Directions

Turn to page 24 in the *AP Course and Exam Description*. Define each of the following below:

1. Essential Knowledge (EK)

   Essential knowledge statements describe the knowledge—including facts, definitions, etc.—required to perform the learning objectives.

2. Learning Objectives (LO)

   Learning objectives define what a student should be able to do with content knowledge in order to progress toward the enduring understanding.

3. Enduring Understandings (EU)

   Enduring understandings are the long-term takeaways related to the big ideas that leave a lasting impression on students. They build and earn these understandings over time by exploring and applying course content throughout the year.

4. Big Idea (BI)

The big ideas serve as the foundation of the course and develop understanding as they spiral throughout the course. The big ideas are the recurring themes that are present in the course. They are crosscutting concepts spiraled throughout the curriculum.

The AP CSP course and exam are designed to encourage students to build deeper conceptual understandings about the course content and skills.

Scenario

Imagine you're having a conversation with someone who took AP CSP. You're curious what they really got out of the course—what they remember as the "takeaways"—so you ask them to finish this sentence:

At the end of the day, AP Computer Science Principles is about …

What word or phrase do you think this person might say to finish that sentence?

"At the end of the day, AP Computer Science Principles is about using computers to solve problems."
"At the end of the day, AP Computer Science Principles is about the impact computers have on everyone's lives."
"At the end of the day, AP Computer Science Principles is about using data to solve problems."

Now think about your AP CSP students, and what you hope their "takeaways" are for your course. How do you hope they would finish this sentence?

programming; solving problems; the impact computers have on our lives; how data are sent via computers; how we can use computer science in all career fields.

AP CSP Big Ideas

One of the goals of AP Computer Science Principles courses is to help students develop deep conceptual understanding that can transfer to new situations, so they will need opportunities to think about and explore central concepts. These central concepts are big ideas, which students will encounter frequently throughout the course; as students encounter these big ideas repeatedly, their knowledge, skill, and understanding related to the big ideas become more complex.

Directions

Turn to page 17 in your copy of the *AP Course and Exam Description*, which describes the big ideas of the course. Review the big ideas and their descriptions, then answer the following questions:

1. How is a big idea different from a unit or module?

   Conceptually, big ideas are of a higher hierarchical order than units or modules; big ideas are recurring concepts that manifest throughout the course, while units are a unified, usually scaffolded, sequence of instructional topics that occur once in the course.

2. Why might it be helpful for students to think about and explore these big ideas multiple times throughout the year and in multiple units or modules?

   Students need to explore these concepts numerous times, in different contexts, to learn an understanding about and skill with the concepts; students need to understand that these concepts are foundational to the course and aren't limited to only one unit but occur in numerous contexts throughout the course.

Course at a Glance and Big Idea Openers

Directions

Turn to the Course at a Glance on page 20, in the *AP Course and Exam Description*. As we discuss the features of the Course at a Glance page, record your answer to the questions below.

1. What do the colors of the practices represent?

   They represent where the skills in the practices are tied to each topic. Each practice is a different color.

2. Which big idea has the most topics? Which has the fewest?

   Algorithms and programming has the most topics; Computer Systems and Networks has the fewest topics.

3. What is the information at the bottom of each column telling you?

   The box shows the number and type of topic questions that can be found in the AP Question Bank.

4. Under each big idea title, there are percentages. What are they percentages of?

   This percentage indicates the percentage of multiple-choice questions that will be on the exam.

5. What do you think is measured in the topic questions?

   The topic questions measure students' ability to apply the associated topic learning objectives and skills

   Now that you have had time to look at the Course at a Glance table as a group. Turn to the Big Idea at a Glance for Big Idea 1 on page 30, in the *AP Course and Exam Description* and answer the following questions.

6. What extra information is given in the Big Idea at a Glance page?

   The page shows learning objectives as well as the specific skills that are associated with the topics and a place to organize these topics into units.

7. How does this table relate to the Course at a Glance?

   It provides more detailed information about the learning objectives and skills included in each topic.