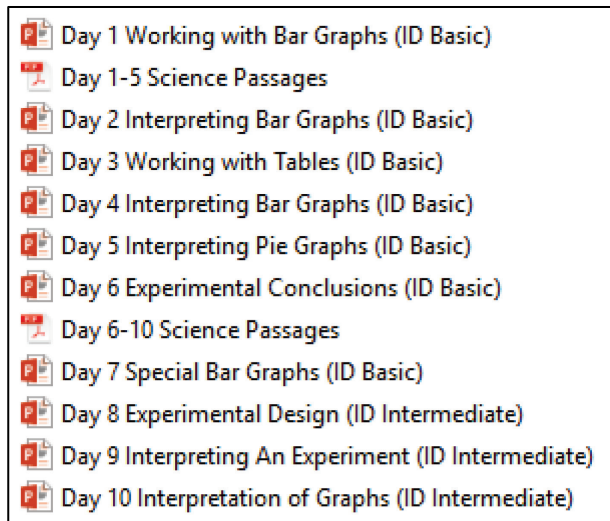


## HOW TO USE Essential Skills Bell Ringers – Science

### About the Bell Ringers

The Essential Skills Science bell ringers are organized by difficulty level, moving from easier skills to more difficult ones.

The bell ringers are provided in 60 slideshow files. The science passages are included in the slideshows and are also included as separate PDFs for printing purposes, as the sample below illustrates:



The slideshow file names include labels to guide you. Each file is titled with a general description, such as “Working with Bar Graphs,” as well as a category and a level of difficulty. The three categories are:

- ID = Interpretation of Data
- SI = Scientific Investigation
- EM = Evaluation of Models

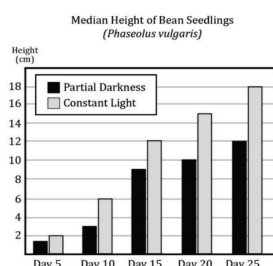
The three levels of difficulty are:

- Basic
- Intermediate
- Advanced

The daily bell ringers include 1 to 3 problems for the students to work through on their own. The problems are then repeated with a solution for you to use in discussing the item with the class.

23. What was the median height for the bean seedlings grown in partial darkness after 20 days?

- A. 3 cm
- B. 8 cm
- C. 10 cm
- D. 12 cm



23. What was the median height for the bean seedlings grown in partial darkness after 20 days?

- A. 3 cm
- B. 8 cm
- C. 10 cm
- D. 12 cm

23. (C) ID Basic

According to the graph, the “partial darkness” bar has a value of 10 cm at 20 days.



The notes for each slide also include the specific skill(s) the problems in the bell ringer are testing, as well as the category of the problem and the level of difficulty.

The screenshot shows a presentation interface with a slide titled "Passage VI". The slide contains a paragraph about an experiment on bean seedlings and a bar graph titled "Median Height of Bean Seedlings (Phaseolus vulgaris)". The graph compares the height of seedlings in "Partial Darkness" (black bars) and "Constant Light" (gray bars) at 5-day intervals from Day 5 to Day 25. The y-axis represents height in centimeters, ranging from 0 to 18. The x-axis shows days 5, 10, 15, 20, and 25. The Cambridge logo is visible in the bottom right corner of the slide.

Day	Partial Darkness (cm)	Constant Light (cm)
Day 5	2	2
Day 10	3	6
Day 15	9	12
Day 20	10	15
Day 25	12	18

The "Next slide" preview shows question 23: "What was the median height for the bean seedlings grown in partial darkness after 20 days?" with multiple-choice options A. 3 cm, B. 8 cm, C. 10 cm, and D. 12 cm. Below the question is a smaller version of the bar graph and the Cambridge logo.

Recognize features of basic data presentations such as headings and units. Use a simple presentation of data to identify one two or more pieces of data either numerical or non-numerical. Level: Basic Skill Group: Interpretation of Data

For further review, locate the appropriate subject and level of difficulty in your *Essential Skills* teacher's guide. Preceding those problems in the *Essential Skills* guide you will find a short lesson introducing the skills tested by the group of items you are reviewing. Use that lesson or additional problems from the exercise to extend student learning.

## Implementing the Bell Ringers

Depending on the number of days you are planning to use the bell ringers, you can implement them in a couple of different ways.

### Option 1: 12 Weeks of Bell Ringers

Teach through the bell ringers for 60 days, using one bell ringer file each day. Each file includes 1 to 3 problems, plus the explanations for those problems.

If possible, print a copy of the weekly passages for each student so that students can see the full passage while answering questions.

### Option 2: Selective Bell Ringer Coverage

Select bell ringers based on specific skills you want to focus on or a specific level of difficulty. For example, if you are only using the bell ringers on Fridays for a semester, you will need 12–14 bell ringers. You might decide to begin with Interpreting Data topics, or you might work through the basic material first.

If possible, print a copy of the weekly passages for each student so that students can see the full passage while answering questions.

If you have questions about implementing the Essential Skills bell ringers, call Cambridge's teacher hotline at 1-800-444-4373.