



Science Reading For College Prep

Skill levels 9 - 12

Complete program: 1 unit

For content of the program see page 3.

For teaching suggestions, see page 4.

Windows 98/Me/NT/2000/2003/XP

8 MB RAM, 34 MB hard disk space

This program requires a minimum screen resolution of 800 by 600 pixels.

Science Reading for College Prep helps students master science reading comprehension skills. Students read multi-paragraph science passages and view related charts and diagrams. Then students answer specific skill questions designed to help them increase their ability to understand and apply basic science principles that they have read. Each passage presents five different types of multiple-choice questions and one writing question. In all, the program contains 10 passages and 100 questions.

The program is compatible with Merit Text Talker, which allows students to have the text read aloud to them.

This self-paced improvement and management program helps prepare students for the kinds of questions they will see on science reading comprehension tests and lets teachers monitor their students' independent learning.

After an assessment, students work on interactive lessons where they can access a tutor. The tutor is available both prior to and during each question. Following the completion of each question and lesson, students receive addition help and contextual feedback. Also, they are able to track their own progress and print results, while a management system stores student scores allowing teachers to view and print reports.

For logging on instructions, see the Logging on and Class Management section of this guide. Versions are available for stand-alone, network, or home use.

PROGRAM DESCRIPTION

Each unit of the program contains three Main Menu parts: Tryout, Workout, and Finals. Summary screens follow each round. The Print option shows the student's progress to date, not just the results of an individual round.

TRYOUT: The student will have a chance to try out his science reading skills on one passage. Because the Tryout helps the student assess his skills, he does not get any sound or graphic rewards until he has completed the Tryout. The bar at the bottom of the screen shows how much of the Tryout he has remaining. When he has finished all the questions, a summary screen reports his results. His scores for specific reading skills let him know how he is doing. 'Print' will show how he did in a progress-to-date report.

WORKOUT: A tutor introduces the Workout and is also accessible while the student is answering questions. There are two reading groups in the Workout. When the student begins, two passages in each round are chosen randomly from the program's lower reading group (Group A). The student must complete all four passages in the lower group of passages before moving on to the four passages in the higher group (Group B). A summary of scores appears after each round.

The student's understanding of each passage is tested by a variety of skill questions: (1) vocabulary (2) comprehension (3) application (4) analysis (5) evaluation. These are followed by a writing question for each passage that encourages students to think about what they have read in a different way.

If the student gets a "Keep going." message, it means the student's understanding of the passage was not great enough to continue with the other exercises for that passage. To pass a passage, students must get at least 70% correct. Any passage that the student does not complete or does not pass will be kept in the same group of randomly chosen passages for subsequent rounds.

For exercises 2 through 5, whenever a student answers incorrectly, he is asked to try again. When the correct answer is selected a feedback message displays an explanation and the relevant passage in the passage becomes highlighted.

(1) Vocabulary: In the first exercise, five vocabulary words highlighted in the passage must each in turn be matched with the best replacement from among seven possible choices.

(2) Comprehension: The student is asked to answer a straightforward question about the facts or ideas in the passage.

(3) Application: The student is asked to take information presented in the passage and apply it to a different situation.

(4) Analysis: The student is asked a question that requires breaking a concept down into simpler ideas and figuring out the relationship between elements of the concept. He may be asked to draw a conclusion.

(5) Evaluation: The student is asked to use reasoning to judge something based on the material presented in the passage.

Writing: Students need to get 70% on exercises 1 through 5 of a passage to be given the final exercise for the passage. Here, the student is asked to write his own test question based on the passage and to give the correct answer and two wrong answer choices. The student's writing is automatically saved and printed as part of his end of round summary.

At the end of each round a summary screen will show how the student did. The student gets a star for passage passed, with a score of 70% or higher. Red stars show the passages passed for the current round. Gray stars show correct answers for preceding rounds. When the student has four stars in a group, he has passed it. When he has gotten four stars in both groups, he has finished the Workout. The bar at the bottom of the screen indicates how many passages the student has passed in the Workout. The scores shown on the screen are only for the current round. 'Print' will show how he did in the current round as well as his progress to date.

FINALS: The student is tested on the same skills but with a different passage from the one used in the Tryout. To pass the Finals, the student must pass all passages, with a score of 70% or higher. The bar at the bottom of the screen shows how much of the Finals he has completed.

When the student has finished all the questions, a summary screen will show how he did. Scores for specific reading skills let the student know how he is doing. 'Print' will show how he did in all the parts of the program.

Targeted Workout (follows the Finals): If the student has NOT passed one or more skills in the Finals, he is prompted to do this optional exercise and then repeat the Finals.

Summary screens follow each of the three parts. The Print option shows the student's progress to date, not just the results of an individual round. Red stars show correct answers in the current round. Gray stars represent correct answers in preceding rounds.

LOGGING ON AND CLASS MANAGEMENT

There are two options for adding student names to the record database.

- Teacher controlled – appropriate for most schools. Names added with the Teacher Program Manager (TPM) Set Up Student Names functions. See the Teacher Program Manager section of the guide.
- Student controlled – for home users and mature students. Names added at the Logon Screen.

