

## 3rd GRADE MINIMUM CONTENTS

### UDI 1: AIR (2)

#### ► WHAT'S THE AIR?

Air is the mixture of gases that surrounds the Earth. The main gases in air are:

- a. **Nitrogen.** This is the most abundant gas.
- b. **Oxygen.** This is the second most abundant gas. Plants produce oxygen and all the living things need oxygen to breathe.
- c. **Carbon dioxide.** This gas is a very small part of air. Living things produce carbon dioxide when they breathe out. It is also produced by cars and factories.

#### ► USES OF AIR

People and animals need air to breathe.

Plants need air during photosynthesis.

Air is also needed for:

- Hearing. Sounds travel through air.
- Flying.
- Burning. Fire needs oxygen from the air in order to burn.
- We use air to inflate balloons and tyres of cars and bicycles.
- Wind farms use energy from moving air to produce electricity.



#### ► THE PROPERTIES OF AIR

Air has different properties:

- **Air is invisible.** It has no colour.
- **Air has no shape.** It takes the shape of the container.
- **Air has weight.** A balloon with air inside weighs more than a balloon with no air inside.
- **Air has no taste or smell.**

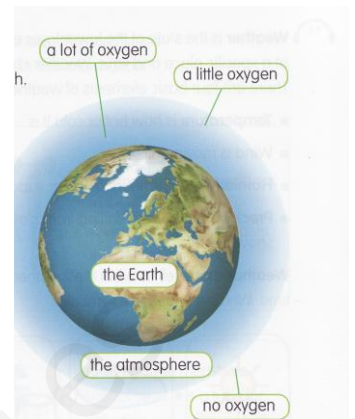
## ► THE ATMOSPHERE

The atmosphere is the layer of gases that surrounds the Earth.

It acts as a filter to protect us from the harmful rays of the Sun.

The atmosphere has different layers:

- **The lower layer** of atmosphere is made up of air. It contains oxygen which living things need to breathe. Weather occurs here.
- **The upper layer** contains very little oxygen. Living things cannot survive here.
- **Outer space** is outside of the atmosphere. Here, there is no air and there are no living things.



## Air pollution

Many human activities release harmful gases into the atmosphere, causing **air pollution**. For example, cars release carbon dioxide. Too much carbon dioxide in the air causes air pollution. Plants help clean the air because they absorb carbon dioxide and release oxygen.

We can do many things to prevent air pollution:

- Walk, ride a bike or use public transport.
- Plant new trees to absorb more carbon dioxide and release more oxygen.

## ► WEATHER AND CLIMATE

Weather is the state of the lower layer of the atmosphere of a specific place and time. Weather changes all the time.

There are four basic elements of weather:

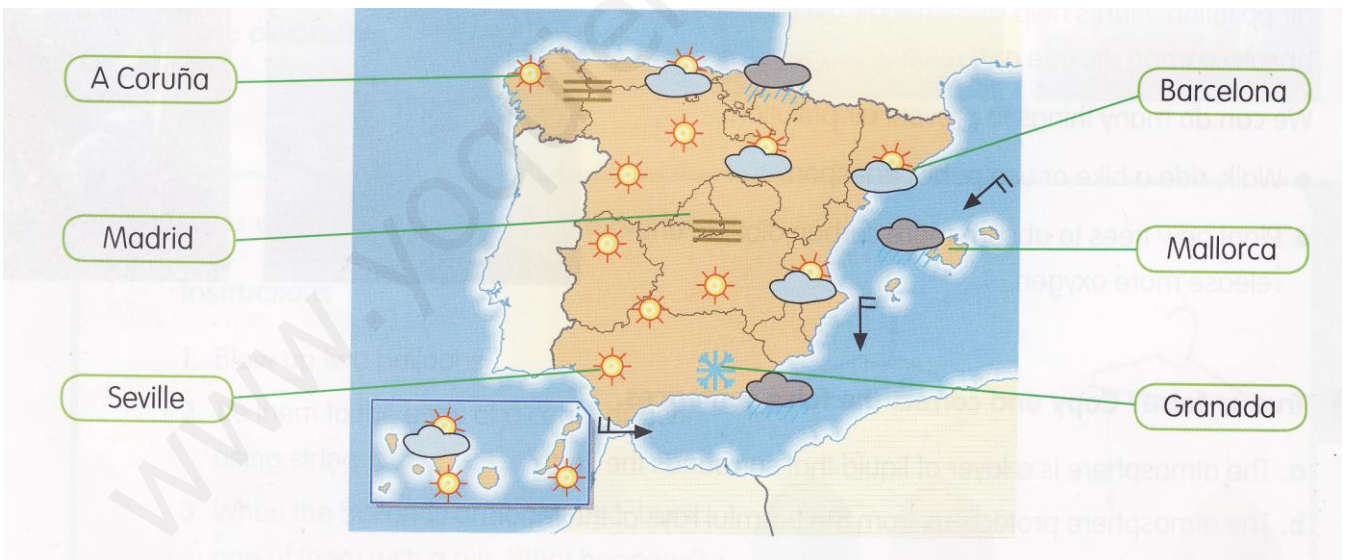
- **Temperature** is how hot or cold it is. When temperatures are low, the weather is cold. When temperatures are high, the weather is hot.
- **Wind** is moving air. There are different types of wind:  
**A breeze** is a very light wind.

