A. The main weather elements – temperature, rain, wind

We measure temperatures by means of a thermometer

1. A thermometer measures the temperature. Temperatures are different in different places.

2. In a thermometer we find a little tube containing mercury.

3. Mercury rises and falls according to how much hot or cold the place is.

4. We measure temperatures in degrees Celsius. A Swedish scientist invented the thermometer.

5. When the temperature falls down a lot, water freezes. When water is heated, it becomes very hot and starts to boil.

6. Some examples: a high temperature - 30° C - very hot
   a low temperature - 12° C - cold
   a very low temperature - 5° C - freezing

7. We can also use a thermometer to measure our body’s temperature. When our body’s temperature rises we say that we are running a fever and we are sick or ill.

B. Wind - directions and the wind vane
1. **Wind** is 'moving air'. A sailing boat is driven by the wind.

2. The wind pump (raddiena) moves by wind energy and it can be used to pump water from underground reservoirs.

3. Wind is invisible, we cannot see it, but we see leaves and flags moving with the wind, and we can also feel the wind on our faces.

4. Seeds are driven to far away places by the wind and plants and trees grow in different and new places.

5. **Wind** has a **FORCE** and a **DIRECTION**. A **breeze** is a soft wind while a **gust** is a strong wind.

6. A **wind vane** shows us the direction of the wind.

7. The **anemometer** shows us the force of the wind.

8. Two very cold winds are the North and the North-West winds. In Malta wind blows mainly from the North-West direction.

9. A 'Gregalata' is a very strong wind blowing from the North-East. It is usually a cold wind too.

10. The South wind is hot and dry and is very common in summer.

11. In Malta we don't have mountains to shelter and protect us from winds, so we feel it more.

12. Winds are stronger in high places such as Dingli, Rabat and Mellieha.
C. the wind rose (warda ta’ rjieħ)

1. The compass (boxxla) points always to the North and it is used for navigation.

2. We find the compass card on aeroplanes, ships and all sorts of boats.

3. It can be useful for hikers.

Fill in the names of the instruments.

1. _____________ shows us the direction of the wind.

2. _____________ measures the force of the wind.

3. _____________ measures the amount of rainfall.

4. _____________ measures the temperature in degrees Celsius.
D. Answer the following questions.

1. What is this instrument called?
   ______________________________________

2. What is it used for?
   ______________________________________

E. Underline the correct answers.

1. To measure the temperature we use the (thermometer, anemometer, rain-gauge, wind vane).
2. To measure the force of the wind we use the (thermometer, anemometer, rain-gauge, wind vane).
3. To measure the amount of rainfall we use the (thermometer, anemometer, rain-gauge, wind vane).

F. Match the following by writing numbers in the blank squares.

| 1. A rain-gauge                  | issues the weather report and forecasts. |
| 2. An anemometer                | measures the amount of rainfall.         |
| 3. A wind vane                  | Measures the force of the wind.          |
| 4. A meteorological office      | shows us the direction from which the wind is blowing. |
G. Answer the following with the help of the diagram.

1. Bertu is walking towards the church. In which direction is he walking?
   _______________________________

2. Bertu is walking to the sea. In which direction is he going?
   _______________________________

3. Bertu is walking towards the field. In which direction is he walking?
   _______________________________

4. In which direction must Bertu walk to go to the football ground?
   _______________________________
5. There remains four more directions.

These are: **South-West, North-West, South-East and North-East**.

Write these four directions in the diagram of exercise G.

G. Write down the following directions in their proper square.

Two are ready.

**North, West, East, North-West, South-West, North-East.**

![Diagram of directions]

H. What season is it, summer or winter?

| temperature: | highest 30°C    | night 20°C |
| wind:        | South          |
| sky:         | sunny          |
| sea:         | 28°C           |
| rain:        | nil            |
| season:      | ______________ |

| temperature: | highest 18°C    | night 9°C |
| wind:        | North          |
| sky:         | cloudy         |
| sea:         | 18°C           |
| rain:        | showers        |
| season:      | ______________ |
I. More Weather Instruments

Research by Moyra Sammut; Antoinette Attard & John Vella

Rain Gauge

1. A “raingauge”, measures the amount of rainfall in one day. Measurements are recorded in millimetres. About 500 mm or 50 cm of rain falls every year on the Maltese Islands.

