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Title : Science course unit 18
(Cells and organisms-title from script)
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Producer: Nat Taylor

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Form VTR

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Seq.	Time	Footage	Sequence List	Sound Cue
1.	26"		Film shots of the following under magnification: Paramecium) commentary by M. Pentz	593.17
	31"		Euglena)	589.44
	37"		Amoeba)	593.117
	1'23"		A darning needle is placed under the microscope near paramecium to illustrate the size of the animal. Prof. Pentz introduces Dr. Varley.	this programme, Dr. Varley.
2.	2'40"		Dr. Varley with a model of the tip of a darning needle and of paramecium to scale. She points out the cilia and various organelles.	When you first 593.17 593.10184
	3'18"		Model of Euglena. Varley points out the sub-cellular organelles, the single long cilia and the chloroplasts.	589.44 Varley, M.E.
	3'45"		Model of Amoeba. Varley points out various sub-cellular organelles.	593.117
	5'31"		The following film sequence, showing a variety of single cell organisms, concentrates mainly on the various uses of the Cilia although other functions are also explained. Paramecium showing use of cilia for movement and eating Food particles in body of paramecium seen. Digestive process explained. Water pumping mechanism shown.	574.8764
			Several other organisms are seen using their cilia in various ways.	

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Continuation

Seq.	Time	Footage	Sequence List	Sound Cue
2.	8'03"		Shot of organism using lia to create a current in the water which draws food particles to itself. Shot of food particles being gulped into food vacuoles of the organism.	
	8'31"		Vegetarian organism eating strands of algae.	
	9'32"		Euglena moving around by use of cilia and by body shape changes.	
	10'11		Movement of Amoeba seen as an example of movement without the use of cilia. Various aspects of amoeba are discussed.	
	10'44"		Dr. Varley briefly discusses the ways in which organisms can become larger.	we ourselves evolved.
3.	11'58"		Pentz introduces the section on the heart.	The main theme 591.116
	12'39"		R.M. Holmes shown with a beating rabbit heart in his hand.	591.0724
	15'45"		Holmes with a simple life support system. He explains how the apparatus works. Beats from a heart connected to this system are monitored on a sooted paper drum (a kymograph)	577.028
	17'37"		The experiment is performed by Holmes in the O.U. Lab. at Milton Keynes. Holmes cuts the heart from a freshly killed rabbit.	Holmes, R.M.
	18'30"		The heart is placed into ice cold Ringer solution to stop the beat and to clean the heart. Clean heart is taken out and examined.	
	20'40"		The rabbit heart is tied to the life support system and slowly revived with warm (37°C), oxygenated Ringer solution. The beat of the revived heart is recorded on a Kymograph.	

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Continuation

Seq.	Time	Footage	Sequence List	Sound Cue
3.	21'30"		Adrenalin is added to the Ringer solution and the effect on the heart shown on the monitor. The beat becomes stronger and more rapid.	615.711 591.1160724
	22'11"		Acetylcholine is added to the Ringer solution and its effect on the heart shown on the monitor. The beat becomes weaker and slower.	615.716
	23'25"		Holmes goes over the Kymograph traces for all three conditions above. He explains the delay in action of adrenalin and acetylcholine.	but clearly visible.
4.	24'15"		Pentz sums up. Credits	Well, now you've seen ....