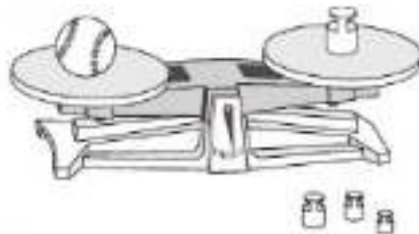


Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Science Test Chapter 5: Comparing Kinds of Matter**

1. This instrument is used to measure the baseball's



- a) weight
- b) volume
- c) mass
- d) density

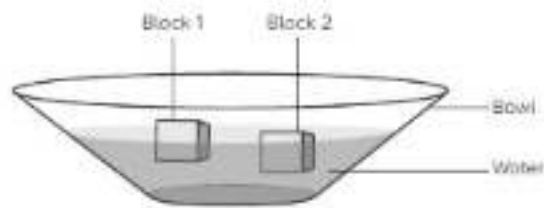
2. Yousef is comparing the density of a block of wood to the density of a block of lead.



Which can Yousef conclude?

- a) The density of the block of lead is greater.
  - b) The density of the block of wood is greater.
  - c) The objects' densities cannot be determined.
  - d) Both objects have the same density.
3. Which test could a student do to determine if an object is a metal?
- a) Add it to hydrochloric acid to see if it reacts.
  - b) Scratch it on glass to see if it leaves a mark.
  - c) Pound it with a hammer to see if it bends.
  - d) Place it in water to see if it sinks.

4. Study the picture below.



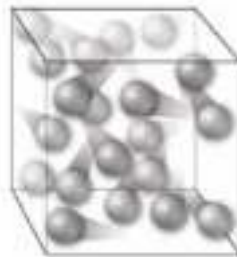
What can you conclude about the blocks in the water?

- a) The density of block 1 is greater than the density of block 2.
- b) The density of block 2 is greater than the density of block 1.
- c) Both blocks have the same density.
- d) Block 1 is denser than water.

5. A copper coin would best be classified as a \_\_\_\_\_.

- a) molecule
- b) metal
- c) non-metal
- d) metalloid

6. Study the picture below.



In which state of matter are particles farthest apart?

- a) gas
- b) liquid
- c) atom
- d) solid

7. Which has a negative charge?

- a) proton
- b) nucleus
- c) nitrogen
- d) electron

8. The drawing below shows a water molecule. The arrow is pointing to a(n)



- a) electron
- b) atom
- c) proton
- d) nucleus

9. Scientists can use a scanning tunnelling microscope to

- a) change the density of an object.
- b) form new elements.
- c) measure an object's weight.
- d) study the shape of a water molecule.

10. The chemical formula for carbon dioxide is  $\text{CO}_2$ . Is carbon dioxide an element? \_\_\_\_\_

Explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Science Test Chapter 5: Comparing Kinds of Matter**

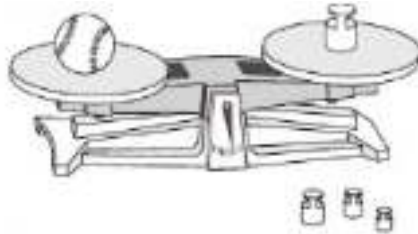
**Vocabulary Matching**

Word		Definition
1. Density	d	a. Anything that has mass and volume.
2. Atom	c	b. A material that cannot be broken down into anything simpler by chemical reaction.
3. Matter	a	c. The smallest unit of an element that retains the properties of that element.
4. Semiconductor	e	d. The amount of mass for each cm <sup>3</sup> (mL) of a substance $\frac{\text{mass}}{\text{volume}}$
5. Element	b	e. A material that conducts electricity better than a non-metal, but not as well as a metal.

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Science Test Chapter 5: Comparing Kinds of Matter**

1. This instrument is used to measure the baseball's



- a) weight
- b) volume
- c) mass
- d) density

2. Yousef is comparing the density of a block of wood to the density of a block of lead.



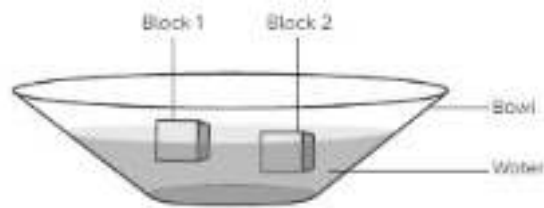
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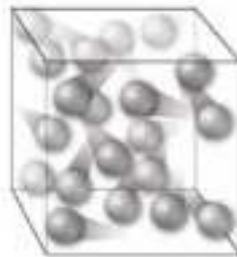
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In which state of matter are particles farthest apart?

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- c) atom
- d) solid

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- a) proton
- b) nucleus
- c) nitrogen
- d) electron

8. The drawing below shows a water molecule. The arrow is pointing to a(n)



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- a) change the density of an object.
- b) from new elements.
- c) measure an object's weight.
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10. The chemical formula for carbon dioxide is  $\text{CO}_2$ . Is carbon dioxide an element? \_\_\_\_\_

Explain. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Science Test Chapter 5: Comparing Kinds of Matter**

**Vocabulary Matching**

Word	Definition
1. Density <b>d</b>	<b>a.</b> Anything that has mass and volume.
2. Atom <b>c</b>	<b>b.</b> A material that cannot be broken down into anything simpler by chemical reaction.
3. Matter <b>a</b>	<b>c.</b> The smallest unit of an element that retains the properties of that element.
4. Semiconductor <b>e</b>	<b>d.</b> The amount of mass for each cm <sup>3</sup> (mL) of a substance $\frac{\text{mass}}{\text{volume}}$
5. Element <b>b</b>	<b>e.</b> A material that conducts electricity better than a non-metal, but not as well as a metal.

## Science Quiz 2

Question 1: The smallest particle of an element that has the properties of that element is a/an \_\_\_\_\_:

- a.) proton
- b) atom
- c) electron
- d) molecule

Question 2: A material that cannot be broken down into anything simpler by chemical reactions is a/an \_\_\_\_\_:

- a) element
- b) atom
- c) metals
- d) liquids

Question 3: \_\_\_\_\_ are particles with more than one atom joined together

- a) nucleus
- b) metals
- c) protons
- d) molecules

Question 4: Which element is most likely to conduct heat and electricity?

- a) nitrogen
- b) oxygen
- c) helium
- d) aluminium

Question 5: What are the building blocks of matter? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Science Quiz 1

Question 1: One of the properties that describe how strongly gravity pulls on an object is:

- a) mass
- b) weight
- c) volume
- d) matter

Question 2: Which property measures the space taken up by an object?

- a) mass
- b) weight
- c) volume
- d) hardness

Question 3: Which of the following may have the lowest density?

- a) liquid mercury
- b) weight
- c) volume
- d) mass

Question 4: A rock is a

- a) solid
- b) liquid
- c) gas
- d) volume

Question 5: A state of matter that has a definite shape?

- a) a marble
- b) water
- c) gas
- d) oxygen

NAME: ----- CLASS: 5 \_\_\_\_ DATE: \_\_\_\_ / \_\_\_\_ / 2019

**Science Quiz: Chapter 5: Week 1**

Circle one of the correct answer.

Question 1: One of the properties that describe how strongly gravity pulls on an object is:

- |           |           |
|-----------|-----------|
| a) mass   | b) weight |
| c) volume | d) matter |

Question 2: Which property measures the space taken up by an object?

- |           |             |
|-----------|-------------|
| a) mass   | b) weight   |
| c) volume | d) hardness |

Question 3: Which of the following may have the lowest density?

- |                   |           |
|-------------------|-----------|
| a) liquid mercury | b) weight |
| c) volume         | d) mass   |

Question 4: A rock is a

- |          |           |
|----------|-----------|
| a) solid | b) liquid |
| c) gas   | d) volume |

Question 5: A state of matter that has a definite shape?

- |             |           |
|-------------|-----------|
| a) a marble | b) water  |
| c) gas      | d) oxygen |

Name: ----- Class: 5 \_\_\_\_ Date: \_\_\_\_/1/2019

## **Science Quiz 2**

**Question 1:** The smallest particle of an element that has the properties of that element is a/an \_\_\_\_\_:

- |             |             |
|-------------|-------------|
| a.) Proton  | b) Atom     |
| c) Electron | d) Molecule |

**Question 2:** A material that cannot be broken down into anything simpler by chemical reactions is a/an \_\_\_\_\_:

- |            |            |
|------------|------------|
| a) Element | b) Atom    |
| c) Metals  | d) Liquids |

**Question 3:** \_\_\_\_\_ are particles with more than one atom joined together.

- |            |              |
|------------|--------------|
| a) Nucleus | b) Metals    |
| c) Protons | d) Molecules |

**Question 4:** Which element is most likely to conduct heat and electricity?

- |             |              |
|-------------|--------------|
| a) Nitrogen | b) Oxygen    |
| c) Helium   | d) Aluminium |

**Question 5:** The chart in which all the elements are organised is called -----.

- |                   |              |
|-------------------|--------------|
| a) Atomic Number  | b) Symbol    |
| c) Periodic Table | d) Metalloid |

**Question 6:** The symbol for aluminium is -----?

- |       |       |
|-------|-------|
| a) N  | b) O  |
| c) He | d) Al |

**Question 7:** The formula for water is -----?

- |                    |                     |
|--------------------|---------------------|
| a) CO <sub>2</sub> | b) O <sub>2</sub>   |
| c) H <sub>2</sub>  | d) H <sub>2</sub> O |

**Question 8:** What are the building blocks of matter? Give examples. (3)

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-----

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**Ministry Of Education**

**Al Mutanabi School**

**Grade 5**

**Sample Test**

**Prepared by Teacher**

**Ibrahim Ali**

**Mohammad Surwar**

## Reading

### Part 1

Read the paragraph and then answer the questions. The first one is an example.

