

CHAPTER
6

Section 1

SKILLBUILDER PRACTICE *Clarifying*

You can clarify information you read by looking up the meaning of unfamiliar terms and summarizing the main ideas in your own words. As you read the passage below, make notes of the main ideas. Look up any unfamiliar or technical terms you do not understand. Then complete the activities that follow. (See Skillbuilder Handbook)

Galileo Galilei was an Italian mathematician, astronomer, and physicist. As a physicist, he began a whole new field of scientific investigation—the modern science of dynamics.

As a youth of 18, Galileo watched the movements of a cathedral’s chandelier as it swung back and forth on its chain. Aristotle had written that a pendulum swings more slowly as it approaches its resting point. Galileo tested this idea and found it incorrect. Feeling his pulse to keep time, he found that each oscillation of the pendulum took exactly the same amount of time.

Galileo’s observation led to a new method of measuring time. In the 1200s and 1300s European inventors had built clocks that were driven by weights. In the 1400s, they turned to spring-driven

clocks. But none of these timepieces were very accurate. In 1656, a Dutch astronomer built a clock using a pendulum. It proved to be more accurate than earlier ways of measuring time. In fact, pendulum clocks were not surpassed in accuracy until the introduction of electricity.

In addition to discovering the law of the pendulum, Galileo performed other experiments in physics. For days he rolled balls down a slope and measured the speed at which they moved. His data led him to conclude that freely falling bodies, heavy or light, had the same, constant acceleration. He also discovered that an object moving on a perfectly smooth horizontal surface would neither speed up or slow down.

1. Define each of the following terms:

Physicist: _____

Dynamics: _____

Oscillation: _____

2. Identify the main idea of the passage. _____

3. Write a paragraph summarizing the main idea and key details in this passage. Remember to restate information in your own words.
