

NAME: _____ KEY _____ COMPUTER SCIENCE WEBQUEST

WHAT IS COMPUTER SCIENCE?

<https://tinyurl.com/yc8kdpb8>

1. What is computational thinking?

-looking at a problem and working out a way a computer might be able to help you solve it

2. What are 3 names for someone who designs and makes computer programs?

programmer coder software engineer

3. What are four examples of **computer technology** that computer scientists have designed?

- The tablet to watch a video

- The traffic lights on the pedestrian crossing

- The bus's engine management system that is programmed.

- The CCTV camera that watches you in the supermarket

Click on the picture of a building and then the labels to the right of it: **websites, robotics, IT systems, computer games.**

4. What are 3 coding languages that are used to build **websites**?

HTML CCS JavaScript

5. A programmer writes the robot's software. An engineer builds the robot.

6. What is one thing an IT systems manager might do? ensuring that the computer systems run smoothly, troubleshooting problems, planning upgrades, managing databases, training people

7. What role in **computer game** development creates the look of the game? designers

CAREERS IN COMPUTER SCIENCE

<https://tinyurl.com/yce6ftf6>

8. If you major in computer science, not only will you learn about computers (hardware and

software), you'll also learn about the real - world

applications of technology.

9. Only 12% of computer science graduates are women. The country is producing 40,000

computer science graduates each year, but the need is for more than 120,000.

10. The starting salary for computer science majors was \$ 65,000 ; the average is close

to \$ 80,000.

Scroll down to see a list of 100 computer science careers.

11. What does a concept artist do? Think up characters, objects, or environments for films or video games

12. What are three jobs related to games? Artist, Designer, Developer, Director, Producer, Programmer, Tester

13. What puts animation and real film footage together to make one amazing movie? Compositor

14. What is one CS job that you might be interested in? answers vary

INSIDE YOUR COMPUTER- WATCH THE VIDEO WITH THE CLOSED CAPTION (CC) TURNED ON. <https://tinyurl.com/yaa8ose3>

15. What does a mouse have to detect? motion and distance

16. What does CPU stand for? central processing unit

17. What body part is the CPU like? brain

18. The CPU's job is fetching instructions from memory and executing them.

19. The CPU executes billions of instructions every second.

20. Human programs take up a lot of space and contain a lot of unnecessary information, so they are compiled and made smaller in bits of 1s and 0s in memory.

The Binary System

<https://tinyurl.com/yad6fmj6>

21. Any code that uses just two symbols to represent information is considered binary code.

22. Two examples of binary codes are Braille and Morse code.

23. The most common use for binary code is in computers.

24. Write out the binary code for your initials. (answers vary- A is 1000001, B is 1000010...)

1st letter () = _____

2nd letter () = _____

3rd letter () = _____

Binary system game <https://games.penjee.com/binary-numbers-game/> (NOT FOR A GRADE)

To find a binary number, put a 1 (click) under the numbers that will add up to the number you are changing into a binary number. For example, 7 is 1 1 1 (4 + 2 + 1). 8 is 1 0 0 0 (8 + 0 + 0 + 0). You do not need zeroes to the left of your first 1.

To change a number from binary to regular, add up the numbers that have a 1 and type it in.

128	64	32	16	8	4	2	1
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