

OBJECTIVE

understand hardware 2.1

CHOOSE AN INPUT DEVICE

SCENARIO: Derek Brown, the CEO of Graphic Design Institute, has received a large contract from a prominent educational products company to design games that will provide an engaging way for students to learn concepts in a variety of topics. He has some possible game ideas and is eager to match the intended learners' experience accurately with the best input device. Derek recognizes that factors such as the goal of the game, the age of the player, and the expected player action are important considerations.

- 1. Which device is the best fit for a math game that teaches multiplication by allowing the user to shoot at the correct answers as the numbers fly across the screen?**
 - a. Xbox 360® Controller
 - b. Keyboard
 - c. Mouse
- 2. Which input device is the best fit for a chemistry quiz game in which the user jumps through a maze and grabs the correct formulas to match definitions?**
 - a. Kinect®
 - b. Xbox 360® Controller
 - c. Windows Phone® (Accelerometer Input)
- 3. Which device is the best fit for a geometry game in which the user matches a word to a shape by flying a plane through geometrically shaped clouds (triangle, square, rhombus, pentagon, and so on), thus enabling the user to match words to shapes?**
 - a. Kinect
 - b. Joystick
 - c. Xbox 360 Controller

HINT



If you were to play the games described, what device would feel "natural?"

Answers

1. Which device is the best fit for a math game that teaches multiplication by allowing the user to shoot at the correct answers as the numbers fly across the screen?
 - a. **Xbox 360 Controller.** This would be the best option because the controller allows for more user control and precision when shooting.
2. Which device is the best fit for a chemistry quiz game in which the user jumps through a maze and grabs the correct formulas to match definitions?
 - a. **Kinect.** This would be the best option because the user is jumping through a maze and grabbing. The Kinect device will make the game more fun and realistic to play.
3. Which device is the best fit for a geometry game in which the user matches a word to a shape by flying a plane through geometrically shaped clouds (triangle, square, rhombus, pentagon, and so on) by enabling the student to match words to shapes?
 - b. **Joystick.** This would be the option because joysticks are made to maneuver easily.

Essential details

- A **peripheral** is any part of a computer other than the CPU or working memory; i.e., disks, keyboards, monitors, mice, printers, scanners, tape drives, microphones, speakers, and cameras.
- An **input device** is a peripheral used to transfer data from the outside world into a computer system.
- A **gamepad** is just another name for a video game controller.
- A **joystick** is a device consisting of a handheld stick that pivots about one end and transmits its angle in two dimensions to a computer.
- A **keyboard** is a hardware device consisting of a number of mechanical buttons (keys) which the user presses to input characters to a computer.
- The **Xbox 360 Controller** is a game control hardware device specifically designed for the Xbox 360.
- The **Kinect** is a device used with Xbox 360 that senses motions and uses voice recognition for gameplay.

FAST TRACK HELP

- **Windows Phone Development**
http://blogs.msdn.com/b/microsoft_press/archive/2010/10/28/free-ebook-programming-windows-phone-7-by-charles-petzold.aspx
- **Input on the XNA Framework (XBox 360 Controller)**
<http://blogs.msdn.com/b/xna/archive/2006/08/25/724607.aspx>

 TRAINING	Track Your Score
	____ / 3