

WRITING ABOUT CONTROL

The world has just discovered **homeostasis**, that is the way in which the body is able to keep its internal environment constant. You are a freelance reporter and you have been asked to write the same item for two very different magazines. It is important that you use the correct language for each magazine, so that the readers can understand your article. These magazines are called

- *Biology Weekly*
- *Control Gazette*

Your article will explain homeostasis by describing how the body keeps a steady temperature. Describe what happens in hot weather, cold weather and when you exercise. Describe and explain how the body controls its temperature. Write the article twice:

- Write in a scientific language for the *Biology Weekly*.
- Write in a technological language for the *Control Gazette*.

Here are a list of words you might use.
Choose your words carefully.

receptor, monitor, control, sweating, muscle, process, feedback, shivering, system, contraction, analogue, liver, stimulus, effector, capillaries, output, closed loop, open loop, expansion, input.
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- Can you illustrate you article with a scientific diagram (a flow chart) and a technological diagram (a control system block diagram) to show what is happening, still using the correct language?

Heres an example of an article for *Biological Weekly* - see if you can fill in the missing words.

BIOLOGICAL WEEKLY

23 OCTOBER ISSUE 101

HOMEOSTASIS DISCOVERED!

A report by our Scientific Correspondent - Pat Smith

Maintenance of the internal environment

The scientific world has just discovered how our bodies are able to keep us comfortable at all times. This process which is called _____, enables the body to maintain a constant internal _____.

How a constant temperature is achieved.

The body is constantly monitoring the temperature of the _____, any change in temperature triggers off a _____ which will raise or

lower the temperature to return it to the optimum of 36 _____ C. Once the temperature is back to normal any response will stop.

In hot weather the body must _____ its temperature and to do this it sweats and expands the blood capillaries becoming red. The _____ evaporates on the surface of the skin, and the expanded _____ radiate heat from the skin surface, both these _____ the temperature of the body.

When the air around the body becomes _____ and the body

temperature begins to drop, _____ has to be conserved. Various activities help to maintain heat in the body, such as _____ and goose pimples. Briefly shivering is a small movement of the _____ which produces heat. _____ help to preserve heat but are more effective in animals with fur. The _____ which cause the hair on the body to stand upright are contracted, fluffing out the fur which forms an _____ layer around the skin.