Oman is to the south of the UAE. The capital, Muscat, is on the north coast of the country and it is the biggest city. Muscat has a population of about 1.3 million. It is a beautiful city with great history, lovely buildings and a warm welcome for those who visit.

If you are planning to visit Muscat, a good time to go is in January when the weather is good. During this month, it is nicer than in the summer. In the summer, it is hotter and more humid than the other months of the year.

Traffic in Muscat is lighter than other Gulf cities, but the best way to travel around is either to walk or to use the bus service, which is faster and the cheapest way to travel.

Finally, don't leave Muscat without going to Sultan Qaboos Grand Mosque with its amazing chandelier and beautiful architecture.

**Example:** Muscat \_\_\_\_.

- A has tall buildings.
- B **has great history.**
- C is not very beautiful.

1. Which title best describes the text?
  - A Muscat: The Capital of Oman

**B** Oman: A Beautiful Country

**C** The Amazing Chandelier of the Grand Mosque

**2.** Why is it better to visit Muscat in January?

**A** It is hotter.

**B** It is more humid.

**C** The weather is good.

**3.** The traffic in Muscat is \_\_\_\_\_ other Gulf cities.

**A** heavier than

**B** lighter than

**C** as heavy as

**4.** The best way to travel around in Muscat is \_\_\_\_.

**A** to walk or use the bus

**B** to walk or use a taxi

**C** to use a taxi

**5.** A tourist must visit the Grand Mosque because \_\_\_\_.

**A** it is old

**B** the chandelier is expensive

**C** it has beautiful architecture

### Part 2

Read the text and decide if each statement is True or False. There is one example.

#### **Sir Steve Redgrave**

Sir Steve Redgrave is a very famous person from Britain. He was an amazing rower. He was so good that he won gold medals in five Olympic Games. This happened from 1984 to 2000. Sir Steve won three gold medals in the Commonwealth Games, too. He also won nine gold medals in the World Rowing Championships.

In 2001, Sir Steve Redgrave met the Queen of England in Buckingham Palace for the first time. In 2002, Sir Steve was number 26 in the BBC list of the greatest British people ever. In 2006, he took part in the London Marathon and finished it. He wanted to collect money to help people who needed it. He collected more than one million pounds. With this money he helped a lot of poor people. In 2011, he got the BBC Sports Personality of the Year for all the amazing things he did in his sporting life.

**Example:** Sir Steve Redgrave won five gold medals in the World Rowing Championships.

A. True

☒ B. False

**6** Sir Steve Redgrave was a rower.

A. True

B. False

**7.** The last time Sir Steve Redgrave won a gold medal in the Olympics was the year 2000.

A. True

B. False

**8.** Sir Steve Redgrave met the Queen of England for the first time in 2002.

A. True

B. False

**9.** Sir Steve ran in the London Marathon in 2006 to help poor people.

A. True

B. False

**10.** For all the amazing things Sir Steve has done in his sports life, he got the BBC Sports Personality of the Year.

A. True

B. False

### Part 3

Read the text and answer with **ONE or TWO words**. There is one example.

#### The Concorde

Back in the 60s, Britain and France wanted to make a supersonic airplane. A “supersonic” airplane is one that travels faster than sound. It's name is Concorde.

The first Concord flight happened on October 1, 1969 and it was a test. People started to use it for every day travelling in 1976. On January 21 that year, the British flew from London to Bahrain. The same day the French flew from Paris to Rio de Janeiro.

The Concorde was so fast that going from London to New York took only about three and a half hours. A normal flight took more than double the time, eight hours.

The Concorde could carry 100 passengers. Passengers are the travelers flying on an airplane. The Concorde had two pilots. It had an engineer, too. There were also six people to serve food and drinks to passengers. These six people were are called cabin crew.

## Notes about the

**Concorde Example:** The Concorde first

flew in 1969.

11. Britain and \_\_\_\_\_ created the Concorde.
12. On January 21, 1976 the British flew from \_\_\_\_\_ to Bahrain.
13. Before the Concorde, a flight from London to New York was \_\_\_\_\_ hours.
14. The Concorde could carry 100 \_\_\_\_\_.
15. There was a \_\_\_\_\_ of 6 people on the plane.

## Writing

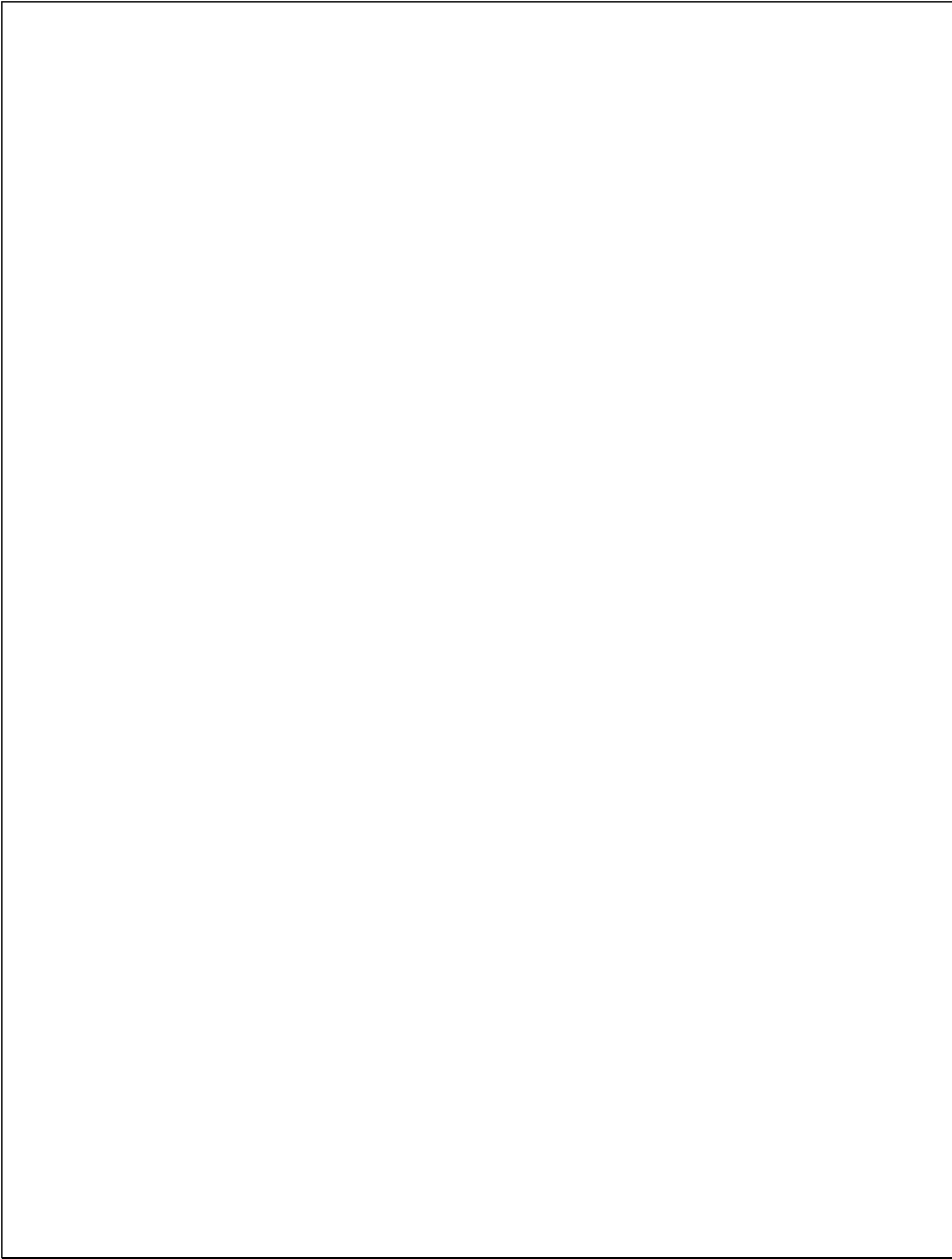
Write an email to your best friend. Tell him/her about a place you have visited.

