Chapter Problem Wrap-Up

Student Text Page
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Suggested Timing
15–30 min

Tools
- computer with Internet access

Related Resources
- BLM 2–14 Chapter 2 Problem Wrap-Up Rubric

Summative Assessment
- Use **BLM 2–14 Chapter 2 Problem Wrap-Up Rubric** to assess student achievement.

Using the Chapter Problem Wrap-Up

- Throughout the chapter, the theme of the chapter problem was that of work at a traffic safety bureau. In this Chapter Problem Wrap-Up, students combine what they already know with some research into what a civil engineer actually does.

Level 3 Sample Response

Answers may vary. Sample answer:

a) A civil engineer is concerned with the construction, maintenance, and workings of the human-made environment, such as roads, bridges, and dams. The problems that we saw in this chapter dealt with traffic flow (Section 2.1), comparing the performance of cars (Section 2.3), and the relationships involved with stopping a car (Sections 2.5 and 2.7). All of these mathematical concepts were used to enhance the knowledge of each situation by modelling each with an appropriate equation(s).

b) Civil engineers take a 4- or 5-year university program that involves mathematics, physics, and design. Once graduated, they have a Bachelor of Engineering or Bachelor of Science degree. As shown by the examples in this chapter, modelling situations with mathematics is quite important to civil engineers.

Level 3 Notes

Look for the following:

- Makes specific reference to the types of problems seen throughout the chapter
- Defines what makes an engineer a civil engineer
- Should make reference to modelling with functions
- Information for what is needed to become a civil engineer should give some specifics

What Distinguishes Level 2

- There may be references to the fact that there were problems related to civil engineering, but no specific references to the actual questions
- No real reference to modelling
- Could have definition of what a civil engineer is but without being too specific
- Requirements may only mention that you have to go to university

What Distinguishes Level 4

- References to problems are more specific in that student may relate specific relationships and conclusions found in the problems
- Specifically shows how modelling is important
- Definition might highlight differences between civil engineers and other engineers
- Description of what is needed goes into more specifics in terms of math and other courses