

# JEOPARDY

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Salts, Acids, and Bases	Chemical Reactions	Scientific Method and Review	Mixtures and Solutions	Atoms and the Periodic Table
Q \$100	Q \$100	Q \$100	Q \$100	Q \$100
Q \$200	Q \$200	Q \$200	Q \$200	Q \$200
Q \$300	Q \$300	Q \$300	Q \$300	Q \$300
Q \$400	Q \$400	Q \$400	Q \$400	Q \$400
Q \$500	Q \$500	Q \$500	Q \$500	Q \$500

Final Jeopardy

## \$100 Question from H1

Reacts with metals and  
produces gas when reacting  
with metals

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\$100 Answer from H1

# Acids

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## \$200 Question from H1

Salts are formed in a \_\_\_\_\_ reaction between an acid and a base?

- A. Neutralization
- B. Molecular
- C. Ionic
- D. Corrosive

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\$200 Answer from H1

A: Neutralization

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## \$300 Question from H1

Shampoo has a pH of 7.5 and it is therefore classified as a(n)?

- A. Salt
- B. Acid
- C. Low pH
- D. Base.

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\$300 Answer from H1

D. Base

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# \$400 Question from H1

Water has a pH of 7, what does this mean?

- A. That water is slightly acidic.
- B. That water is slightly basic
- C. That water is Neutral
- D. That water is highly acidic because the scale is from 0 to 14.

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\$400 Answer from H1

C. That water is neutral

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# \$500 Question from H1

List three characteristics of bases to include: Feel, Taste, reaction to metals, pH range, and the color of litmus paper used and what color that litmus paper



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# \$500 Answer from H1

- 1: Taste: Bitter Taste
2. Feel: Slippery Feel
3. Turn red litmus paper blue.
- 4.pH range from 7.1-14

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# \$100 Question from H2

The law of conservation of mass states that?

- A. The amount of atoms present in the reactants will be greater than that of products.
- B. The amount of atoms present in the reactants will be less than that of the products.
- C. The mass of the atoms present in the reactants is equal to that of the products.
- D. It depends if the reaction is an exothermic or endothermic reaction.

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# \$100 Answer from H2

C. The mass of the atoms present in the reactants is equal to that of the products.

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# \$200 Question from H2

An apple is cut in half and is then left out and begins to turn brown and smell different. What are the chemical changes and physical changes taking place?

- A. Physical change; Apple cut in half : Chemical change; Color change and odor
- B. Physical change: Apple cut in half and color change: Chemical change: Odor produced.
- C. Physical change: Odor Produced: Chemical change: Apple cut in half and color change
- D. Physical change: Odor Produced and Color change: Chemical change: Apple cut in half.

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## \$200 Answer from H2

A. Physical change; Apple cut in half : Chemical change; Color change and odor

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## \$300 Question from H2

The reaction in a fuel cell is used to power cars and other devices. What kind of reaction is this?

- A. Physical Reaction
- B. Molecular Reaction
- C. Endothermic Reaction
- D. Exothermic Reaction

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\$300 Answer from H2

## D. Exothermic Reaction

The car releases energy that the car in  
Turn uses for power.

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## \$400 Question from H2

Identify the Reactants, Products, coefficients, and subscripts in the following chemical equation:



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\$400 Answer from H2

Reactants: White

Products: Red

Coefficients: Yellow

Subscripts: Green



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## \$500 Question from H2

What factors affect the rate of a chemical reaction?

- A. Temperature, Catalysts, Type of Elements used, and Solubility
- B. Surface area, temperature, concentration, the use of catalysts, and inhibitors
- C. Temperature, Length of time, use of inhibitors, and adding more reactant.
- D. Temperature and Concentration.

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# \$500 Answer from H2

B. Surface area,  
temperature,  
concentration, the use  
of catalysts, and  
inhibitors

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## \$100 Question from H3

“All substances are composed of particles called atoms”, is a statement that is an example of?

- A. Scientific Theory
- B. Observation
- C. Inference
- D. Scientific Law

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\$100 Answer from H3

## A. Scientific Theory

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## \$200 Question from H3

You are investigating whether robins prefer one type of bird seed over any other type. Your independent variable is the type of bird seed used. What is the dependent variable?

- A. The amount of bird seed in the feeder.
- B. The number of birds visiting the feeder.
- C. The number of robins visiting the feeder.
- D. The cost of the different types of bird seed..

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*\$200 Answer from H3*

C. The number  
of robins  
visiting the  
feeder.

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## \$300 Question from H3

You are investigating the numbers and types of birds in your neighborhood. If you watch the bird feeder to see which birds appear you are?

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\$300 Answer from H3

Observing

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## \$400 Question from H3

What is the best way to study complicated processes such as studying the solar system or complex traffic patterns.

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\$400 Answer from H3

Build a model

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# \$500 Question from H3

John conducted an experiment that tested various types of plants to see which would have the greatest growth using soil found in his yard. After testing sunflower, bean, tulips, and pumpkin seeds he discovered that sunflower seeds had the best results. His friend Jennie wanted to confirm the results and repeated the experiment again. She is.

- A. Conducting Repeated Trials (Repetition)
- B. Conducting Replication
- C. Formulating a Hypothesis
- D. Observing

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*\$500 Answer from H3*

# B. Conducting Replication

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## \$100 Question from H4

What has no definite shape, but has a definite volume?

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\$100 Answer from H4

Liquid

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**\$200 Question from H4**

Which Diagram represents a mixture?

A.

B.

C.

