# Let's Be The Judge (Elem)

*Gallery walk of questions with incorrect and correct answers.*
*Determine if right/wrong and why.*

**Prep:**

1. Chose a concept or standard(s) you want students to review.
2. Select 8-10 examples of questions with correct and incorrect responses..
3. Post each question and selected response for students to examine on chart paper or in area of the room and number them. Another option is to place each question/selected response on a Jamboard page.
4. Place students in groups of 3-4.
5. Provide students with a "Judge's Log" as they go through each question.

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# Let's Be The Judge

**Directions:**

1. You will start at a question with your group.
2. Together, read the question and the response given. Discuss if the response is correct or incorrect and justify your answer aloud.
3. Once there is group agreement, record you decision in the numbered box corresponding to the question on your "Judge's Log".
4. When the teacher directs you, your group will move to the next question and repeat the process.

***Be prepared to share your Judge's Log with other group members or the whole class at the end of the activity.***

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# Judge's Log

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Name: _____ Team Members: _____

#1

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#2

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#3

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#4

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

# Judge's Log

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Name: _____ Team Members: _____

#5

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#6

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#7

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#8

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

# Judge's Log

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Name: _____ Team Members: _____

#9

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

#10

Correct or Incorrect: _____

Why or why not?

If incorrect, what is a correct response?

# Let's Be The Judge

Example:

- Concept: Properties of Matter
- **TEKS: 5.5A** - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy. **TEKS: 5.5B** - demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water. **TEKS: 5.5C** - identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.
- The next 10 slides are questions/responses.
- The final 10 slides are the answers with TEKS.

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# Question 1

A student prepared a snack that consisted of grapes, pecans, and strawberries sprinkled with white powdered sugar. The student stored the snack in a refrigerator. An hour later the student observed that the powdered sugar could no longer be seen but the fruit and nuts had not changed in appearance.

What most likely happened to the sugar in the mixture?

## Response:

The sugar evaporated at the lower temperature in the refrigerator without causing any changes to the fruit and nuts.

## Correct? Incorrect? Why or why not?

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# Question 2

Students investigate the physical properties of some substances. They draw a table to show how the substances can be grouped. The students need to complete the table with column headings.

Physical Properties of Substances

| ? | ? | ? |
|---|---|---|
| • Aluminum foil<br>• Brass key<br>• Gold ring | • Cooking oil<br>• Soap bubble<br>• Wood chip<br>• Feather | • Baking soda<br>• Drink mix<br>• White sugar |

Which column headings should the students use for their table?

## Response:

| Good Conductors of Electrical Energy | Less Dense than Water | Soluble in Water |
|---|---|---|

## Correct? Incorrect? Why or why not?

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# Question 3

A student mixes a sample of stones with a sample of table salt. The mass and volume of the samples were determined before mixing the samples. The mass and volume of each sample is shown.

| Material | Grams (g) | Milliliters (mL) |
|---|---|---|
| Stones | 45 | 25 |
| Salt | 40 | 35 |

## Response:

The mass of the mixture is 85 grams.

## Correct? Incorrect? Why or why not?

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# Question 4

A student filled each of four beakers with 100 mL of water at 25 °C. The student added an equal amount of a different substance to each of the beakers of water.

Student Investigation

| Substance | Appearance | Observations When Stirring | Observations After Stirring Stopped |
|---|---|---|---|
| Iron filings | Silvery gray | Particles swirling around | Particles settled to bottom of beaker |
| Papain | White powder | Cloudy changing to clear | Clear; no visible particles |
| Talcum powder | White powder | Floating on surface in clumps | Collected on beaker walls above liquid |
| Vegetable oil | Yellow liquid | Oil in clumps moving around | Formed a layer on top of water |

Based on the student's observations in the table, how many of the substances did NOT dissolve in the water?

## Response:

4 substances

## Correct? Incorrect? Why or why not?

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# Question 5

Students conduct an investigation with breakfast cereal. The first four steps of the students' investigation are in the table shown.

Breakfast Cereal Investigation

| |
|---|
| 1. Grind 50 grams of cereal into a fine powder. |
| 2. Stir the cereal powder into 500 milliliters of warm water. |
| 3. Hold a magnet against the side of the beaker at the 250-milliliter mark. |
| 4. Stir the mixture for three minutes. |

The students are trying to determine the presence of which substance in the cereal?

## Response:

Sugar

Correct? Incorrect? Why or why not?