A **gale** is a very strong wind.

A **hurricane** is an extremely strong wind with rain

- **Humidity** is the amount of water vapour in the air.
- **Precipitation** is water falling from clouds. It can be **rain**, **snow** or **hail**.

**Weather maps** tell us what the weather is going to be like in a specific area at a specific time. Weather maps use symbols.



## ► RECORDING WEATHER

A **meteorologist** is a scientist who studies the Earth's atmosphere.

Meteorologists use **instruments** to measure and record the weather.

They use this information to predict what the weather will be like.

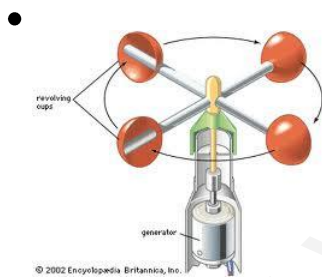
- A **thermometer** is an instrument that measures the temperature of the air. It's a glass tube containing a liquid which rises and falls according to the temperature.



- A **hygrometer** is an instrument that measures humidity in the air. The needle on the dial tells us what percentage of the air is water vapour.



- An **anemometer** is an instrument that measures the speed of wind.



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- A **weather vane** is an instrument that indicates the direction of



wind.

- A **rain gauge** is an instrument that measures precipitation. It is a tube for collecting rain, snow or hail. A scale at the side indicates how much rain or snow has fallen.



## ► WEATHER AND THE SEASONS

There are four seasons:

- a. **Winter** is the coldest season. It can snow. At the beginning of winter, the days are shorter, and the nights are longer. In winter, deciduous trees are bare.
- b. **Spring** is the mildest season. At the beginning of spring, days and nights are the same length. At the end of spring, the days are longer, and the nights are shorter. Flowers and grass start to grow. Leaves start to grow in trees.
- c. **Summer** is the hottest season. At the beginning of summer, the days are longer, and the nights are shorter. At the end of summer, days and nights are the same length. Many plants dry up because there is very little rain.
- d. **Autumn**. At the beginning of autumn temperatures are mild. Towards the end of autumn, temperatures get colder. It often rains. At the beginning of autumn, days and nights are the same length. Then, the nights are longer. On many trees, leaves turn yellow and brown. At the end of autumn, the leaves fall from these trees.

## ► SEVERE WEATHER

Severe weather is weather which causes damage or puts people's lives in danger.

Some examples of severe weather are:

**Hurricanes:** extremely strong winds with rain.

**Thunderstorms:** electrical storms.

**Strong winds**

**Droughts:** a long period of abnormally low rainfall.

**Floods:** great flowing of water.

**Tornadoes** are one of the most powerful and destructive weather phenomena on land. A tornado is a violent storm with a swirling column of wind .It looks like a dark, funnel-shaped cloud. A tornado can destroy buildings and uproot trees.



## UDI 1: AIR (2)

### ACTIVITIES

1.- Complete the sentences about the gases in air.

- a. ----- is the most abundant gas in air.
- b. ----- is the second most abundant gas in air.
- c.----- is a very small part of air.