Say:

- Where you went
- Who you went there with
- Whether you liked it or not

**Write 50-60 words.**

[illegible]



Name: \_\_\_\_\_ Grade 5 \_\_\_\_ Date: \_\_\_\_\_

**Exam: Chapter 8; Using Energy (Sound and Light)**

**Section A: Multiple Choice**

1. What is a vibration?
  - a) A back-and-forth motion that produces sound
  - b) A bouncing motion
  - c) A large wave
  
2. When the bell of an alarm clock vibrates, it causes
  - a) An explosion
  - b) Nearby air particles to move
  - c) Solids to move
  
3. A wave that transfers sound through matter is a
  - d) Sound wave
  - e) Radio wave
  - f) Radio frequency
  
4. Sound waves travel through
  - a) Solids, liquids and gases
  - b) Solids only
  - c) Gases only
  
5. A sound that bounces off a surface is an
  - a) Shout
  - b) Echo
  - c) Solid

**Section B: True or False - put a tick ✓ in the correct column**

	True	False
<b>A tiny bundle of energy by which light travels is called a photon.</b>		
<b>A perceptual quality that distinguishes between high and low frequency waves is called pitch</b>		
<b>Volume is the strength or weakness of a sound.</b>		
<b>When you look in a mirror, you see an image of yourself.</b>		
<b>Refraction is a straight wave passing from one substance (medium) to another.</b>		
<b>Bats and Dolphins use echolocation like SONAR to find food.</b>		

**(6)**

Answer the following questions in full sentences.

1. Do you think there is sound in outer space? Explain your answer.

---



---



---

**(2)**

2. Why should you avoid wearing black clothing on a hot, sunny day?

---



---



---

**(2)**

Section C: Answer the following questions. Use the words in the box to help you.

**Energy, Prism, Bend, Visible spectrum, Denser, Transparent, Concave, Convex, Refract, Scatters**

1. Light is a form of \_\_\_\_\_ we detect with our eyes.
2. A tool used to separate white light into different colors is a(n) \_\_\_\_\_.
3. The colors that make up white light are called the \_\_\_\_\_.
4. Light rays \_\_\_\_\_ as they pass from one material to another.
5. Light travels more slowly through \_\_\_\_\_ materials.
6. A lens is a tool used to \_\_\_\_\_, or bend light.
7. A lens that bend light outward, making objects look smaller, is called a(n) \_\_\_\_\_ lens. A lens that bends light toward its center, making objects look bigger, is called a(n) \_\_\_\_\_ lens.
8. Opaque material blocks light, \_\_\_\_\_ material allows light to pass through, and *translucent* material allows some light to pass through but \_\_\_\_\_ it in different directions.

(10)

Total marks: 25

Name: \_\_\_\_\_ Grade 5 \_\_\_\_ Date: \_\_\_\_\_

Section A: Multiple Choice

1. What is a vibration?

- A bouncing motion
- A large wave
- A back-and-forth motion that produces sound

2. When the bell of an alarm clock vibrates, it causes

- Nearby air particles to move
- An explosion
- Solids to move

3. A wave that transfers sound through matter is a

- Radio wave
- Sound wave
- Radio frequency

4. Sound waves travel through

- Solids, liquids and gases
- Solids only
- Gases only

5. A sound that bounces off a surface is an

- Shout
- Solid
- Echo

**Section B: True or False - put a tick ✓ in the correct column**

	True	False
A tiny bundle of energy by which light travels is called a photon.	✓	
A perceptual quality that distinguishes between high and low frequency waves is called pitch	✓	
Volume is the highness or lowness of a sound Confusing with terms strength and weakness	✓	
When you look in a mirror, you see an Image of yourself.	✓	
Refraction is a straight wave passing from one substance to another.		✓
Bats and Dolphins use echolocation to find food.	✓	

(6)

Answer the following questions in full sentences.

1. Do you think there is sound in outer space? Explain your answer.

Possible answer: **Sound waves are moving particles of matter. If there is no air in outer space, there is no sound. Therefore, Sound cannot travel through empty outer space.**

(2)

2. Why should you avoid wearing black clothing on a hot, sunny day?

Possible answer: Dark colors absorb most of the light that falls on them. Wearing black clothing would make a person feel hotter because the color will absorb more light.

(2)

Section C: Answer the following questions. Use the words in the box to help you.

energy	prism	bend	visible spectrum
	bend	denser	

1. Light is a form of energy we detect with our eyes.
2. A tool used to separate white light into different colors is a(n) prism.
3. The colors that make up white light are called the visible spectrum.
4. Light rays bend as they pass from one material to another.
5. Light travels more slowly through denser materials.
6. A lens is a tool used to refract, or bend light.
7. A lens that bend light outward, making objects look smaller, is called a(n) concave lens. A lens that bends light toward its center, making objects look bigger, is called a(n) convex lens.
8. Opaque material blocks light, transparent material allows light to pass through, and translucent material allows some light to pass through but scatters it in different directions.

(10)

**Total Marks: 25**

Name: \_\_\_\_\_ Grade 5 \_\_\_ Date: \_\_\_\_\_

**Exam: Chapter 9: Minerals, Rocks and Soil**

**Section A: True or False - put a tick ✓ in the correct column**

	True	False
Minerals are solid materials made underground naturally.		
All mineral are of same color and do not make different streaks.		
Changing of rocks over time from one type to another type is called the rock cycle.		
There are only two types of rocks which are sedimentary and igneous rocks.		
Humus is the part of the soil which is made up of decayed organic materials.		
The protection of natural resources including soil is called conservation.		

(6)

**Section B: Multiple Choices**

1. The Sheikh Zayed mosque is built using?  
a) Blue Marble B) White marble C) Brown marble
2. From which material does an intrusive rock form?  
a) Magma B) Lava C) Limestone
3. Which property describe minerals that beak along smooth surfaces?  
A) Fracture B) Hardness C) Cleavage

(3)

- 4- List at least 2 properties of minerals.

1) \_\_\_\_\_

2) \_\_\_\_\_ (2)

**Section C:** Fill in the blanks. Questions are linked to the clues about the different types of rocks. Use each word in the box twice.

**Igneous x2**

**Sedimentary x2**

**Metamorphic x2**

1. \_\_\_\_\_ This rock is made from melted rocks.
2. \_\_\_\_\_ This rock is formed in layers.
3. \_\_\_\_\_ This rock is changed by heat and pressure.

4. \_\_\_\_\_ This rock may be formed from lava.
5. \_\_\_\_\_ Fossils are often found in this rock.
6. \_\_\_\_\_ Marble and Slate are example of this rock.

(6)

**Section D:** Following questions are about the soil and its properties.

*Write the names of the soils by looking at the pictures and descriptions.*

**(Chose the word from this word bank: Sand, Clay, Humus)**



Sticky and  
waterlogged.



Thin  
and dry.



Made up of  
rotting plants.

1-

2-

3-

**Label the following layers of soil.**



1-

2-

3-

4-

5-

**Choose from  
these words.**

**Bedrock**

**Topsoil**

**Humus**

**Subsoil**

**Parent material**

(8)

**Total marks: 25**

Name: \_\_\_\_\_ Grade 5 \_\_\_ Date: \_\_\_\_\_

## Exam: Chapter 9: Minerals, Rocks and Soil

### Section A: True or False - put a tick ✓ in the correct column

	True	False
Minerals are solid materials made underground naturally.	✓	
All mineral are of same color and do not make different streaks.		✓
Changing of rocks over time from one type to another type is called the rock cycle.	✓	
There are only two types of rocks which are sedimentary and igneous rocks.		✓
Humus is the part of the soil which is made up of decayed organic materials.	✓	
The protection of natural resources including soil is called conservation.	✓	

(6)

### Section B: Multiple Choices

- The Sheikh Zaqyed mosque is built using?  
a) Blue Marble B) **White marble** C) Brown marble
- From which material does an intrusive rock form?  
a) **Magma** B) Lava C) Limestone
- Which property describe minerals that beak along smooth surfaces?  
A) Fracture B) Hardness C) **Cleavage**

(3)

4- List at least 2 properties of minerals.

Any 2 properties from color, hardness, cleavage, density, streak or luster

Section C: Fill in the blanks. Questions are linked to the clues about the different types of rocks. Use each word in the box twice.

<b>Igneous x2</b>	<b>Sedimentary x2</b>	<b>Metamorphic x2</b>
-------------------	-----------------------	-----------------------

- \_\_\_igneous\_\_\_ This rock is made from melted rocks.
- \_\_\_sedimentary\_\_\_ This rock is formed in layers.
- \_\_\_metamorphic\_\_\_ This rock is changed by heat and pressure.
- \_\_\_igneous\_\_\_ This rock may be formed from lava.

5. \_\_\_\_\_sedimentary\_\_\_\_\_ Fossils are often found in this rock.  
6. \_\_\_\_\_metamorphic\_\_\_\_\_ Marble and Slate are example of this rock.

(6)

**Section D:** Following questions are about the soil and its properties.

*Write the names of the soils by looking at the pictures and descriptions.*

(Chose the word from this word bank: Sand, Clay, Humus)



Sticky and  
waterlogged.

1- clay



Thin  
and dry.

2- sand



Made up of  
rotting plants.