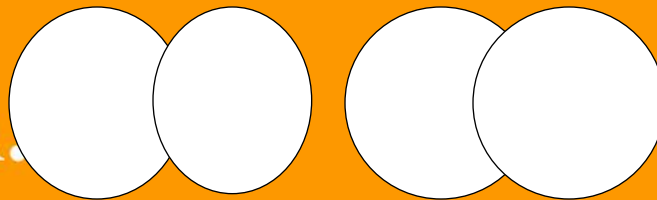
D

E: All of the above

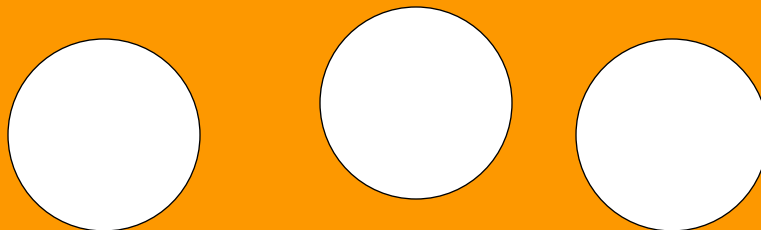
F: Both A & B

G: Both C & D

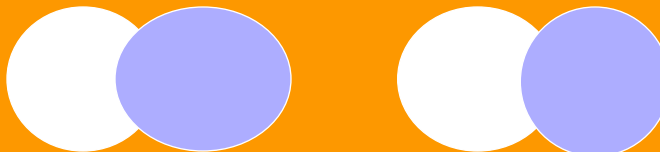
A.



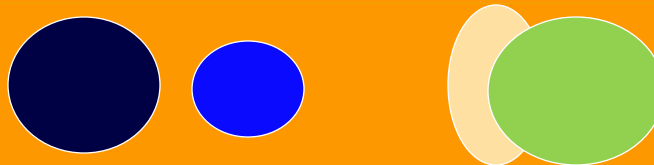
B.



C.



D.



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\$200 Answer from H4

D

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## \$300 Question from H4

Which of the following is not a pure substance

- A. Distilled Water
- B. Oxygen
- C. Air
- D. Carbon Dioxide

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*\$300 Answer from H4*

*C. Air*

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# \$400 Question from H4

Water is mixed ice tea to make a drink. What is the solute, solvent, and when the ice tea is mixed with the water what does it make?

- A. Water is the Solute, Ice Tea is the solvent, The mixture is Heterogeneous
- B. Water is the Solvent, Ice Tea is the solute, The mixture is a solution.
- C. Water is the Solvent, Ice Tea is the solute, The mixture is Heterogeneous
- D. Water is the solute, Ice Tea is the solvent, The mixture is a solution

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**\$400 Answer from H4**

**B. Water is the Solvent,  
Ice Tea is the solute, The  
mixture is a solution.**

Water is what is doing the dissolving (solvent) the tea, whether it is a powder or from tea bags is what is being dissolved (solute), and the mixture is a solution because it is homogeneous and contains at least one solute.

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## \$500 Question from H4

Three sugar cubes are placed in a beaker containing 50 mL of water at 20°C. Which action would speed up the rate at which the sugar cubes dissolve in the water?

- A. Use less water
- B. Transfer the contents to a larger beaker
- C. Cool the water and sugar cubes to 5°C
- D. Heat the contents of the beaker

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*\$500 Answer from H4*

D. Heat the contents of  
the beaker

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## \$100 Question from H5

Which group of elements are most reactive?

- A. Group 18
- B. Group 2
- C. Group 1
- D. Group 17

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*\$100 Answer from H5*

*C. Group 1*

*Return to Board*

## \$200 Question from H5

The ion  $\text{Na}^+$  is most likely to bond with?

- A. Ar
- B. Cl
- C. Mg.
- D. K

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*\$200 Answer from H5*

*B. C1*

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# \$300 Question from H5

A balloon filled with air does not rise as high as a balloon filled with helium. What can you conclude?

- A. Helium is more dense than air.
- B. Helium is less dense than air.
- C. Both have the same density.
- D. If more helium is added then it would be more dense.

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*\$300 Answer from H5*

B. Helium is Less Dense  
Than Air

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## \$400 Question from H5

Two elements bond together and the new compound is a crystalline solid, has a high melting point and can conduct electricity when dissolved in water. What type of compound is this?

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\$400 Answer from H5

# Ionic Compound

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## \$500 Question from H5

What would the chemical formula be when Calcium and Phosphorus are combined?

- A. CaP.
- B.  $\text{CA}_3\text{P}_2$ .
- C.  $\text{Ca}_2\text{P}_3$
- D.  $\text{Ca}_3\text{P}_2$ .

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\$500 Answer from H5

D.  $\text{Ca}_3\text{P}_2$ .

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# Final Jeopardy

Which of the following chemical equations supports the law of conservation of mass?

- A.  $\text{Na}_2\text{SO}_4 + \text{CaCl}_2 \rightarrow \text{CaSO}_4 + \text{NaCl}$
- B.  $\text{Na}_2\text{SO}_4 + 2\text{CaCl}_2 \rightarrow \text{CaSO}_4 + 2\text{NaCl}$
- C.  $2\text{Na}_2\text{SO}_4 + \text{CaCl}_2 \rightarrow \text{CaSO}_4 + 2\text{NaCl}$
- D.  $\text{Na}_2\text{SO}_4 + \text{CaCl}_2 \rightarrow \text{CaSO}_4 + 2\text{NaCl}$



# Final Jeopardy Answer

