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Mathematics has always benefited from its involvement with developing sciences. Each successive interaction revitalises and enhances the field. Biomedical science is clearly the premier science of the foreseeable future. For the continuing health of their subject mathematicians must become involved with biology. With the example of how mathematics has benefited from and influenced physics, it is clear that if mathematicians do not become involved in the biosciences they will simply not be a part of what are likely to be the most important and exciting scientific discoveries of .all time.

1. Continuous Population Models for Single Species2. Discrete Population Models for a Single Species3. Continuous Models for Interacting Populations4. Discrete Growth Models for Interacting Populations5. Reaction Kinetics6. Biological Oscillators and Switches 7. Belousov-Zhabotinskii Reaction8. Perturbed and Coupled Oscillators and Black Holes9. Reaction Diffusion, Chemotaxis and Non-local Mechanisms10. Oscillator Generated Wave Phenomena and Central Pattern Generators11. Biological Waves: Single Species Models12. Biological Waves: Multi-species Reaction Diffusion Models13. Travelling Waves in Reaction Diffusion Systems with Weak Diffusion: Analytical Techniques and Results14. Spatial Pattern Formation with Reaction/Population Interaction Diffusion Mechanisms15. Animal Coat Patterns and Other Practical Applications of Reaction Diffusion Mechanisms16. Neural Models of Pattern Formation17. Mechanical Models for Generating Pattern and Form in Development18. Evolution and Developmental Programmes19. Epidemic Models and the Dynamics of Infectious Diseases20. Geographic Spread of EpidemicsAppendicesBibliographyIndex

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