

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS

WEATHER WATCHERS

THESE ACTIVITIES FOLLOW ON FROM THE WEATHER WATCHERS WORKSHOP THAT YOU HAVE TAKEN PART IN AT DUMFRIES HOUSE STEM CENTRE. USING WHAT YOU LEARNED ABOUT THE WIND AND WEATHER DURING YOUR VISIT CAN YOU MEASURE THE WEATHER AT HOME OR SCHOOL USING THESE RESOURCES?

ACTIVITY 1:

MEASURE THE WIND USING BUBBLES, CHALK AND A COMPASS

1. Find a windy place and draw or mark a circle on the ground.
2. Stand inside the circle and blow bubbles, choose one bubble to follow until it either bursts, you cannot see it, or it is no longer safe to follow it. Mark this point on the ground with an “x”, or handy object. (be careful not to follow your bubble into any roads or dangerous areas.)
3. Now return to your circle and draw a small arrow from the edge of your circle pointing towards the cross of marker you used.
4. Repeat steps 2 and 3 at least four times, in science the more times you repeat an experiment the more reliable your results will be.
5. Once you have at least 4 arrows you will need to decide what the most common direction is that the bubbles went in. Once you have decided this then draw a large arrow pointing in this direction.
6. Now find north, there are a few ways you can do this, use a compass on a flat surface, the red arrow will always point north. Look at your shadow, in Scotland your shadow will point roughly north at around about lunch time, north is where your shadow’s noggin (head) is south is down next to your shoes.
7. Now that you know the direction the wind is coming from you can have a go at predicting the weather. Wind from the south generally brings warm weather, wind from the west generally brings wet weather, wind from the north generally brings cold weather and wind from the east generally brings mild weather.

IF ALL OF YOUR BUBBLES WENT IN COMPLETELY DIFFERENT DIRECTIONS THEN YOU HAVE FOUND A SPOT OF TURBULENCE, WHERE THE WIND IS BOUNCING OFF OF OBSTACLES LIKE BUILDINGS, YOU WILL NOT BE ABLE TO FIND THE WIND DIRECTION HERE, DRAW A BIG “T” INSIDE YOUR CIRCLE AND TRY ANOTHER SPOT AWAY FROM THESE OBSTACLES.

ACTIVITY 2:

BEAUFORT, HOW FAST IS THE WIND BLOWING?

1. Now that you know what direction the wind is coming from you can measure it’s speed.
2. Download the Beaufort Scale from The Royal Meteorological Society www.rmets.org/metmatters/beaufort-scale
3. Use the Beaufort Scale to observe the impact of the wind today and note the speed the wind is travelling inside your circle from activity 1.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS

USEFUL RESOURCES

MET OFFICE WOW:

www.wow.metoffice.gov.uk

REPORT YOUR WEATHER OBSERVATIONS TO HELP METEOROLOGISTS MAKE MORE ACCURATE PREDICTIONS

MAKE YOUR OWN WEATHER STATION:

www.metoffice.gov.uk/weather/learn-about/met-office-for-schools/other-content/other-resources/weather-station/index

BUILD A WEATHER STATION TO ALLOW YOU TO MONITOR THE WEATHER AT SCHOOL

HELP MONITOR CLOUD COVER:

www.zooniverse.org/projects/nasaglobe/nasa-globe-cloud-gaze

HELP NASA SCIENTISTS IDENTIFY CLOUDS TYPES, CLOUD COVER, AND SKY COLOUR IN THIS ONLINE CITIZEN SCIENCE PROJECT.

