

and human embryological development. Children's fears and misinformation were replaced by knowledge and understanding about their own bodily growth and development. Evidence was conclusive that human and chick embryological development con-

cepts can be a rewarding and meaningful experience for primary-level children.<sup>1</sup>

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<sup>1</sup>Unit content verification by the NSF sponsored Elementary School Science Project at the University of California, Berkeley.

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### **Rabies IV: What It Is Like**

The rabies victim not only suffers intensely, but is a harrowing sight as he sinks into a coma and eventual death.

Rabies is passed ordinarily from animals to man by a bite from the rabid animal. Usually, the rabies symptoms develop within two weeks to three months after the bite has been incurred. However, if the bite has been on the head or face and is of a severe nature, symptoms may manifest themselves in as few as ten days. With slight wounds the incubation period is longer and has been known, though rarely, to have been delayed a year or even longer.

Rabies is not an inevitable result of a bite from an infected animal. The fact is that less than 20% of the individuals exposed to the disease contract it. But that, of course, is not the point; no one knows who will develop rabies and who will not thus making inoculation of all exposed persons vital. Once symptoms appear there is no known cure. Persons with bites on the face or hands have been shown, statistically, to be more vulnerable to the disease than those with wounds inflicted upon other parts of the body. Children, naturally and most tragically, because of their carefree and casual habits, are its most frequent victims. It has been estimated that 60% of rabies-induced fatalities are youngsters.

There are two types of rabies, so-called "dumb" and "furious" rabies with the latter being the more common.

At first, dogs infected with the virus will act "strangely," that is, there will be a departure from normal habits, either the animal will be unnaturally withdrawn or abnormally attentive. Following this stage, which lasts only a couple of days, the dog will have an irresistible tendency to wander far afield. And it is then that the damage is done for it is during this period of roving that he is

"mad." The dog will bite humans or animals at will thus infecting them with the fatal virus. It is also during this period that the animal appears to be frothing at the mouth, the familiar symbol of the "mad" or rabid dog. Actually, the animal's appearance is not caused by undue salivation, but to an accumulation of the saliva due to difficulty in swallowing. When the roving is over, the animal comes home to die. Returning to his familiar haunts, he finds an isolated place to suffer his final paroxysms, lapse into a paralytic state, and die.

"Dumb" rabies differs in that there is no roving or "mad" period. Paralysis, usually of the lower jaw is the first recognizable symptom. This soon spreads to the limbs and vital organs resulting very shortly in death.

Human beings, since rabies principally attacks the central nervous system, experience the same spasms of moody depression or abnormal excitement in the early stage. Later as the disease secures its hold the hapless victim endures seizures of pain, an often maniacal fury, a dread of water or liquid, and an extreme sensitivity to alterations of temperature, light, and surroundings. Frequently, it is necessary to keep the advanced rabies patient under sedation. Finally, in most cases, paralysis and coma quiet the victim until death ends his misery.

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### **Pesticides**

The Public Health Service's Office of Pesticides Intelligence System has awarded a \$59,500 grant to the Midwest Research Institute in Kansas City, Missouri to develop a monitoring system to determine the amounts of pesticides in the general population. 135 stations for collecting human tissue and body fluids will be established throughout the U.S.