

Jeopardy

Size and Scale	Nano Products	Tools	Structure Of Matter	Science and Society
<u>Q \$100</u>	<u>Q \$100</u>	<u>Q \$100</u>	<u>Q \$100</u>	<u>Q \$100</u>
<u>Q \$200</u>	<u>Q \$200</u>	<u>Q \$200</u>	<u>Q \$200</u>	<u>Q \$200</u>
<u>Q \$300</u>	<u>Q \$300</u>	<u>Q \$300</u>	<u>Q \$300</u>	<u>Q \$300</u>
<u>Q \$400</u>	<u>Q \$400</u>	<u>Q \$400</u>	<u>Q \$400</u>	<u>Q \$400</u>
<u>Q \$500</u>	<u>Q \$500</u>	<u>Q \$500</u>	<u>Q \$500</u>	<u>Q \$500</u>



Final Jeopardy

\$100 Question from Size and Scale

1×10^{-9} meter

\$100 Answer from Size and Scale

What is a nanometer?



\$200 Question from Size and Scale

World of Measurement where objects can be seen with an optical microscope.



\$200 Answer from Size and Scale

What is the micro-world of measurement?



\$300 Question from Size and Scale

The shape with the minimum surface area to volume.

\$300 Answer from Size and Scale

What is a sphere?



\$400 Question from Size and Scale

Any system or material with at least one dimension falling between 1 and 100 nm.

\$400 Answer from Size and Scale

What is the nanoscale?



\$500 Question from Size and Scale

Must be used to explain the behavior of matter at the atomic and subatomic scales instead of classical physics.



\$500 Answer from Size and Scale

What is quantum mechanics?



\$100 Question from Nano Products

Number of products that contain nano particles and are developed through nanotechnology.



\$100 Answer from Nano Products

What is over 1500?



\$200 Question from Nano Products

Metal found in products such as socks and storage containers that is antimicrobial.



\$200 Answer from Nano Products

What is silver?



\$300 Question from Nano Products

Property of products that allows them to repel liquids and dirt used in products such as Nano-Tex pants and StoCoat Lotusan® coating.



\$300 Answer from Nano Products

What is super hydrophobic?



\$400 Question from Nano Products

This active ingredient in sunscreen
is white at the macro scale,
but is clear or transparent at the
nanoscale



\$400 Answer from Nano Products

What is titanium dioxide or zinc oxide?



\$500 Question from Nano Products

A very porous material with a large surface area that has excellent insulating properties even though it is 99.8% air.



\$500 Answer from Nano Products

What is aerogel?



\$100 Question from Tools and Instrumentation

Light is used in microscopes to view objects in the micro-world but in the nano-world this must be used.

\$100 Answer from Tools and Instrumentation

What are electrons?



\$200 Question from Tools and Instrumentation

SEM and AFM.



\$200 Answer from Tools and Instrumentation

What is scanning electron microscope and atomic force microscope?

\$300 Question from Tools and Instrumentation

A laboratory where the air is filtered to create a clean environment.

\$300 Answer from Tools and Instrumentation

What is a cleanroom?



\$400 Question from Tools and Instrumentation

Instrument that can be used to move materials around atom by atom.

\$400 Answer from Tools and Instrumentation

What is an atomic force microscope?



\$500 Question from Tools and Instrumentation

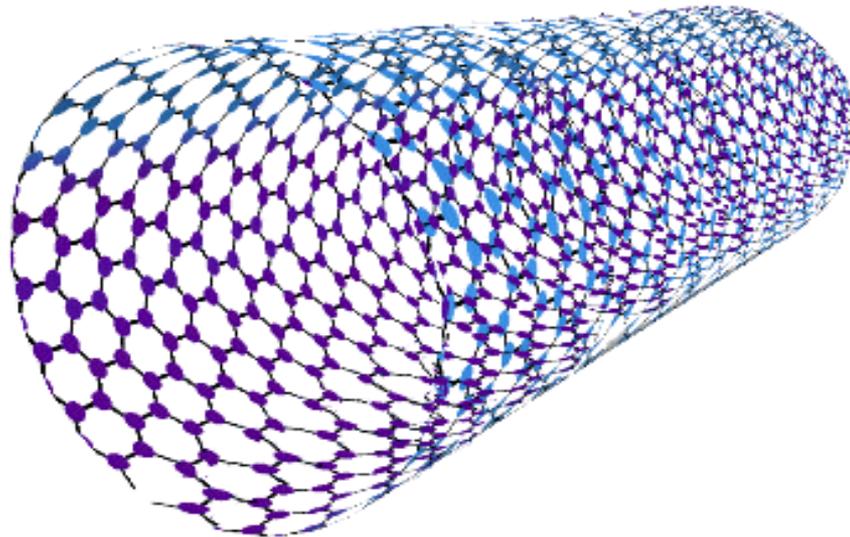
The tools used to study and/or manipulate nanoscale structures interact with individual atoms or nanoscale particles by means of these forces.

\$500 Answer from Tools and Instrumentation

What are electrical forces?

\$100 Question from Structure of Matter

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\$100 Answer from Structure of Matter

What is a carbon nanotube?



\$200 Question from Structure of Matter



\$200 Answer from Structure of Matter

What is buckminsterfullerene or Buckyball?

\$300 Question from Structure of Matter

These outermost electrons of an atom determine how atoms interact with each other to form molecules or nanoscale structures.

\$300 Answer from Structure of Matter

What are valence electrons?



\$400 Question from Structure of Matter

Nanoscale structure made of chains of Nucleotides that codes for proteins.



\$400 Answer from Structure of Matter

What is DNA?



\$100 Question from Science and Society

The work of these individuals is to describe, explain, and predict the way the world works.



\$100 Answer from Science and Society

What are scientists?



\$200 Question from Science and Society

These individuals design, build, and analyze products that address practical problems.

\$200 Answer from Science and Society

What are engineers?



\$300 Question from Science and Society

The application of scientific knowledge about the behavior of matter at the nanoscale to solve practical problems.



\$300 Answer from Science and Society

What is nanotechnology?



\$400 Question from Science and Society

The number of workers needed world-wide in the field of nanoscale science and engineering by the year 2020.



\$400 Answer from Science and Society

What is seven million?



\$500 Question from Science and Society

Nanotechnology is an interdisciplinary field that interconnects these academic areas.

\$500 Answer from Science and Society

What is chemistry, biology, physics, and engineering?

Final Jeopardy

We can copy how nature has been producing and using “nano” structures in a branch of science called_____



Final Jeopardy Answer

What is biomimetics?