2.- What are the properties of air? Unscramble the letters and write.

- Air has no pshae .....
- Air has hgwtie .....
- Air is vbiensili .....
- Air has no taste or lelms .....

3.- What is the atmosphere? Read and write.

Little - Sun - breathe - oxygen - outer space - weather - gases -Earth

The atmosphere is made up of layers of ..... that surround the ..... The lower layer contains ..... which living things need to ..... Clouds form and ..... occurs here. The upper layers have very ..... oxygen and there are no living things. Outside the atmosphere is ....., where is no air and there are no living things. The atmosphere protect us from the harmful rays of the .....

**4.- Read and write true or false .Then, correct the false sentences.**

- The Earth's atmosphere is made up of water. ....
- The main gases in air are nitrogen, oxygen and carbon dioxide.  
.....
- The most abundant gas in air is oxygen. ....
- All living things need air to survive. ....
- People breathe out oxygen. ....
- Plants release nitrogen into the atmosphere. ....

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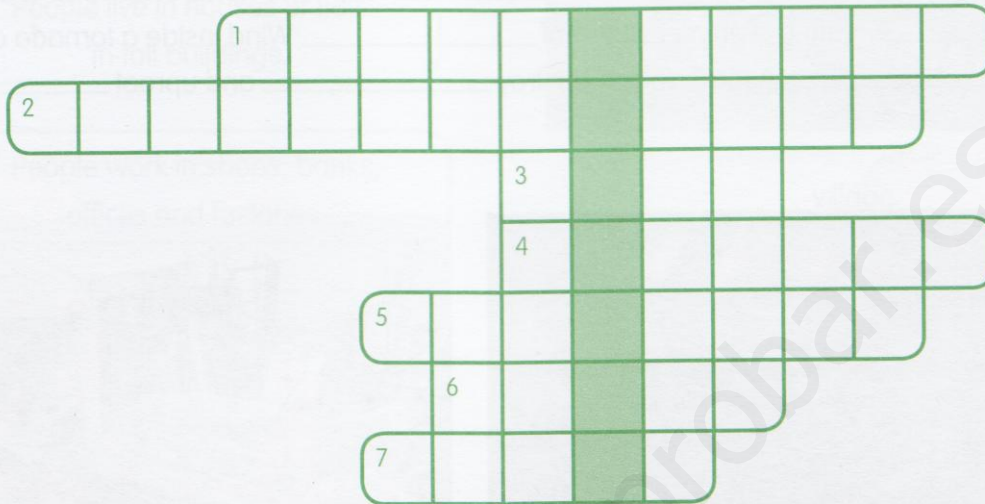
**5.- Match**

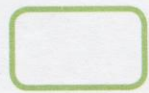
- a. Weather is
  - b. Weather refers to different things, such as
  - c. When temperature are low ,
  - d. When temperatures are high
1. temperature, precipitation and wind.
  - 2 the weather is hot.
  - 3.the weather is cold.
  - 4.the state of the atmosphere in a particular place and time.

**6.- Complete the puzzle. Then, draw and write the secret word.**



1. ... is how hot or cold it is.
2. ... is water falling from clouds in the form of rain, snow or hail.
3. ... is moving air.
4. ❄️ is the symbol for ... .
5. ... is the amount of water vapour in the air.
6. ☀️ is the symbol for ... .
7. ☁️ is the symbol for ... .



 is the weather symbol for \_\_\_\_\_.

