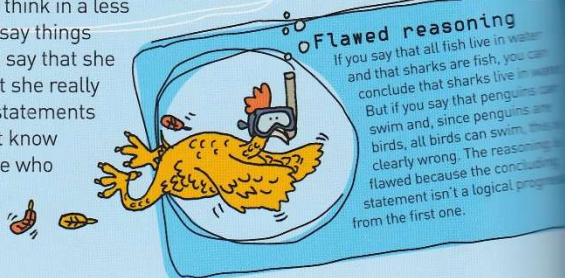
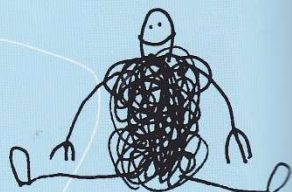


LOGIC

Everyone thinks, but some people think in a less disciplined way than others. They say things that don't add up. Someone might say that she hates all animals but then say that she really likes her neighbor's cat. The two statements contradict each other, so you don't know which one to take seriously. People who talk like this are often said to be lacking in logic—they can't analyze what they say and see the flaws in it. Logic is all about thinking clearly.



Use your head

Logic involves using sound reasoning to draw the right conclusions from known facts. If you cannot fault the reasoning, it is likely that the conclusions are correct. Checking the reasoning is an important part of logical thinking.

But perfectly good reasoning is no use if the basic facts are wrong, so you have to check those as well.

Testing the argument

The ability to test the argument is important when you can't test the conclusion. Bacteria are well known to cause tooth decay, so it is logical to argue that a toothpaste that destroys bacteria will help prevent tooth decay. You have to trust the logic, because you have no way of testing the effect on your teeth.



Logic and philosophy

The intellectual discipline of philosophy, first practiced by the ancient Greeks, is mostly about logic, because it uses reasoned argument to investigate concepts such as truth, beauty, and justice. To many people, these exercises are intellectual games, as we believe we know the answers through common sense. But common sense can be misleading if it is based on false ideas. The rigorous, logical argument encouraged by the study of philosophy has real practical value.

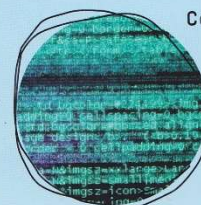
Persuasive logic

Many people use logic to persuade others. If someone says something that you don't believe but then backs it up with a solid logical argument, you might start to believe it. But if there is no logical argument to back it up, you will not be persuaded. This makes logic very important for lawyers and politicians such as Hillary Clinton.



Computer logic

Logic is vital to computing. All computers are controlled by long strings of electronic instructions called programs. These are devised by programmers who have to convert their ideas into a code that a computer can read. If the coded instructions are not logical, the program will not work.



Checking the facts

Very often people come up with conclusions that are based on ideas that are wrong. If making teeth shiny really did make them healthy, the argument in this advertisement would be fine. But simply brushing your teeth does not prevent tooth decay, so the facts are wrong. It's important to check the facts as well as the logic.