_.
- \_\_\_\_\_ people have great new ideas.
- In Bob's \_\_\_\_\_ of the future, he is an engineer.
- Provide \_\_\_\_\_ on the project's pros and cons.
- \_\_\_\_\_ lets companies make new projects.

- Listen and read the notice. Who will decide which project is best?



**6** Listen to a conversation between two engineers. Choose the correct answers.

- 1 What is the conversation mainly about?
  - A the entries received so far
  - B the least impressive contest entries
  - C the lack of creativity in the entries
  - D the verification checks of entries
- 2 What can be inferred about last year's contest entries?
  - A They were more numerous.
  - B They were less creative.
  - C They did not produce a winner.
  - D They failed verification checks.

**7** Listen again and complete the conversation.

- Engineer 1:** The City Challenge entries are so creative! Much better than last year.
- Engineer 2:** I haven't seen them yet. Which ones impress you the most?
- Engineer 1:** Well, one of them solves the problem of a city office building overheating.
- Engineer 2:** How did the engineer do it?
- Engineer 1:** By simply 1 \_\_\_\_\_ with cooler exterior air.
- Engineer 2:** Interesting. By adding more air conditioning capacity?
- Engineer 1:** 2 \_\_\_\_\_. She installed an inexpensive heat pump.
- Engineer 2:** Not a bad idea—but it's not terribly 3 \_\_\_\_\_. Any others?
- Engineer 1:** Yes, there's another entry from an engineer who solves the problem of icy sidewalks.
- Engineer 2:** Sounds interesting. What did that person do?
- Engineer 1:** He installs pipes under the sidewalks. Hot water 4 \_\_\_\_\_ the pipes and melts the ice.
- Engineer 2:** Hmm ... nice, it might take 5 \_\_\_\_\_ to heat the water though.
- Engineer 1:** No—he uses 6 \_\_\_\_\_ to produce electricity.

**8** With a partner, act out the roles below, based on task 7. Then switch roles.

**USE LANGUAGE SUCH AS:**

*The entries are so ...*

*Which one impresses you the most?*

*What did that person do?*

**Student A:** You are discussing the contest entries. Talk to Student B about:

- problems the entries try to solve
- the best entry
- improving the entry

**Student B:** You are an engineer. Answer Student A's questions.

## Writing

**9** Use the conversation from Task 8 to fill out a feedback form for a City Challenge entry.

## City Challenge Entry Feedback

Name of Entry: \_\_\_\_\_

Was the Entry's Originality Verified? Y / N

Description of the Entry:

\_\_\_\_\_

\_\_\_\_\_

Evaluation of the Entry:

Strengths: \_\_\_\_\_

Suggestions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_