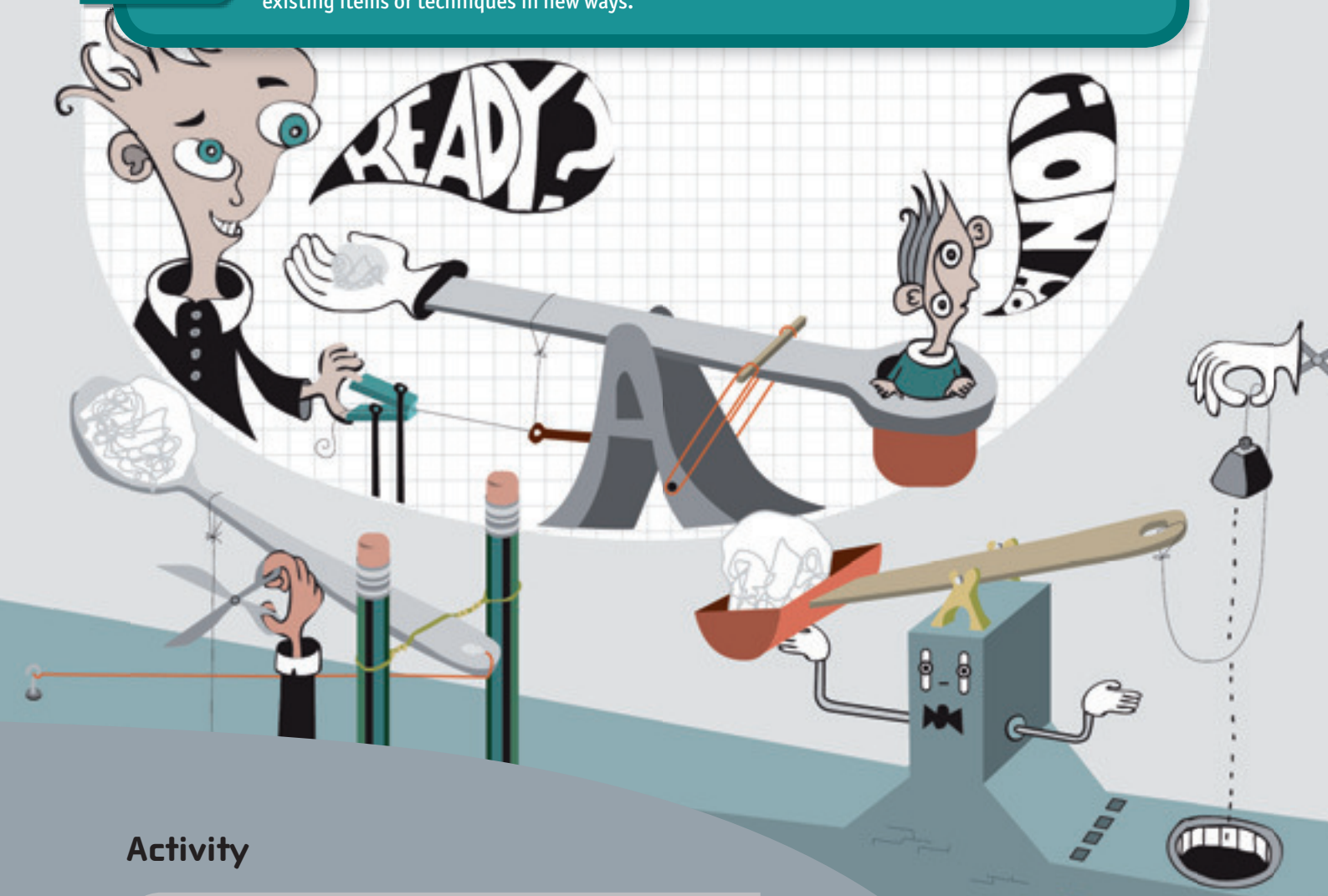
Cotton Wool Catapults

You need ★ catapult materials (e.g., popsicle sticks, rubber bands, paper clips, sticky tape, plastic spoons, cotton wool balls) ★ a measuring tape ★ classmates

TECHNOLOGY New technology may come from creating something completely new or from combining existing items or techniques in new ways.



Activity

Working with a classmate, your challenge is to make a catapult that fires cotton wool balls.

1. a. Design and build your catapult.
   b. Find a place to test your catapult. Work out the best way to fire it, then modify it if necessary to get greater length and accuracy.
2. Discuss with some classmates why the cotton wool balls don't always fly straight ahead. (You may decide to modify your catapult after this discussion.)
3. As a class, decide how you will measure the length and accuracy of each shot for a class competition and how you will record the results.