3- humus

**Label the following layers of soil.**



1- humus

2- top soil

3- subsoil

4- parent material

5- bedrock

**Choose from  
these words.**

Bedrock

Topsoil

Humus

Subsoil

Parent material

(8)

**Total marks: 25**

Name: \_\_\_\_\_ Grade 5 \_\_\_\_\_ Date: \_\_\_\_\_

**Chapter 9: Minerals, Rocks and Soil**  
**Section A: Multiple Choice**

1. Which mineral property describes how easily a mineral can be scratched? (2 points)
  - a) streak
  - b) cleavage
  - c) hardness
  
2. All are changes that happen in the rock cycle EXCEPT \_\_\_\_\_. (2 points)
  - a) igneous rock → sediments
  - b) magma → sedimentary rock
  - c) sediments → sedimentary rock
  
3. Which properties are most helpful in identifying minerals? (2 points)
  - a) size and ability to float
  - b) weight and shape
  - c) luster and streak
  
4. What causes an igneous rock to change into a metamorphic rock? (2 points)
  - a) heat and pressure
  - b) weathering and erosion
  - c) compaction and cementation
  
5. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property? (2 points)
  - a) color
  - b) streak
  - c) hardness
  
6. Write the name of the rock group in each space. (3 points)

igneous

metamorphic

sedimentary

Rock Group	Characteristics
a.) _____	Forms when rocks are exposed to heat and pressure
b.) _____	Forms as melted rock cools and hardens
c.) _____	Forms when pieces of rocks and minerals are cemented together

7. Study the table.

Copper has a hardness of 3.  
Which minerals would copper most likely scratch?

- a.) gypsum and talc
- b.) apatite and diamond
- c.) feldspar and quartz

Mohs' Hardness Scale	
Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
9	corundum
10	diamond

(2 points)

Section B: Use the words in the box to complete the sentence. (1 point each)

<u>hardness</u>	<u>igneous</u>	<u>luster</u>	<u>mineral</u>
<u>rock cycle</u>	<u>sedimentary</u>	<u>soil</u>	<u>soil horizon</u>
<u>streak</u>	<u>topsoil</u>		

1. A mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals is \_\_\_\_\_.
2. A solid, natural material made from nonliving substances in the ground is a(n) \_\_\_\_\_.
3. As lava or magma cools, a(n) \_\_\_\_\_ rock is formed.
4. Most plant roots grow in \_\_\_\_\_.
5. The continuous process in which rocks change from one kind into another is called the \_\_\_\_\_.
6. The way a mineral reflects light is its \_\_\_\_\_.
7. The color of a mineral's powder is its \_\_\_\_\_.
8. Friedrich Mohs created a scale to measure the \_\_\_\_\_ of a mineral.
9. Each layer of soil is called a(n) \_\_\_\_\_.
10. A rock that forms from sediments is called \_\_\_\_\_ rock.

Name: \_\_\_\_\_ Grade 5 \_\_\_\_\_ Date: \_\_\_\_\_

**Chapter 9: Minerals, Rocks and Soil**  
**Section A: Multiple Choice**

1. Which mineral property describes how easily a mineral can be scratched? (2 points)
  - a) streak
  - b) cleavage
  - c) hardness
  
2. All are changes that happen in the rock cycle EXCEPT \_\_\_\_\_. (2 points)
  - a) igneous rock → sediments
  - b) magma → sedimentary rock
  - c) sediments → sedimentary rock
  
3. Which properties are most helpful in identifying minerals? (2 points)
  - a) size and ability to float
  - b) weight and shape
  - c) luster and streak
  
4. What causes an igneous rock to change into a metamorphic rock? (2 points)
  - a) heat and pressure
  - b) weathering and erosion
  - c) compaction and cementation
  
5. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property? (2 points)
  - a) color
  - b) streak
  - c) hardness
  
6. Write the name of the rock group in each space. (3 points)

igneous

metamorphic

sedimentary

Rock Group	Characteristics
a.) _____	Forms when rocks are exposed to heat and pressure
b.) _____	Forms as melted rock cools and hardens
c.) _____	Forms when pieces of rocks and minerals are cemented together

7. Study the table.

Copper has a hardness of 3.  
Which minerals would copper most likely scratch?

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- b.) apatite and diamond
- c.) feldspar and quartz

Mohs' Hardness Scale	
Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
9	corundum
10	diamond

(2 points)

**Section B: Use the words in the box to complete the sentence.** (1 point each)

<u>hardness</u>	<u>igneous</u>	<u>luster</u>	<u>mineral</u>
<u>rock cycle</u>	<u>sedimentary</u>	<u>soil</u>	<u>soil horizon</u>
<u>streak</u>	<u>topsoil</u>		

1. A mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals is soil.
2. A solid, natural material made from nonliving substances in the ground is a(n) mineral.
3. As lava or magma cools, a(n) igneous rock is formed.
4. Most plant roots grow in topsoil.
5. The continuous process in which rocks change from one kind into another is called the rock cycle.
6. The way a mineral reflects light is its luster.
7. The color of a mineral's powder is its streak.
8. Friedrich Mohs created a scale to measure the hardness of a mineral.
9. Each layer of soil is called a(n) soil horizon.
10. A rock that forms from sediments is called sedimentary rock.

## Grade 5 Chapter 9 Exam

### Matching

- |              |              |
|--------------|--------------|
| a. pollution | d. intrusive |
| b. crystal   | e. extrusive |
| c. fracture  |              |

- \_\_\_\_\_ 1. When an igneous rock forms from lava on Earth's surface.
- \_\_\_\_\_ 2. The addition of harmful materials to soil.
- \_\_\_\_\_ 3. When an igneous rock forms from magma inside Earth.
- \_\_\_\_\_ 4. A solid whose shape forms a pattern
- \_\_\_\_\_ 5. A mineral break that is rough or uneven

- |                     |             |
|---------------------|-------------|
| a. Sedimentary rock | d. streak   |
| b. soil             | e. top soil |
| c. soil horizon     |             |

- \_\_\_\_\_ 6. a rock that from sediments.
- \_\_\_\_\_ 7. the color of a mineral's powder
- \_\_\_\_\_ 8. a mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals.
- \_\_\_\_\_ 9. the name of each layer of soil.
- \_\_\_\_\_ 10. the layer of soil in which most plant roots grow

- |                 |               |
|-----------------|---------------|
| a. hardness     | d. mineral    |
| b. igneous rock | e. rock cycle |
| c. luster       |               |

- \_\_\_\_\_ 11. is measured by a scale created by Friedrich Mohs.
- \_\_\_\_\_ 12. A solid, natural material made from non living substances in the ground.
- \_\_\_\_\_ 13. The continuous process in which rocks change from one kind into another.
- \_\_\_\_\_ 14. describes how light is reflected of a mineral.
- \_\_\_\_\_ 15. this rock is formed by cooling magma or lava.

### Multiple Choice

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 16. The walls of rock cut through by Truck Road in Al Ain are examples of what type of rocks?
 

a. igneous	c. none of these
b. metamorphic	d. sedimentary

- \_\_\_\_\_ 17. What are the main steps in the formation of soil?
- decay of plants and animals, breakdown of rock by microorganisms, plant growth, weathering of rock
  - Weathering of rock, plant growth, breakdown of rock by microorganisms, decay of plants and animals.
  - weathering of rock, breakdown of rock by microorganisms, plant growth, decay of plants and animals.
  - none of these
- \_\_\_\_\_ 18. From which material does an extrusive rock form?
- magma
  - sediment
  - mineral
  - lava
- \_\_\_\_\_ 19. A student tested the hardness of four mineral samples by using each sample to scratch the others. Mineral 1 scratched mineral 2 but would not scratch mineral 3. Mineral 2 would not scratch any of the others. Mineral 4 scratched Mineral 3. Which list shows the mineral samples in order from softest to hardest?
- 2,1,3,4
  - 1,3,4,2
  - 1,2,3,4
  - 2,4,1,3
- \_\_\_\_\_ 20. Which steps of the rock cycle involve heat?
- forming igneous and metamorphic rocks.
  - forming igneous and sedimentary rocks.
  - forming sedimentary and metamorphic rocks.
  - none of these.
- \_\_\_\_\_ 21. Which of the following is NOT the best test to identify minerals
- overall shape
  - hardness
  - luster
  - streak
- \_\_\_\_\_ 22. The chart lists characteristics of the three main rock groups. Which order correctly fills in the left column (top to bottom)?

Rock Group	Characteristics
	forms as melted rock cools and hardens into a solid
	forms when rocks are exposed to increases in heat and pressure
	forms when pieces of rocks and minerals are cemented together

- igneous, sedimentary, metamorphic
  - igneous, metamorphic, sedimentary
  - lava, igneous, metamorphic
  - sedimentary, metamorphic, igneous
- \_\_\_\_\_ 23. What causes an igneous rock to change into a metamorphic rock?
- weathering and erosion
  - heat and pressure
  - compaction and cementation
  - melting and cooling

- \_\_\_\_\_ 24. How do you determine a mineral's streak?
- melt it
  - soak it in water
  - scratch it on a white surface
  - break it
- \_\_\_\_\_ 25. All are changes that happen in the rock cycle EXCEPT
- Sediments > sedimentary rock
  - magma > sedimentary rock >
  - igneous rock > sediments
  - Metamorphic rock > magma
- \_\_\_\_\_ 26. Which mineral property describes how easily a mineral can be scratched?
- hardness
  - reaction to acid
  - cleavage
  - streak
- \_\_\_\_\_ 27. A conglomerate is an example of which type of rock?
- metamorphic
  - intrusive igneous
  - sedimentary
  - extrusive igneous
- \_\_\_\_\_ 28. Study the table below.

Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
9	corundum
10	diamond

Copper has the hardness of 3. Which minerals would copper most likely scratch?

- feldspar and quartz
  - topaz and talc
  - apatite and diamond
  - gypsum and talc
- \_\_\_\_\_ 29. Which properties are most helpful in identifying minerals?
- weight and shape
  - luster and streak
  - shape and color
  - size and ability to float
- \_\_\_\_\_ 30. Which property describes minerals that break along smooth surfaces?
- color
  - hardness
  - cleavage
  - fracture
- \_\_\_\_\_ 31. What is the part of soil that is made of decayed organic materials called?
- topsoil
  - clay
  - bedrock
  - humus
- \_\_\_\_\_ 32. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property?
- color
  - luster
  - hardness
  - streak

- \_\_\_\_\_ 33. What causes mountaintops to have little or no topsoil?
- a. rain washing the soil down the mountain.
  - b. both of these
  - c. animals using the soil up.
  - d. none of these
- \_\_\_\_\_ 34. Which correctly describes strip farming?
- a. cutting shelves in hills
  - b. adding fertilizer to soil
  - c. planting trees around crops
  - d. planting grasses between crop rows
- \_\_\_\_\_ 35. A student placed a liquid on a mineral and the mineral began to fizz and bubble. What property was the student investigating?
- a. reaction to acid.
  - b. cleavage
  - c. luster
  - d. hardness
- \_\_\_\_\_ 36. What happens to the fossils in limestone as it turns into marble?
- a. they disappear
  - b. they are crushed
  - c. none of these
  - d. they don't change
- \_\_\_\_\_ 37. What are the steps to quickly sort a set of unidentified rocks?
- a. check the colors then the grain.
  - b. check shape then check the structure.
  - c. check the structure then the shape.
  - d. check the grain then the colors.
- \_\_\_\_\_ 38. What properties of soil are best for farming?
- a. high humus content, and high mineral content.
  - b. ability to hold water
  - c. all listed
  - d. none listed
- \_\_\_\_\_ 39. What are the steps by which an igneous rock turns into a sedimentary rock?
- a. pressure cements and forms the rocks, weathering and erosion, deposited sediment.
  - b. none of these
  - c. deposited sediment, weathering and erosion, pressure cements and forms the rocks.
  - d. weathering and erosion, deposited sediment, pressure cements and forms the rocks.
- \_\_\_\_\_ 40. Why do rocks have different characteristics.
- a. they are made of different materials
  - b. they come in different shapes
  - c. they are formed differently
  - d. they come in different sizes
- \_\_\_\_\_ 41. Which best explains should you test several properties when identifying minerals?
- a. none of these
  - b. you should not use several tests to identify minerals.
  - c. some minerals have more than one property in common
  - d. it's a smart thing to do.
- \_\_\_\_\_ 42. Which is true of desert soil but not of forest soil
- a. desert soil has lots of humus
  - b. desert soil has lots of minerals
  - c. desert soil can hold lots of water
  - d. none of these
- \_\_\_\_\_ 43. What is the best way to determine the crystal structure of a mineral?
- a. using a hand lens or a microscope
  - b. putting it in acid.
  - c. floating it in water
  - d. examining it with your eyes only

## Grade 5 Chapter 9 Exam Answer Section

### MATCHING

- |            |        |
|------------|--------|
| 1. ANS: E  | PTS: 1 |
| 2. ANS: A  | PTS: 1 |
| 3. ANS: D  | PTS: 1 |
| 4. ANS: B  | PTS: 1 |
| 5. ANS: C  | PTS: 1 |
| 6. ANS: A  | PTS: 1 |
| 7. ANS: D  | PTS: 1 |
| 8. ANS: B  | PTS: 1 |
| 9. ANS: C  | PTS: 1 |
| 10. ANS: E | PTS: 1 |
| 11. ANS: A | PTS: 1 |
| 12. ANS: D | PTS: 1 |
| 13. ANS: E | PTS: 1 |
| 14. ANS: C | PTS: 1 |
| 15. ANS: B | PTS: 1 |

### MULTIPLE CHOICE

- |            |        |          |
|------------|--------|----------|
| 16. ANS: D | PTS: 1 | LOC: 9.2 |
| 17. ANS: C | PTS: 1 | LOC: 9.2 |
| 18. ANS: D | PTS: 1 | LOC: 9.2 |
| 19. ANS: A | PTS: 1 | LOC: 9.1 |
| 20. ANS: A | PTS: 1 | LOC: 9.2 |
| 21. ANS: A | PTS: 1 | LOC: 9.1 |
| 22. ANS: B | PTS: 1 | LOC: 9.2 |
| 23. ANS: B | PTS: 1 | LOC: 9.2 |
| 24. ANS: C | PTS: 1 | LOC: 9.1 |
| 25. ANS: B | PTS: 1 | LOC: 9.2 |
| 26. ANS: A | PTS: 1 | LOC: 9.1 |
| 27. ANS: C | PTS: 1 | LOC: 9.2 |
| 28. ANS: D | PTS: 1 | LOC: 9.1 |
| 29. ANS: B | PTS: 1 | LOC: 9.1 |
| 30. ANS: C | PTS: 1 | LOC: 9.1 |
| 31. ANS: D | PTS: 1 | LOC: 9.3 |
| 32. ANS: D | PTS: 1 | LOC: 9.1 |
| 33. ANS: A | PTS: 1 | LOC: 9.2 |
| 34. ANS: D | PTS: 1 | LOC: 9.3 |
| 35. ANS: A | PTS: 1 | LOC: 9.2 |
| 36. ANS: B | PTS: 1 | LOC: 9.2 |
| 37. ANS: D | PTS: 1 | LOC: 9.1 |
| 38. ANS: C | PTS: 1 | LOC: 9.3 |
| 39. ANS: D | PTS: 1 | LOC: 9.1 |

40. ANS: C	PTS: 1	LOC: 9.1
41. ANS: C	PTS: 1	LOC: 9.1
42. ANS: A	PTS: 1	LOC: 9.3
43. ANS: A	PTS: 1	LOC: 9.1

**Grade 5 Chapter 9 Exam****Multiple Choice**

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. What is the part of soil that is made of decayed organic materials called?  
a. topsoil c. clay  
b. bedrock d. humus
- \_\_\_\_\_ 2. Which property describes minerals that break along smooth surfaces?  
a. hardness c. cleavage  
b. fracture d. color
- \_\_\_\_\_ 3. Which is true of desert soil but not of forest soil  
a. desert soil has lots of humus c. desert soil can hold lots of water  
b. none of these d. desert soil has lots of minerals
- \_\_\_\_\_ 4. From which material does an extrusive rock form?  
a. magma c. mineral  
b. lava d. sediment
- \_\_\_\_\_ 5. Which correctly describes strip farming?  
a. adding fertilizer to soil c. planting trees around crops  
b. cutting shelves in hills d. planting grasses between crop rows
- \_\_\_\_\_ 6. What causes an igneous rock to change into a metamorphic rock?  
a. compaction and cementation c. heat and pressure  
b. weathering and erosion d. melting and cooling
- \_\_\_\_\_ 7. Which of the following is NOT the best test to identify minerals  
a. overall shape c. hardness  
b. streak d. luster
- \_\_\_\_\_ 8. All are changes that happen in the rock cycle EXCEPT  
a. Sediments > sedimentary rock c. Metamorphic rock > magma  
b. igneous rock > sediments d. magma > sedimentary rock >
- \_\_\_\_\_ 9. Which best explains should you test several properties when identifying minerals?  
a. it's a smart thing to do. c. none of these  
b. some minerals have more than one property in common d. you should not use several tests to identify minerals.
- \_\_\_\_\_ 10. How do you determine a mineral's streak?  
a. break it c. scratch it on a white surface  
b. melt it d. soak it in water
- \_\_\_\_\_ 11. Which steps of the rock cycle involve heat?  
a. forming sedimentary and metamorphic rocks. c. forming igneous and sedimentary rocks.  
b. forming igneous and metamorphic rocks. d. none of these.

- \_\_\_\_\_ 12. What causes mountaintops to have little or no topsoil?
- none of these
  - rain washing the soil down the mountain.
  - animals using the soil up.
  - both of these
- \_\_\_\_\_ 13. Which properties are most helpful in identifying minerals?
- size and ability to float
  - luster and streak
  - shape and color
  - weight and shape
- \_\_\_\_\_ 14. Study the table below.

Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
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Copper has the hardness of 3. Which minerals would copper most likely scratch?