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# Question 6

A student wants to classify four different objects based on physical properties. The student uses the questions shown in the table to test each object.

| Materials | Physical Properties | | |
|---|---|---|---|
| | Insulate Thermal Energy? | Float in Water? | Conduct Electrical Energy? |
| 1 | Yes | No | No |
| 2 | No | No | Yes |
| 3 | Yes | Yes | No |
| 4 | No | No | Yes |

Materials

Aluminum washer

Copper wire

Rubber ball

Piece of cardboard

Which statement correctly identifies two of the materials based on the classification of properties in the table?

## Response:

Material 2 is an aluminum washer.
Material 3 is a copper wire.

## Correct? Incorrect? Why or why not?

# Question 7

A student pours 14 grams of sugar into a jar filled with 500 milliliters of water. The student thoroughly stirs the sugar and water to make a solution.

Which change most likely occurs to the sugar when it is added to the water?

Response:

The sugar changes water into a new substance in the solution.

Correct? Incorrect? Why or why not?

# Question 8

A table of different properties of four samples of matter is shown.

| Sample | Conducts Electricity | Conducts Heat | Soluble in Water | Physical State at Room Temperature |
|---|---|---|---|---|
| 1 | No | No | Yes | Solid |
| 2 | Yes | Yes | No | Solid |
| 3 | No | Yes | Yes | Liquid |
| 4 | Yes | Yes | No | Liquid |

Which conclusion can be made about the samples based on the table?

## Response:

Sample 1 is made of plastic.

Correct? Incorrect? Why or why not?

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# Question 9

The table lists the ingredients of five different mixtures.

Mixtures and Their Ingredients

| Mixture | Ingredients |
|---|---|
| 1 | Salt, hot water, sand |
| 2 | Sugar, hot water, salt |
| 3 | Iron filings and sand |
| 4 | Pebbles, wood chips, soil |
| 5 | Powdered soap and hot water |

In which mixtures do all the ingredients maintain their physical state?

## Response:

Mixtures 3 and 4 only

## Correct? Incorrect? Why or why not?

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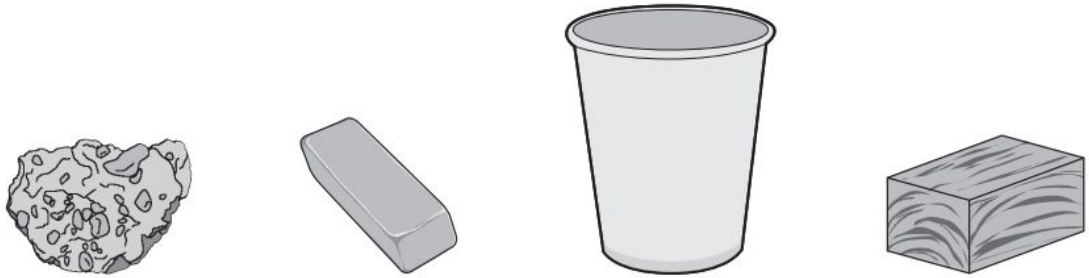
# Question 10

A student compares the physical properties of the four objects shown.



Rock | Rubber eraser | Paper cup | Wooden block

Which of these physical properties do all four objects have in common?

## Response:

They all attract the same metal objects and are not soluble in water.

## Correct? Incorrect? Why or why not?

# Let's Be The Judge
# Answer Key

# Question 1

A student prepared a snack that consisted of grapes, pecans, and strawberries sprinkled with white powdered sugar. The student stored the snack in a refrigerator. An hour later the student observed that the powdered sugar could no longer be seen but the fruit and nuts had not changed in appearance.

What most likely happened to the sugar in the mixture?

## Response:

The sugar evaporated at the lower temperature in the refrigerator without causing any changes to the fruit and nuts.

## Correct Response:

The sugar dissolved in the moisture on the fruit.

**TEKS: 5.5C** - identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water

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# Question 2

Students investigate the physical properties of some substances. They draw a table to show how the substances can be grouped. The students need to complete the table with column headings.

Physical Properties of Substances

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| • Aluminum foil<br>• Brass key<br>• Gold ring | • Cooking oil<br>• Soap bubble<br>• Wood chip<br>• Feather | • Baking soda<br>• Drink mix<br>• White sugar |

Which column headings should the students use for their table?

## Response:

| | | |
|---|---|---|
| Good Conductors of Electrical Energy | Less Dense than Water | Soluble in Water |

## Correct Response:

What is listed above is correct..

TEKS: 5.5A - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy

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# Question 3

A student mixes a sample of stones with a sample of table salt. The mass and volume of the samples were determined before mixing the samples. The mass and volume of each sample is shown.

| Material | Grams (g) | Milliliters (mL) |
|---|---|---|
| Stones | 45 | 25 |
| Salt | 40 | 35 |

Response:

The mass of the mixture is 85 grams.

