Unit 9, Lesson 10

Estimation Exploration

Let's design an Estimation Exploration activity.

Warm-up

Estimation Exploration: No Driver Required

Here are pictures showing the exterior and the interior of a parking tower in Wolfsburg, Germany. The parking is automated—each car goes up on a lift and is then placed in a parking space.

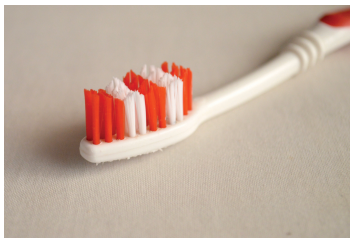
How many cars can fit in the tower?

Record an estimate that is:

too low	about right	too high

Activity 1

Dental Care



Jada brushes for 2 minutes, twice a day. She changes her toothbrush every 3 months.

Use this information to make some estimates. Explain or show your reasoning.

1. In a lifetime, approximately:
   a. How many toothbrushes will Jada use?
   b. How many dollars will she spend on toothbrushes?
2. About how many minutes would she spend brushing her teeth:
   a. in a year?
   b. in a lifetime?
3. Think of another estimation question you could ask about this situation.

Activity 2

Get Your Classmates to Estimate

It's your turn to create an estimation problem.

1. Think of situations or look for images that would make interesting estimation problems. Write down 4–5 ideas or possible topics.

2. Choose your favorite idea.
   - Write an estimation question that would encourage others to use multiplication of multi-digit numbers to answer.
   - Record an estimate that is:

too low	about right	too high

Activity 3

Facilitate Your Estimation Exploration Activity

Follow these steps to facilitate your Estimation Exploration activity for another group:

- Display your image or present your scenario.
- Ask your classmates: “What is an estimate that’s too high? Too low? About right?”
- Give them 1 minute of quiet think time.
- Give them 1–2 minutes to discuss together.
- Invite them to share their estimates and how they made them. Record their ideas.
- Reveal the actual number or quantity if you know it.