- feldspar and quartz
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  - apatite and diamond
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- \_\_\_\_\_ 15. A student tested the hardness of four mineral samples by using each sample to scratch the others. Miner 1 scratched mineral 2 but would not scratch mineral 3. Mineral 2 would not scratch any of the others. Mineral 4 scratched Mineral 3. Which list shows the mineral samples in order from softest to hardest?
- 1,2,3,4
  - 2,1,3,4
  - 2,4,1,3
  - 1,3,4,2
- \_\_\_\_\_ 16. What happens to the fossils in limestone as it turns into marble?
- none of these
  - they disappear
  - they don't change
  - they are crushed
- \_\_\_\_\_ 17. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property?
- hardness
  - streak
  - color
  - luster
- \_\_\_\_\_ 18. A student placed a liquid on a mineral and the mineral began to fizz and bubble. What property was the student investigating?
- cleavage
  - hardness
  - luster
  - reaction to acid.
- \_\_\_\_\_ 19. A conglomerate is an example of which type of rock?
- intrusive igneous
  - sedimentary
  - metamorphic
  - extrusive igneous

- \_\_\_\_ 20. Why do rocks have different characteristics.
- a. they are made of different materials
  - b. they come in different sizes
  - c. they are formed differently
  - d. they come in different shapes
- \_\_\_\_ 21. The chart lists characteristics of the three main rock groups. Which order correctly fills in the left column (top to bottom)?

Rock Group	Characteristics
	forms as melted rock cools and hardens into a solid
	forms when rocks are exposed to increases in heat and pressure
	forms when pieces of rocks and minerals are cemented together

- a. sedimentary, metamorphic, igneous
  - b. lava, igneous, metamorphic
  - c. igneous, sedimentary, metamorphic
  - d. igneous, metamorphic, sedimentary
- \_\_\_\_ 22. What properties of soil are best for farming?
- a. ability to hold water
  - b. high humus content, and high mineral content.
  - c. none listed
  - d. all listed
- \_\_\_\_ 23. Which mineral property describes how easily a mineral can be scratched?
- a. reaction to acid
  - b. streak
  - c. cleavage
  - d. hardness
- \_\_\_\_ 24. What are the steps to quickly sort a set of unidentified rocks?
- a. check shape then check the structure.
  - b. check the grain then the colors.
  - c. check the structure then the shape.
  - d. check the colors then the grain.
- \_\_\_\_ 25. The walls of rock cut through by Truck Road in Al Ain are examples of what type of rocks?
- a. metamorphic
  - b. sedimentary
  - c. igneous
  - d. none of these
- \_\_\_\_ 26. What is the best way to determine the crystal structure of a mineral?
- a. examining it with your eyes only
  - b. using a hand lens or a microscope
  - c. putting it in acid.
  - d. floating it in water
- \_\_\_\_ 27. What are the steps by which an igneous rock turns into a sedimentary rock?
- a. none of these
  - b. pressure cements and forms the rocks, weathering and erosion, deposited sediment.
  - c. deposited sediment, weathering and erosion, pressure cements and forms the rocks.
  - d. weathering and erosion, deposited sediment, pressure cements and forms the rocks.

Name: \_\_\_\_\_

ID: B

- \_\_\_\_\_ 28. What are the main steps in the formation of soil?
- a. weathering of rock, breakdown of rock by microorganisms, plant growth, decay of plants and animals.
  - b. none of these
  - c. decay of plants and animals, breakdown of rock by microorganisms, plant growth, weathering of rock
  - d. Weathering of rock, plant growth, breakdown of rock by microorganisms, decay of plants and animals.

### Matching

- a. pollution
  - b. crystal
  - c. fracture
  - d. intrusive
  - e. extrusive
- \_\_\_\_\_ 29. The addition of harmful materials to soil.
- \_\_\_\_\_ 30. When an igneous rock forms from magma inside Earth.
- \_\_\_\_\_ 31. A mineral break that is rough or uneven
- \_\_\_\_\_ 32. When an igneous rock forms from lava on Earth's surface.
- \_\_\_\_\_ 33. A solid whose shape forms a pattern
- a. Sedimentary rock
  - b. soil
  - c. soil horizon
  - d. streak
  - e. top soil
- \_\_\_\_\_ 34. the name of each layer of soil.
- \_\_\_\_\_ 35. a rock that from sediments.
- \_\_\_\_\_ 36. the color of a mineral's powder
- \_\_\_\_\_ 37. the layer of soil in which most plant roots grow
- \_\_\_\_\_ 38. a mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals.
- a. hardness
  - b. igneous rock
  - c. luster
  - d. mineral
  - e. rock cycle
- \_\_\_\_\_ 39. this rock is formed by cooling magma or lava.
- \_\_\_\_\_ 40. describes how light is reflected of a mineral.
- \_\_\_\_\_ 41. The continuous process in which rocks change from one kind into another.
- \_\_\_\_\_ 42. is measured by a scale created by Friedrich Mohs.
- \_\_\_\_\_ 43. A solid, natural material made from non living substances in the ground.

**Grade 5 Chapter 9 Exam  
Answer Section****MULTIPLE CHOICE**

1. ANS: D	PTS: 1	LOC: 9.3
2. ANS: C	PTS: 1	LOC: 9.1
3. ANS: A	PTS: 1	LOC: 9.3
4. ANS: B	PTS: 1	LOC: 9.2
5. ANS: D	PTS: 1	LOC: 9.3
6. ANS: C	PTS: 1	LOC: 9.2
7. ANS: A	PTS: 1	LOC: 9.1
8. ANS: D	PTS: 1	LOC: 9.2
9. ANS: B	PTS: 1	LOC: 9.1
10. ANS: C	PTS: 1	LOC: 9.1
11. ANS: B	PTS: 1	LOC: 9.2
12. ANS: B	PTS: 1	LOC: 9.2
13. ANS: B	PTS: 1	LOC: 9.1
14. ANS: B	PTS: 1	LOC: 9.1
15. ANS: B	PTS: 1	LOC: 9.1
16. ANS: D	PTS: 1	LOC: 9.2
17. ANS: B	PTS: 1	LOC: 9.1
18. ANS: D	PTS: 1	LOC: 9.2
19. ANS: B	PTS: 1	LOC: 9.2
20. ANS: C	PTS: 1	LOC: 9.1
21. ANS: D	PTS: 1	LOC: 9.2
22. ANS: D	PTS: 1	LOC: 9.3
23. ANS: D	PTS: 1	LOC: 9.1
24. ANS: B	PTS: 1	LOC: 9.1
25. ANS: B	PTS: 1	LOC: 9.2
26. ANS: B	PTS: 1	LOC: 9.1
27. ANS: D	PTS: 1	LOC: 9.1
28. ANS: A	PTS: 1	LOC: 9.2

**MATCHING**

29. ANS: A	PTS: 1
30. ANS: D	PTS: 1
31. ANS: C	PTS: 1
32. ANS: E	PTS: 1
33. ANS: B	PTS: 1
34. ANS: C	PTS: 1
35. ANS: A	PTS: 1
36. ANS: D	PTS: 1
37. ANS: E	PTS: 1
38. ANS: B	PTS: 1
39. ANS: B	PTS: 1

- |            |        |
|------------|--------|
| 40. ANS: C | PTS: 1 |
| 41. ANS: E | PTS: 1 |
| 42. ANS: A | PTS: 1 |
| 43. ANS: D | PTS: 1 |

## Grade 5 Chapter 9 Exam

### Matching

- |              |              |
|--------------|--------------|
| a. pollution | d. intrusive |
| b. crystal   | e. extrusive |
| c. fracture  |              |

- \_\_\_\_\_ 1. When an igneous rock forms from lava on Earth's surface.
- \_\_\_\_\_ 2. A solid whose shape forms a pattern
- \_\_\_\_\_ 3. When an igneous rock forms from magma inside Earth.
- \_\_\_\_\_ 4. A mineral break that is rough or uneven
- \_\_\_\_\_ 5. The addition of harmful materials to soil.

- |                     |             |
|---------------------|-------------|
| a. Sedimentary rock | d. streak   |
| b. soil             | e. top soil |
| c. soil horizon     |             |

- \_\_\_\_\_ 6. the layer of soil in which most plant roots grow
- \_\_\_\_\_ 7. the name of each layer of soil.
- \_\_\_\_\_ 8. a mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals.
- \_\_\_\_\_ 9. the color of a mineral's powder
- \_\_\_\_\_ 10. a rock that from sediments.

- |                 |               |
|-----------------|---------------|
| a. hardness     | d. mineral    |
| b. igneous rock | e. rock cycle |
| c. luster       |               |

- \_\_\_\_\_ 11. A solid, natural material made from non living substances in the ground.
- \_\_\_\_\_ 12. describes how light is reflected of a mineral.
- \_\_\_\_\_ 13. The continuous process in which rocks change from one kind into another.
- \_\_\_\_\_ 14. is measured by a scale created by Friedrich Mohs.
- \_\_\_\_\_ 15. this rock is formed by cooling magma or lava.

### Multiple Choice

*Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 16. What are the steps to quickly sort a set of unidentified rocks?
 

a. check the colors then the grain.	c. check the structure then the shape.
b. check shape then check the structure.	d. check the grain then the colors.

- \_\_\_\_\_ 17. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property?
- a. streak
  - b. luster
  - c. hardness
  - d. color
- \_\_\_\_\_ 18. A student tested the hardness of four mineral samples by using each sample to scratch the others. Miner 1 scratched mineral 2 but would not scratch mineral 3. Mineral 2 would not scratch any of the others. Mineral 4 scratched Mineral 3. Which list shows the mineral samples in order from softest to hardest?
- a. 1,2,3,4
  - b. 1,3,4,2
  - c. 2,4,1,3
  - d. 2,1,3,4
- \_\_\_\_\_ 19. From which material does an extrusive rock form?
- a. mineral
  - b. magma
  - c. lava
  - d. sediment
- \_\_\_\_\_ 20. A student placed a liquid on a mineral and the mineral began to fizz and bubble. What property was the student investigating?
- a. reaction to acid.
  - b. cleavage
  - c. hardness
  - d. luster
- \_\_\_\_\_ 21. Study the table below.

Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
9	corundum
10	diamond

Copper has the hardness of 3. Which minerals would copper most likely scratch?

- a. apatite and diamond
  - b. feldspar and quartz
  - c. topaz and talc
  - d. gypsum and talc
- \_\_\_\_\_ 22. Which correctly describes strip farming?
- a. planting grasses between crop rows
  - b. planting trees around crops
  - c. cutting shelves in hills
  - d. adding fertilizer to soil
- \_\_\_\_\_ 23. Which property describes minerals that break along smooth surfaces?
- a. cleavage
  - b. hardness
  - c. color
  - d. fracture

- \_\_\_\_\_ 24. Which best explains should you test several properties when identifying minerals?
- a. you should not use several tests to identify minerals.
  - b. it's a smart thing to do.
  - c. none of these
  - d. some minerals have more than one property in common
- \_\_\_\_\_ 25. Which steps of the rock cycle involve heat?
- a. forming sedimentary and metamorphic rocks.
  - b. forming igneous and metamorphic rocks.
  - c. forming igneous and sedimentary rocks.
  - d. none of these.
- \_\_\_\_\_ 26. What is the part of soil that is made of decayed organic materials called?
- a. clay
  - b. topsoil
  - c. bedrock
  - d. humus
- \_\_\_\_\_ 27. The walls of rock cut through by Truck Road in Al Ain are examples of what type of rocks?
- a. metamorphic
  - b. sedimentary
  - c. none of these
  - d. igneous
- \_\_\_\_\_ 28. What is the best way to determine the crystal structure of a mineral?
- a. floating it in water
  - b. examining it with your eyes only
  - c. using a hand lens or a microscope
  - d. putting it in acid.
- \_\_\_\_\_ 29. Which is true of desert soil but not of forest soil
- a. none of these
  - b. desert soil can hold lots of water
  - c. desert soil has lots of humus
  - d. desert soil has lots of minerals
- \_\_\_\_\_ 30. What are the steps by which an igneous rock turns into a sedimentary rock?
- a. deposited sediment, weathering and erosion, pressure cements and forms the rocks.
  - b. none of these
  - c. pressure cements and forms the rocks, weathering and erosion, deposited sediment.
  - d. weathering and erosion, deposited sediment, pressure cements and forms the rocks.
- \_\_\_\_\_ 31. All are changes that happen in the rock cycle EXCEPT
- a. Sediments > sedimentary rock
  - b. Metamorphic rock > magma
  - c. magma > sedimentary rock > igneous rock
  - d. igneous rock > sediments
- \_\_\_\_\_ 32. Which mineral property describes how easily a mineral can be scratched?
- a. streak
  - b. hardness
  - c. cleavage
  - d. reaction to acid
- \_\_\_\_\_ 33. What causes an igneous rock to change into a metamorphic rock?
- a. compaction and cementation
  - b. melting and cooling
  - c. heat and pressure
  - d. weathering and erosion
- \_\_\_\_\_ 34. What are the main steps in the formation of soil?
- a. none of these
  - b. Weathering of rock, plant growth, breakdown of rock by microorganisms, decay of plants and animals.
  - c. weathering of rock, breakdown of rock by microorganisms, plant growth, decay of plants and animals.
  - d. decay of plants and animals, breakdown of rock by microorganisms, plant growth, weathering of rock

- \_\_\_\_\_ 35. A conglomerate is an example of which type of rock?
- intrusive igneous
  - metamorphic
  - sedimentary
  - extrusive igneous
- \_\_\_\_\_ 36. What happens to the fossils in limestone as it turns into marble?
- they don't change
  - they disappear
  - they are crushed
  - none of these
- \_\_\_\_\_ 37. Which properties are most helpful in identifying minerals?
- shape and color
  - weight and shape
  - luster and streak
  - size and ability to float
- \_\_\_\_\_ 38. How do you determine a mineral's streak?
- scratch it on a white surface
  - melt it
  - soak it in water
  - break it
- \_\_\_\_\_ 39. The chart lists characteristics of the three main rock groups. Which order correctly fills in the left column (top to bottom)?

Rock Group	Characteristics
	forms as melted rock cools and hardens into a solid
	forms when rocks are exposed to increases in heat and pressure
	forms when pieces of rocks and minerals are cemented together

- igneous, metamorphic, sedimentary
  - lava, igneous, metamorphic
  - igneous, sedimentary, metamorphic
  - sedimentary, metamorphic, igneous
- \_\_\_\_\_ 40. Which of the following is NOT the best test to identify minerals
- luster
  - overall shape
  - streak
  - hardness
- \_\_\_\_\_ 41. Why do rocks have different characteristics.
- they come in different sizes
  - they come in different shapes
  - they are formed differently
  - they are made of different materials
- \_\_\_\_\_ 42. What properties of soil are best for farming?
- all listed
  - high humus content, and high mineral content.
  - none listed
  - ability to hold water
- \_\_\_\_\_ 43. What causes mountaintops to have little or no topsoil?
- none of these
  - rain washing the soil down the mountain.
  - both of these
  - animals using the soil up.

## Grade 5 Chapter 9 Exam Answer Section

### MATCHING

- |            |        |
|------------|--------|
| 1. ANS: E  | PTS: 1 |
| 2. ANS: B  | PTS: 1 |
| 3. ANS: D  | PTS: 1 |
| 4. ANS: C  | PTS: 1 |
| 5. ANS: A  | PTS: 1 |
|            |        |
| 6. ANS: E  | PTS: 1 |
| 7. ANS: C  | PTS: 1 |
| 8. ANS: B  | PTS: 1 |
| 9. ANS: D  | PTS: 1 |
| 10. ANS: A | PTS: 1 |
|            |        |
| 11. ANS: D | PTS: 1 |
| 12. ANS: C | PTS: 1 |
| 13. ANS: E | PTS: 1 |
| 14. ANS: A | PTS: 1 |
| 15. ANS: B | PTS: 1 |

### MULTIPLE CHOICE

- |            |        |          |
|------------|--------|----------|
| 16. ANS: D | PTS: 1 | LOC: 9.1 |
| 17. ANS: A | PTS: 1 | LOC: 9.1 |
| 18. ANS: D | PTS: 1 | LOC: 9.1 |
| 19. ANS: C | PTS: 1 | LOC: 9.2 |
| 20. ANS: A | PTS: 1 | LOC: 9.2 |
| 21. ANS: D | PTS: 1 | LOC: 9.1 |
| 22. ANS: A | PTS: 1 | LOC: 9.3 |
| 23. ANS: A | PTS: 1 | LOC: 9.1 |
| 24. ANS: D | PTS: 1 | LOC: 9.1 |
| 25. ANS: B | PTS: 1 | LOC: 9.2 |
| 26. ANS: D | PTS: 1 | LOC: 9.3 |
| 27. ANS: B | PTS: 1 | LOC: 9.2 |
| 28. ANS: C | PTS: 1 | LOC: 9.1 |
| 29. ANS: C | PTS: 1 | LOC: 9.3 |
| 30. ANS: D | PTS: 1 | LOC: 9.1 |
| 31. ANS: C | PTS: 1 | LOC: 9.2 |
| 32. ANS: B | PTS: 1 | LOC: 9.1 |
| 33. ANS: C | PTS: 1 | LOC: 9.2 |
| 34. ANS: C | PTS: 1 | LOC: 9.2 |
| 35. ANS: C | PTS: 1 | LOC: 9.2 |
| 36. ANS: C | PTS: 1 | LOC: 9.2 |
| 37. ANS: C | PTS: 1 | LOC: 9.1 |
| 38. ANS: A | PTS: 1 | LOC: 9.1 |
| 39. ANS: A | PTS: 1 | LOC: 9.2 |

40. ANS: B	PTS: 1	LOC: 9.1
41. ANS: C	PTS: 1	LOC: 9.1
42. ANS: A	PTS: 1	LOC: 9.3
43. ANS: B	PTS: 1	LOC: 9.2

**Grade 5 Chapter 9 Exam****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. The chart lists characteristics of the three main rock groups. Which order correctly fills in the left column (top to bottom)?