**Correct Response:**
The mass of the mixture is 85 grams.

**TEKS: 5.5B** - demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water

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# Question 4

A student filled each of four beakers with 100 mL of water at 25 °C. The student added an equal amount of a different substance to each of the beakers of water.

Student Investigation

| Substance | Appearance | Observations When Stirring | Observations After Stirring Stopped |
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| Iron filings | Silvery gray | Particles swirling around | Particles settled to bottom of beaker |
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| Talcum powder | White powder | Floating on surface in clumps | Collected on beaker walls above liquid |
| Vegetable oil | Yellow liquid | Oil in clumps moving around | Formed a layer on top of water |

Based on the student's observations in the table, how many of the substances did NOT dissolve in the water?

## Response:

4 substances

## Correct Response:

3 substances

TEKS: 5.5A - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy

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| |
|---|
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| 2. Stir the cereal powder into 500 milliliters of warm water. |
| 3. Hold a magnet against the side of the beaker at the 250-milliliter mark. |
| 4. Stir the mixture for three minutes. |

The students are trying to determine the presence of which substance in the cereal?

## Response:

Sugar

## Correct Response:

Iron

TEKS: 5.5B - demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water

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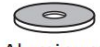
# Question 6

A student wants to classify four different objects based on physical properties. The student uses the questions shown in the table to test each object.

| Materials | Physical Properties | | |
|---|---|---|---|
| | Insulate Thermal Energy? | Float in Water? | Conduct Electrical Energy? |
| 1 | Yes | No | No |
| 2 | No | No | Yes |
| 3 | Yes | Yes | No |
| 4 | No | No | Yes |

Materials


Aluminum washer


Copper wire


Rubber ball


Piece of cardboard

Which statement correctly identifies two of the materials based on the classification of properties in the table?

## Response:

Material 2 is an aluminum washer. Material 3 is a copper wire.

## Correct Response:

Material 3 is a piece of cardboard. Material 4 is an aluminum washer.

TEKS: 5.5A - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy

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# Question 7

A student pours 14 grams of sugar into a jar filled with 500 milliliters of water. The student thoroughly stirs the sugar and water to make a solution.

Which change most likely occurs to the sugar when it is added to the water?

**Response:**

The sugar changes water into a new substance in the solution.

**Correct Response:**
The sugar completely dissolves in the solution.

**TEKS: 5.5C** - identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water

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# Question 8

A table of different properties of four samples of matter is shown.

| Sample | Conducts Electricity | Conducts Heat | Soluble in Water | Physical State at Room Temperature |
|---|---|---|---|---|
| 1 | No | No | Yes | Solid |
| 2 | Yes | Yes | No | Solid |
| 3 | No | Yes | Yes | Liquid |
| 4 | Yes | Yes | No | Liquid |

Which conclusion can be made about the samples based on the table?

## Response:

Sample 1 is made of plastic.

## Correct Response:

Sample 2 is made of metal.

TEKS: 5.5A - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy

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| 3 | Iron filings and sand |
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| 5 | Powdered soap and hot water |

In which mixtures do all the ingredients maintain their physical state?

## Response:

Mixtures 3 and 4 only

## Correct Response:

Mixtures 3 and 4 only

TEKS: 5.5B - demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water

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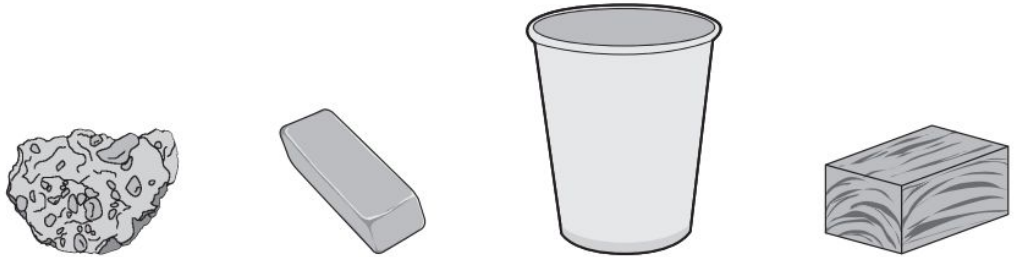
# Question 10

A student compares the physical properties of the four objects shown.



Rock | Rubber eraser | Paper cup | Wooden block

Which of these physical properties do all four objects have in common?

## Response:

They all attract the same metal objects and are not soluble in water.

## Correct Response:

They all are not soluble in water and have the same physical state.

TEKS: 5.5A - classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy

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