

## TOPIC

Weather

## SDGS



## LEARNING OUTCOMES

- 4.7.1 I can observe and record changes in the weather.
- 4.7.2 I can interpret basic weather charts and the symbols used.

## ADDITIONAL OUTCOMES

- I can record temperature using a microprocessor and a thermometer
- I can create animated weather symbols using a Micro:bit
- I can recognise and name different weather instruments
- I can appreciate the work of a local STEM professional: A Meteorologist

## MATERIALS NEEDED

<https://www.csm.edu.mt/stemmersion/>

- PowerPoint: stemmersion\_y4\_s2.pptx
- Video: Meteorologist.mp4
- VR expedition: Measuring weather in Malta | STEMMERSION on ExpeditionsPro App
- PowerPoint: stemmersion\_y4\_s2\_Microbit.pptx
- .hex programme using Micro:bit:  
stemmersion\_y4\_s2\_microbit\_weather\_symbols\_and  
\_temperature\_alarm code.hex
- VR Headsets
- Micro:bit / group
- Cables to connect Micro:bit / group
- Laptop / group
- Thermometer / group
- Other Weather instruments (if available)
- Weather station device (if available)

## KEY WORDS

Thermometer, wind vane, anemometer rain gauge, UV index, sunny, windy, cloudy, thunderstorm, snowy, barometer, atmospheric pressure, radiometer, rain gauge, anenometer

## SESSION ACTIVITIES



### Recording weather

- The teacher explains how a weather chart works
- Students recording the weather and air temperature daily for a week using thermometers or data from the internet on the Weather Chart (Found Online). Students are encouraged to use weather instruments (if available) such as weather vanes to observe and record wind direction etc.



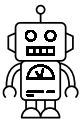
PowerPoint about different weather symbols and different instruments used to measure different weather conditions.



Maltese STEM Professional Video: A local Meteorologist who explains how weather was recorded in the past and today, the different weather instruments and symbols, and the importance of knowing the weather for farmers, fishermen, pilots etc.



VR expedition: Measuring Weather in Malta | STEMMERSION on ExpeditionsPro which can be seen through a VR headset.



### Coding the Micro:bit

- The students code the Micro:bit to create animated weather symbols such as rain, sun etc.
- They then code the microbit to measure the temperature and set an alarm so if the recorded temperature is more than a specific temperature the Micro:bit would sound an alarm and display a message for them to water the plant. (More info can be found in the PowerPoint)

## CONCLUSION

Students practice the weather symbols with the following game:  
<https://learningapps.org/watch?v=ps7q8jeo523>