Rock Group	Characteristics
	forms as melted rock cools and hardens into a solid
	forms when rocks are exposed to increases in heat and pressure
	forms when pieces of rocks and minerals are cemented together

- a. igneous, sedimentary, metamorphic  
b. igneous, metamorphic, sedimentary  
c. lava, igneous, metamorphic  
d. sedimentary, metamorphic, igneous
- \_\_\_\_\_ 2. Which best explains should you test several properties when identifying minerals?  
a. some minerals have more than one property in common  
b. you should not use several tests to identify minerals.  
c. none of these  
d. it's a smart thing to do.
- \_\_\_\_\_ 3. A conglomerate is an example of which type of rock?  
a. intrusive igneous  
b. sedimentary  
c. metamorphic  
d. extrusive igneous
- \_\_\_\_\_ 4. Which steps of the rock cycle involve heat?  
a. forming igneous and metamorphic rocks.  
b. forming sedimentary and metamorphic rocks.  
c. none of these.  
d. forming igneous and sedimentary rocks.
- \_\_\_\_\_ 5. What are the steps by which an igneous rock turns into a sedimentary rock?  
a. deposited sediment, weathering and erosion, pressure cements and forms the rocks.  
b. weathering and erosion, deposited sediment, pressure cements and forms the rocks.  
c. pressure cements and forms the rocks, weathering and erosion, deposited sediment.  
d. none of these

- \_\_\_\_\_ 6. What are the main steps in the formation of soil?
- a. Weathering of rock, plant growth, breakdown of rock by microorganisms, decay of plants and animals.
  - b. none of these
  - c. weathering of rock, breakdown of rock by microorganisms, plant growth, decay of plants and animals.
  - d. decay of plants and animals, breakdown of rock by microorganisms, plant growth, weathering of rock
- \_\_\_\_\_ 7. Which is true of desert soil but not of forest soil
- a. none of these
  - b. desert soil can hold lots of water
  - c. desert soil has lots of minerals
  - d. desert soil has lots of humus
- \_\_\_\_\_ 8. What are the steps to quickly sort a set of unidentified rocks?
- a. check shape then check the structure.
  - b. check the grain then the colors.
  - c. check the colors then the grain.
  - d. check the structure then the shape.
- \_\_\_\_\_ 9. A student tested the hardness of four mineral samples by using each sample to scratch the others. Miner 1 scratched mineral 2 but would not scratch mineral 3. Mineral 2 would not scratch any of the others. Mineral 4 scratched Mineral 3. Which list shows the mineral samples in order from softest to hardest?
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  - c. 2,1,3,4
  - d. 2,4,1,3
- \_\_\_\_\_ 10. From which material does an extrusive rock form?
- a. mineral
  - b. lava
  - c. magma
  - d. sediment
- \_\_\_\_\_ 11. The walls of rock cut through by Truck Road in Al Ain are examples of what type of rocks?
- a. metamorphic
  - b. sedimentary
  - c. none of these
  - d. igneous
- \_\_\_\_\_ 12. You are trying to find out what kind of mineral you have. You will need a white tile to find out which property?
- a. hardness
  - b. luster
  - c. color
  - d. streak
- \_\_\_\_\_ 13. What is the part of soil that is made of decayed organic materials called?
- a. topsoil
  - b. humus
  - c. bedrock
  - d. clay
- \_\_\_\_\_ 14. Which property describes minerals that break along smooth surfaces?
- a. cleavage
  - b. fracture
  - c. hardness
  - d. color
- \_\_\_\_\_ 15. Why do rocks have different characteristics.
- a. they are made of different materials
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- \_\_\_\_\_ 16. What causes an igneous rock to change into a metamorphic rock?
- a. compaction and cementation
  - b. weathering and erosion
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  - d. melting and cooling
- \_\_\_\_\_ 17. Which of the following is NOT the best test to identify minerals
- a. streak
  - b. overall shape
  - c. hardness
  - d. luster

- \_\_\_\_\_ 18. What properties of soil are best for farming?
- all listed
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  - weight and shape
  - luster and streak
  - shape and color
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- streak
  - hardness
  - reaction to acid
  - cleavage
- \_\_\_\_\_ 21. Study the table below.

Hardness	Mineral
1	talc
2	gypsum
3	calcite
4	fluorite
5	apatite
6	feldspar
7	quartz
8	topaz
9	corundum
10	diamond

Copper has the hardness of 3. Which minerals would copper most likely scratch?

- apatite and diamond
  - topaz and talc
  - gypsum and talc
  - feldspar and quartz
- \_\_\_\_\_ 22. What is the best way to determine the crystal structure of a mineral?
- putting it in acid.
  - examining it with your eyes only
  - using a hand lens or a microscope
  - floating it in water
- \_\_\_\_\_ 23. A student placed a liquid on a mineral and the mineral began to fizz and bubble. What property was the student investigating?
- luster
  - cleavage
  - hardness
  - reaction to acid.
- \_\_\_\_\_ 24. All are changes that happen in the rock cycle EXCEPT
- Sediments > sedimentary rock
  - magma > sedimentary rock >
  - igneous rock > sediments
  - Metamorphic rock > magma
- \_\_\_\_\_ 25. Which correctly describes strip farming?
- cutting shelves in hills
  - planting trees around crops
  - planting grasses between crop rows
  - adding fertilizer to soil

Name: \_\_\_\_\_

ID: D

- \_\_\_\_\_ 26. What causes mountaintops to have little or no topsoil?
- a. rain washing the soil down the mountain.
  - b. none of these
  - c. both of these
  - d. animals using the soil up.
- \_\_\_\_\_ 27. How do you determine a mineral's streak?
- a. soak it in water
  - b. break it
  - c. melt it
  - d. scratch it on a white surface
- \_\_\_\_\_ 28. What happens to the fossils in limestone as it turns into marble?
- a. none of these
  - b. they don't change
  - c. they disappear
  - d. they are crushed

### Matching

- a. Sedimentary rock
  - b. soil
  - c. soil horizon
  - d. streak
  - e. top soil
- \_\_\_\_\_ 29. the name of each layer of soil.
- \_\_\_\_\_ 30. a rock that from sediments.
- \_\_\_\_\_ 31. the color of a mineral's powder
- \_\_\_\_\_ 32. the layer of soil in which most plant roots grow
- \_\_\_\_\_ 33. a mixture of minerals, bits of rock, and pieces of once-living parts of plants and animals.
- a. hardness
  - b. igneous rock
  - c. luster
  - d. mineral
  - e. rock cycle
- \_\_\_\_\_ 34. this rock is formed by cooling magma or lava.
- \_\_\_\_\_ 35. is measured by a scale created by Friedrich Mohs.
- \_\_\_\_\_ 36. The continuous process in which rocks change from one kind into another.
- \_\_\_\_\_ 37. describes how light is reflected of a mineral.
- \_\_\_\_\_ 38. A solid, natural material made from non living substances in the ground.
- a. pollution
  - b. crystal
  - c. fracture
  - d. intrusive
  - e. extrusive
- \_\_\_\_\_ 39. The addition of harmful materials to soil.
- \_\_\_\_\_ 40. A solid whose shape forms a pattern
- \_\_\_\_\_ 41. When an igneous rock forms from lava on Earth's surface.
- \_\_\_\_\_ 42. When an igneous rock forms from magma inside Earth.
- \_\_\_\_\_ 43. A mineral break that is rough or uneven

## Grade 5 Chapter 9 Exam Answer Section

### MULTIPLE CHOICE

1. ANS: B	PTS: 1	LOC: 9.2
2. ANS: A	PTS: 1	LOC: 9.1
3. ANS: B	PTS: 1	LOC: 9.2
4. ANS: A	PTS: 1	LOC: 9.2
5. ANS: B	PTS: 1	LOC: 9.1
6. ANS: C	PTS: 1	LOC: 9.2
7. ANS: D	PTS: 1	LOC: 9.3
8. ANS: B	PTS: 1	LOC: 9.1
9. ANS: C	PTS: 1	LOC: 9.1
10. ANS: B	PTS: 1	LOC: 9.2
11. ANS: B	PTS: 1	LOC: 9.2
12. ANS: D	PTS: 1	LOC: 9.1
13. ANS: B	PTS: 1	LOC: 9.3
14. ANS: A	PTS: 1	LOC: 9.1
15. ANS: D	PTS: 1	LOC: 9.1
16. ANS: C	PTS: 1	LOC: 9.2
17. ANS: B	PTS: 1	LOC: 9.1
18. ANS: A	PTS: 1	LOC: 9.3
19. ANS: C	PTS: 1	LOC: 9.1
20. ANS: B	PTS: 1	LOC: 9.1
21. ANS: C	PTS: 1	LOC: 9.1
22. ANS: C	PTS: 1	LOC: 9.1
23. ANS: D	PTS: 1	LOC: 9.2
24. ANS: B	PTS: 1	LOC: 9.2
25. ANS: C	PTS: 1	LOC: 9.3
26. ANS: A	PTS: 1	LOC: 9.2
27. ANS: D	PTS: 1	LOC: 9.1
28. ANS: D	PTS: 1	LOC: 9.2

### MATCHING

29. ANS: C	PTS: 1
30. ANS: A	PTS: 1
31. ANS: D	PTS: 1
32. ANS: E	PTS: 1
33. ANS: B	PTS: 1
34. ANS: B	PTS: 1
35. ANS: A	PTS: 1
36. ANS: E	PTS: 1
37. ANS: C	PTS: 1
38. ANS: D	PTS: 1
39. ANS: A	PTS: 1

- |     |        |        |
|-----|--------|--------|
| 40. | ANS: B | PTS: 1 |
| 41. | ANS: E | PTS: 1 |
| 42. | ANS: D | PTS: 1 |
| 43. | ANS: C | PTS: 1 |