2. A wind vane shows the direction from which the wind is blowing. An anemometer measures the force of wind.

3. Wind vanes and anemometers are widely used by the pilots of aeroplanes and ships.

4. The weather forecast is issued by the meteorological office that can be found in Luqa.

5. The compass shows us the wind direction and its arrow points always to the North. The compass is an important instrument for aeroplanes, ships and boats. It can be useful also for hikers.

6. Humidity consists of invisible water in the air around us. Although humidity is invisible, we can still feel and see its effects. When there's a lot of humidity in the air, roads become wet and slippery, even though it doesn't rain.
J. **Answer with the help of the diagram.**

1. If wind is blowing from direction number 2, from what direction is it blowing?
   ______________________________

2. Which direction is shown by number 6?
   ______________________________

3. Which direction is shown by number 1?
   ________________

4. Name direction number 4.
   ________________

5. The North-West direction is indicated by which number? ________________

6. Il-Lbiċ huwa mmarkat bin-numru:
   ________________

7. Is the South-East wind normally a cool or hot wind?
   ______________________________

8. What kind of wind, cool or hot, normally blows from direction number 5?
   ________________________________
K. Complete

1. Water that falls down as rain, was once:
   a) seawater
   b) soil
   c) a tree

2. Answer these questions about instrument A:
   a) What is the instrument called?
      __________________________________________________
   b) What is it normally used for?
      __________________________________________________

3. The instrument marked by the letter A can help us decide (the wind's direction, which clothes we should wear, what we should cook).

4. Answer these questions about instrument B:
   a) What is the instrument called?
      __________________________________________________
   b) What is it used for?
      __________________________________________________

5. Instrument B can help fishermen to decide whether they should (colour their nets, go out at sea to fish, eat fish or vegetables).

6. When the temperature goes down to about 5 degrees Celsius, the weather is normally (cloudy, very hot, very cold).
7. It was so hot yesterday that we had no energy at all. The weather report showed a temperature of (15, 150, 33) degrees Celsius.

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>1</strong></td>
<td>![Anemometer]</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>![Thermometer]</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>![Rain-gauge]</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>![Wind vane]</td>
</tr>
</tbody>
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**L. Write about the following instruments.**

1. **This is an ANEMOMETER.**
   - The anemometer is used to
     - [ ]
     - [ ]

2. **This is a THERMOMETER.**
   - We use a thermometer to
     - [ ]
     - [ ]

3. **This is a RAIN-GAUGE.**
   - A rain-gauge is used to
     - [ ]
     - [ ]

4. **This is a WIND VANE.**
   - We use a wind vane to
     - [ ]
     - [ ]
**M. Underline the correct answer.**

1. By means of the (rain-gauge, anemometer, wind vane, thermometer) we measure the amount of daily rainfall.
2. The force of wind is measured by the (rain-gauge, anemometer, wind vane, thermometer).
3. The direction of the wind is measured by the (rain-gauge, anemometer, wind vane, thermometer).
4. The (rain-gauge, anemometer, wind vane, thermometer) shows us the temperature of the air in degrees Celsius.

**N. Complete these sentences using the following phrases**

in Malta it can be really hot. in spring.
in winter. in autumn.
dries clothes in a short while. measures the amount of rainfall.
heavy rains. in summer.

1. In summer, ____________________________________________.
2. We can feel a lot of cold __________________________________.
3. We celebrate the feast of Easter ____________________________.
4. Robins migrate over Malta ________________________________.
5. We eat a lot of water melons ____________________________.
6. Thunder and lightning is normally followed by ________________.
7. A North wind, normally ________________________________.
8. A rain-gauge ________________________________________.