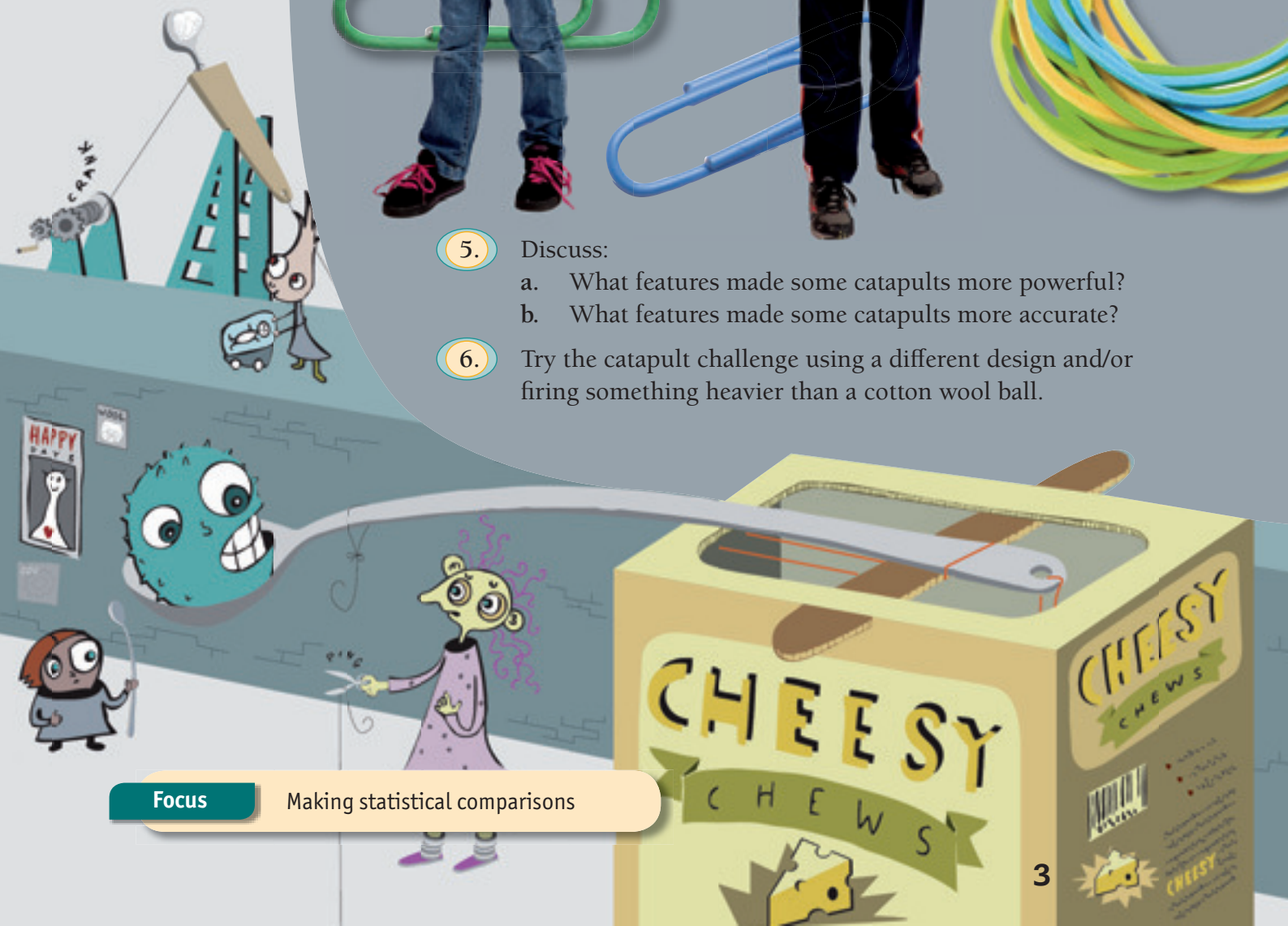
4. *Competition time!*

a. Set up a firing range in an open area, for example, the school hall or the corridor outside your classroom.
b. Take turns to fire your catapults an agreed number of times. Record the results.
c. Compare the results. Decide who had:
   i. the most powerful catapult ii. the most accurate catapult.
d. How did you decide?
e. How effective was your measuring and recording system in helping you decide whose catapult was the best?
f. Is there a better way of collecting and recording the data you need?

5. Discuss:

a. What features made some catapults more powerful?
b. What features made some catapults more accurate?

6. Try the catapult challenge using a different design and/or firing something heavier than a cotton wool ball.



Focus Making statistical comparisons