Lesson Plan

Studying Silicon

Book: *Silicon*
Series: Momentous Materials
Level: Beacon

Objective

To have students demonstrate comprehension of key words from a book about silicon by completing a fill-in-the-blank worksheet.

Supplies

- *Silicon* book
- Silicon Sentences worksheet (attached)
- Pencils

Before the Activity

Print a Silicon Sentences worksheet for each student.

Activity

The *Silicon* book explains how this very important material is made and used. Read this book out loud to the class. Then pass out the Silicon Sentences worksheet. This worksheet has a list of words at the top. Each word is related to a key idea from the book. Students should use these words to fill in the blanks on the worksheet. Each term will be used only once.

Evaluation

Collect the worksheets. Use the attached answer key to give each student 1 point for each correct answer, for up to 16 points total.

Standards

This lesson may be used to address the Common Core State Standards' reading standards for informational text, grade 4 (RI 4.4).

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Silicon Sentences

Word Bank		
silicon	current	doping
boule	binary	transistors
wafer	solar cells	memory
etch	conductor	amplifiers
microchips	insulators	semiconductor
logic		

1. _____ turn sunlight into electricity.
2. Radios use _____ to make the signal stronger.
3. A _____ is a tube-shaped piece of silicon.
4. _____ is when scientists add small amounts of other material to change silicon's charge.
5. Materials like rubber that block the flow of electricity are called _____.
6. Silicon can be made into _____, which are used in computers.
7. Computers communicate using _____.
8. When a machine heats sand until it melts, _____ is left behind.
9. A _____ can both block electricity and let electricity flow through it.
10. _____ chips are microchips that store information.
11. The electric _____ flows when light hits a solar cell.
12. Electricity flows through copper, so copper is a _____.
13. Silicon is cut into a thin _____ to become a microchip.
14. _____ chips may help with graphics or tasks, such as a smartphone game.
15. _____ can be used like switches or as amplifiers.
16. Machines _____ away part of a wafer to create a microchip.

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Silicon Sentences Answer Key

Word Bank		
silicon	current	doping
boule	binary	transistors
wafer	solar cells	memory
etch	conductor	amplifiers
microchips	insulators	semiconductor
logic		

1. _____Solar cells_____ turn sunlight into electricity.
2. Radios use _____amplifiers_____ to make the signal stronger.
3. A _____boule_____ is a tube-shaped piece of silicon.
4. _____Doping_____ is when scientists add small amounts of other material to change silicon's charge.
5. Materials like rubber that block the flow of electricity are called _____insulators_____.
6. Silicon can be made into _____microchips_____, which are used in computers.
7. Computers communicate using _____binary_____.
8. When a machine heats sand until it melts, _____silicon_____ is left behind.
9. A _____semiconductor_____ can both block electricity and let electricity flow through it.
10. _____Memory_____ chips are microchips that store information.
11. The electric _____current_____ flows when light hits a solar cell.
12. Electricity flows through copper, so copper is a _____conductor_____.
13. Silicon is cut into a thin _____wafer_____ to become a microchip.
14. _____Logic_____ chips may help with graphics or tasks, such as a smartphone game.
15. _____Transistors_____ can be used like switches or as amplifiers.
16. Machines _____etch_____ away part of a wafer to create a microchip.

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