Auditioning AudioVisuals

By staff members of the Audio-Visual Center of Indiana University, unless otherwise noted

Dissection of a frog [two filmstrips]. Color, sound; 31 min. (part 1: 63 frames, 18 min.; part 2: 46 frames, 13 min.). 1970. Library Filmstrip Center, Wichita, Kan. $40.00.

These filmstrips have a narration on audible-signal cassettes. Part 1 illustrates the skin and the muscular, nervous, endocrine, and reproductive systems of the frog; part 2 illustrates the excretory, circulatory, respiratory, digestive, and skeletal systems. Each tape includes dissection methods and encourages observation and experimentation.

These filmstrips may be used before, during, or after the frog dissection. A few diagrams are used for clarification. The set is most appropriate to junior and senior high school use.

Harold Durst
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Ecology checks and balances, 16 mm, sound, color; 1970: Pyramid Films, Santa Monica, Calif.

Aphids are prolific; if unchecked, within a few months the offspring could surpass our planet in weight. One adult ladybird beetle eats approximately 50 aphids a day, and one larva eats dozens a day. The main theme of this film is the important ecologic relationships between ladybird beetles and aphids. We are shown the life cycles of both insects. Several species of aphids and ladybird beetles appear, and there are numerous shots of the adult and larval forms of ladybird beetles eating aphids.

Brief scenes show the ant–aphid relationship and a preying mantis capturing and eating the ladybird beetle. The role of the male aphid is presented briefly and not very clearly. Excellent shots of the birth of an aphid, of pupation, and of the emergence of the adult ladybird beetle are in contrast with the mediocre and probably unnecessary concluding scenes of aphids and beetles in a garden. An informal narration supplements the visuals very well; and although the film is slow-paced and repetitious, it never drags.

Some of the previewers thought the music was appropriate; others found it distracting. If used properly, this film could accomplish the same end as the hard-sell, scare films on ecology. The dramatic aphid–beetle relationship could be used as a starting point for discussions of other ecologic relationships and the results of disturbing the balance.

George Vuke

Animal systems, series of five films, 16 mm, color, sound. 1972: Audio-Visual Center, Indiana University, Bloomington. George Vuke, educational author and production supervisor; Harper Follansbee, educational consultant.

These outstanding films present a survey of animal systems from simple to complex, with special emphasis on their physiology, structural changes, and adaptations. The most conspicuous features of the films are the excellent photography, the use of freshly dissected specimens, and the movement of body parts to illustrate physiologic aspects of the organism. Animation is used sparingly and appropriately. Teachers who use BSCS materials will find these films quite appropriate as supplements to chapter readings. Non-BSCS teachers will find the films helpful in presenting animal systems in a more functional way. It is important that teachers give reading assignments before showing the films, to enhance understanding. The films can be used separately or as a series, because they follow quite closely the general sequence of material on animal systems covered in many textbooks. The narration is properly paced, and with some exceptions the labeling appears to be well coordinated with the narration. Key labels are overprinted for clarification. The choice of animals for each film coincides closely with those animals used in most textbooks; in addition, some unusual organisms are used to illustrate certain systems. Students who have viewed these films include first-year and second-year biology sections, and all reacted quite favorably. The contents of the five films are as follows:

Digestive Systems in Animals (15 min) has excellent shots of peristalsis and moving villi in the small intestine. The dissected cat used to illustrate the digestive system of a mammal is one of the few preserved specimens used; perhaps a freshly dissected rat would have been better. The use of a living amoeba at the beginning, illustrating phagocytosis, prompted one student to say: "We didn't get a chance to see an amoeba engulfing a good particle when we looked at it under the microscope in the laboratory." The earthworm sequences and the beating cilia of *Stentor* are particularly good.

Transport Systems in Animals (17 min) has a very fast pace; unless the students are familiar with the names of the blood vessels of a frog, they might find viewing this portion of the film difficult. There are excellent shots of hearts beating in a number of different organisms. The contraction of the aortic loops in the earthworm is worth seeing. The subjects progress from cytoplasmic streaming in *Amoeba* to more complex methods in *Hydra, Planaria,* earthworms, mollusks, insects, salamanders (axolotls), reptiles, birds, and mammals. Open and closed circulatory systems are stressed. One of the highlights of the film is the opening and closing of valves in a mammalian heart.

Excretory Systems in Animals (16 min) has some particularly good animated segments. Simple diffusion in lower animals is followed by more complex excretory methods in higher organisms, such as *Planaria,* rotifers, earthworms, insects, crayfish, amphibians, and mammals. There are excellent pictures of the nephrostome in the earthworm and of beating cilia in the flame cells of living *Planaria.* The discussion of waste products, such as ammonia, carbon dioxide, urea, and uric acid, in simple to complex animals is quite meaningful and well illustrated.

Respiratory Systems in Animals (14 min) has some outstanding sequences—in particular the movement of red blood cells through gill filament capillaries, opening and closing of the glottis in a live frog, the tracheal system in the grasshopper, diaphragm action in the rat, and x-ray photography of the human chest and diaphragm in action. This film brings out the more functional aspects of respiratory systems. The summary is particularly good for class discussion, which should follow the film. The choice of organisms is quite appropriate and coincides very closely with most textbooks. The addition of the axolotl in most of the films is most interesting.

Nervous Systems in Animals (17 min) begins with responses of *Paramecium, Amoeba,* and *Euglena* to external stimuli. This is followed by responses of multicellular organisms. In addition, there is a sequential presentation of the development of the animal nervous system; this includes a detailed treatment of the earthworm and an insect. There is a good functional comparison of vertebrate brains and nerves.

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