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Life as a Meteorologist

Courtesy of Environment Canada's "Skywatchers" website: http://www.on.ec.gc.ca/skywatchers/index_e.html

Forecasting the weather is very interesting... whether it's a sunny weekend, a hurricane, or some other wild weather. If you're interested in the weather, like to solve problems, and want a job where you work with people and computers, then maybe meteorology is the career for you.

Atmospheric science is the study of the atmosphere – the thin layer of air covering the Earth. Atmospheric scientists study everything about the atmosphere and how it moves and changes. The best-known atmospheric scientists are meteorologists who forecast the weather, but atmospheric scientists may also study things like air pollution or trends in the climate of the Earth such as global warming or droughts (dry weather) or ozone holes in the Arctic.

A meteorologist needs to have an assortment of skills and education. A strong science background is important and meteorologists must complete either a Bachelor of Science Degree (BS) in atmospheric science or in math or physics with extra training in meteorology. Meteorologists must have strong communication skills and must be good at turning lots of complex data into information that people can use.

Meteorologists study information on air pressure, temperature, humidity, precipitation and wind. They use computers to watch how these change and then use that information to make weather forecasts. Their data come from weather satellites, weather radar, computers, sensors and observers all over the world. One meteorologist might write the weather forecasts and weather warnings for a huge area, giving people the weather information they need to plan their day and letting them know when severe weather is expected.

Every day is different and that goes along with how quickly the weather changes. One day might be quiet, while the next day is busy tracking a severe storm or lightning strikes across the region. Whether it's day or night, weekday, weekend or a holiday, there are always meteorologists forecasting the weather in the Storm Prediction Centers. It's great knowing that Environment Canada's weather forecasters are helping to keep people and property safe.

One thing is for sure: If you choose a career in weather, you'll hear about it if your sunny forecast turns to rain. Meteorology as a career is fun, but very challenging.

FACTOID

Aristotle, an ancient Greek philosopher invented the term meteor to mean "things in the air". Weather forecasters are called meteorologists because they work with things in the air: rain, snow, ice, clouds, and air pollution.

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“Life as a Meteorologist” questions

1. Why are weather forecasters called meteorologists?

2. With which statement would the author of the article most agree?
 - a. A meteorologist must be skilled in art, science, and math.
 - b. Meteorologists are computer experts.
 - c. You must be attractive and a good actor to be a meteorologist.
 - d. A meteorologist must excel in computer research, science, communication skills, and problem-solving.

3. What does the author imply in the statement, “Meteorology as a career is fun, but very challenging”? Use a fact from the article to support your answer.

4. Which skills do you possess that would make meteorology a possible career choice for you?

5. Sunny McGregor reported that the high yesterday was 23° F. The low temperature was -2° F. What was the difference in temperatures?

6. The temperature at 3:00 am was 7° F. For each of the next two hours the temperature dropped 5°F. What was the temperature at 5:00 am?

7. Sunny McGregor, the meteorologist, recorded the following temperatures for Oslo, Norway, the first week in December: -5°, 4°, 12°, 6°, -3°, -1°, 7°. What was the range of temperatures?

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8. The weekly salary for 10 meteorologists is given in the chart below. Find the mean salary.

Weekly salary	Number of people
\$500	5
\$600	3
\$700	2

9. You are interviewing for a position as a meteorologist. The manager of the television station shows you the following salaries: \$32,500; \$40,000; \$36,000; \$72,000; \$38,525. Which measure of central tendency (mean, median, mode, or range) best describes the salaries earned at the television station? Why did you use that measure?

10. For homework tonight:

a. Research Doppler radar. What does it do? Why is it important to meteorologists?

b. Ask you parent/guardian which meteorologist they regularly watch on television or listen to on the radio. Why do they trust that meteorologist?

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Enrichment activity

Steps for graphing the monthly mean temperatures for European capitals:

1. Record the capitals of the following European countries:
 - a. England _____
 - b. France _____
 - c. Germany _____
 - d. Greece _____
 - e. Ireland _____
 - f. Italy _____
 - g. Spain _____
2. Go to the website www.worldweather.org Who developed and maintains this site?
3. Record on the back of this paper the monthly mean temperatures (both minimum and maximum temperatures) **in degrees Fahrenheit** for one of the European capital cities you listed above.
4. Make a spreadsheet and graph of your data. Follow these guidelines carefully.
 - Find the Excel program on your computer. (It might be in Microsoft Office.)
 - On a new spreadsheet, select cell A1 and type the following words: Month *enter* Jan *enter* Feb *enter* Mar *enter* Apr *enter* May *enter* Jun *enter* Jul *enter* Aug *enter* Sept *enter* Oct *enter* Nov *enter* Dec *enter*
 - Select cell B1 and type the following data: Minimum (Low temps in degrees Fahrenheit) *enter* then type in cells B2-B13 the low temperatures for each month that you recorded on the back of this sheet.
 - Select cell C1 and type the following data: Maximum (High temps in degrees Fahrenheit) *enter* then type in cells C2-C13 the high temps for each month that you recorded on the back of this sheet.
 - Select cells A2:C13 (highlight this area).
 - Choose “Chart” from the “Insert” menu.
 - In Chart Wizard, select the “Standard Types” tab.
 - In Chart Type, select “Line.”
 - Click the Next button two times to go to the Chart Options.
 - Select the “Titles” tab. For the Chart Title, type Monthly Temps (High/Lows) for the European city and country that you researched. For the Category (X) axis, type Months. For the Category (Y) axis, type Temperatures (degrees Fahrenheit).
 - Click on Finish.

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- Double click on any value seen on the vertical (Y) axis.
- Select the “Scale” tab. For minimum enter 0. For maximum enter 100. For Major Unit type 10. Click the OK or Finish button.
- Move the graph below the spreadsheet data so you can see both.
- Print the spreadsheet and graph. Write your name on your paper and hand it in.