**7.- Complete the definitions for these types of wind. Use these words.**

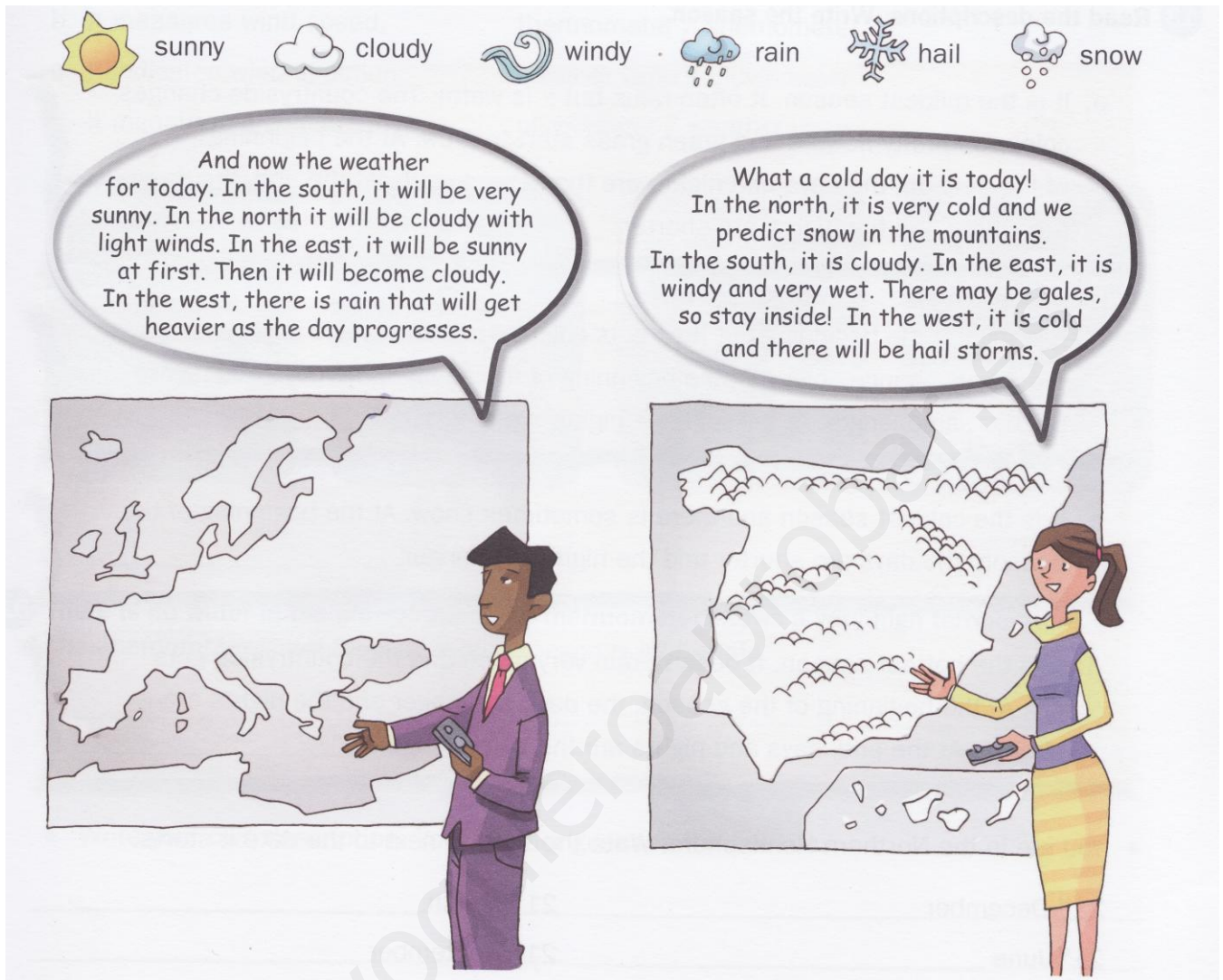
Light - strong - extremely strong - cold - mild - cold

A gale is a ..... wind. The temperature is.....

A hurricane is an ..... wind. The temperature is .....

A breeze is a ..... wind. The temperature is .....

**8.- Help the weather presenters on TV. Read the text and draw the symbols.**



**9.- Complete your bilingual dictionary.**

AIR AND WEATHER		
-Nitrogen: _____	-Precipitation : _____	-Weather vane : _____
-Oxygen : _____	-Atmosphere: _____	- Rain gauge: _____
-Carbon dioxide : _____	-Lower layer : _____	- Thunderstorm: _____
-Gale : _____	-Upper layer : _____	-Tornado : _____
- Hurricane : _____	-Outer space: _____	- Flood: _____
- Breeze: _____	-Air pollution : _____	- Drought: _____
-Wind : _____	-Thermometer: _____	-Meteorologist: _____
- Temperature : _____	-Hygrometer : _____	-Weather map: _____
-Humidity : _____	-Anemometer: _____	-Climate : _____



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