Ask Jon Eakes

BASEMENTS AND CRAWL SPACES

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I love the story that Harold Orr of the National Research Council tells about basements. Years ago, a farmer went into his field, dug a hole and prayed to God that it would fill up with water for his cows. He called it a watering hole. Then a housing developer bought the farm, dug a hole on the same land and prayed to God that it would stay dry. He called it a basement. Harold doesn't like basements.Almost half the questions I receive at home shows deal with basement problems and I have come to agree with Harold. He argues that taking into consideration the building, insulating and maintenance costs, it is cheaper in Canada to build, heat and maintain space above ground (another floor or finished attic) than underground. As Harold is famous for putting it -- the only trouble-free basement is one above ground. But then you would have to insulate your crawl space, I'll cover that here too.The historical evolution of the basement is interesting, especially since we can see traces of it in many older homes. It started out as a root cellar to preserve vegetables through the winter, or sometimes as a coal bin below the house. With time, these holes under the house were made larger and larger to house the heating systems and then general storage. Then we began to recuperate some living space by making recreation rooms and finally they because full living suites for grandma -- all partially underground. In Canada we don't realize it, but basement are a northern cultural phenomena. Most houses in the southern US have no basements. The bottom of the house is simply a concrete slab poured right on the soil.We're talking about existing houses in this book and you may very well have a basement. To be honest, it must be said that insulating basements is still more of an art than a science; basements and soil conditions vary greatly and the long-term effects of different practices are really not that well known. When evaluating basement recommendations, take into account who is doing the recommending. One school of thought, which I belong to, is very cautious and emphasizes protecting the structure of the basement, even if it is to the detriment of conserving maximum energy. Another school of though tries to maximize energy conservation until proven problems indicate they should back off. And there are always those who try to sell their products or services without much concern for either protecting the structure or conserving energy.Don't think that all questions about basements are settled. Even in the year 2000 we are waiting for results of new research on just how basement walls get wet and get dry and even some answers to the very strange proposition of perhaps modifying the concept of a vapour barrier in the basement. But we do know a lot about what works and what doesn't work and that is what I will try to present here.

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