The program opens to a Logon screen with all previously entered class codes and student names. Students must select their class code in order to see the list of students in their class. They then click on their name to begin the program. If the program is in student controlled mode and students are logging on for the first time, they select their class code, click the New Student icon, and fill in their name on the form that appears on the screen.

The evaluation version of the program permits entry of only two student names. When a third name is entered, the first one will be deleted. The stand-alone version for one station contains record keeping for 42 students. Other school versions permit entry of as many names as disk space allows. When disk space is filled, the name that was entered first will be deleted.

SCORING

Students may print out their scores at the end of round progress-to-date screen. Teachers may view detailed scoring in the Teacher Program Manager.

TEACHER PROGRAM MANAGER

All Merit Software applications utilize a centralized student record keeping/management system utility program called Teacher Program Manager (TPM). For more information about class management, scoring, and other program features see the Teacher Program Manager manual. It can be printed out from a Merit Software CD or from this link on the Internet:

http://meritsoftware.com/Teacher_Program_Manager.pdf

Here are the program features the teacher may customize for students using the Program options menu in the TPM.

1. Hide/Show Sound
2. Hide/Show Graphics
3. Control which program parts are active

CONTENTS OF SCIENCE READING FOR COLLEGE PREP

Here are the science subjects and the topics covered within each subject:

Subject 1: Physical Science / Chemistry

Topic: Atomic Structure

Supporting Graphics: Illustration, Chart

Subject 2: Biology / Life Science
Topic: Horseshoe Crabs
Supporting Graphics: Illustration, Chart

Subject 3: Biology / Life Science
Topic: Bacteria
Supporting Graphic: Diagram

Subject 4: Earth Science / Astronomy
Topic: The Moon
Supporting Graphic: Chart

Subject 5: Earth Science
Topic: Earthquakes
Supporting Graphics: Maps

Subject 6: Earth Science
Topic: Ocean Currents
Supporting Graphics: Maps

Subject 7: Biology / Life Science
Topic: Animal Behavior
Supporting Graphic: Graph

Subject 8: Physical Science
Topic: Light Waves
Supporting Graphics: Charts

Subject 9: Physical Science / Chemistry
Topic: Nuclear Energy
Supporting Graphics: Cartoon, Formula

Subject 10: Physical Science / Mechanics
Topic: Energy
Supporting Graphic: Table

SUGGESTIONS FOR USING THIS PROGRAM

For best results we recommend that students use the program 20 to 30 minutes a session, two to three times a week, for six to eight weeks in conjunction with other methods of instruction. Program usage should be paced to allow students sufficient time between sessions to absorb the material.

Start out with Merit's *Tryouts* to see where students need science reading help the most.

Discuss problem areas with students.

Ask students what they read most outside of school. How much do they read outside of school? Do they use books or go online? What do they like to read?

Supplement Merit with science material from other sources so students may practice skills in a variety of science subtopic areas.

Return to the software and have students try the *Workout* section.

Follow up each software session. Ask students to name something from the software texts that was already familiar to them before their session. Can they name something they read about for the first time? What new questions do they have?

Look at a sample text. Ask students to find the key words that tell the main idea. Can they list 1-2 details? Find a fact and/or an opinion? Explain text sequence? What can they infer from the text?

Have students print scores received for completing software *Workout* section. Later, discuss these scores with students. Are they pleased with their progress? What seems easier to them? What needs more practice?

Relate skills practiced with the software to material in their social studies, science and language arts classes, so students can apply new skills to each subject area. Have students write sentences explaining what they are reading.

Give students short texts on science topics. Have students work in pairs to create additional sentences that could be inserted into each text.

Suggest students read something they like for an extra 20 minutes a day on weekends.

Ask students to keep a reading journal.

Have students imagine they are making up reading/vocabulary questions for a Merit program being used. Give students a short text. Have them work in pairs to create and write their own skill-related question and answers.

Have students imagine they are creating a crossword puzzle for a Merit program being used. Tell them to choose words from classroom material, then work in pairs to write, draw and design their own vocabulary puzzles.

Organize students into small groups for games of charades based on passages in science class.

Return to the software and let students try Merit's *Finals*, to help prepare for and demystify standardized tests.

Follow up software units with written post-tests.

Compare students' software results with gains in standardized test scores.

TIPS FOR INTRODUCING MERIT TEXT TALKER

The Merit Text Talker is an optional feature that may be helpful for your students. Introduce the Merit Text Talker feature to students by demonstrating how it functions.

Show how they can right-click in a text box to have the "Say text" pop-up message appear. Then show that moving the mouse over the pop-up highlights the pop-up. Press the highlighted pop-up to have the text read aloud. Right-click again to stop the text.

Show students that using the Application Key (next to the right-side CTRL Key) is equivalent to right-clicking.

Have students practice using the Merit Text Talker.

Encourage students to change the Merit voice periodically from "Kate" to "Paul," so they can practice listening to two different voices.