

CONTENTS

	Page
LETTER OF TRANSMITTAL	iii
PREFACE	vii
THE DIRECTOR'S STATEMENT	ix
PROGRAM ACTIVITIES OF THE NATIONAL SCIENCE FOUNDATION	1
INTRODUCTION AND SUMMARY	3
RESEARCH SUPPORT ACTIVITIES	29
Mathematical and Physical Sciences	34
Chemistry	34
Physics	45
Astronomy	56
Kitt Peak National Observatory	58
Cerro Tololo Inter-American Observatory	64
National Radio Astronomy Observatory	66
Mathematics	76
Biological and Medical Sciences	80
Environmental Sciences	87
The United States Antarctic Research Program	88
Atmospheric Sciences	92
National Center for Atmospheric Research	92
Weather Modification	100
Global Atmospheric Research Program	105
International Years of the Quiet Sun	106
Meteorology	107
Aeronomy	110
Solar-Terrestrial Research	114
Oceanography	116
National Ocean Sediment Coring Program	117
Earth Sciences	126
Engineering	130
Social Sciences	139
SCIENCE EDUCATION	149
Graduate Education in Science	153
Graduate Traineeships	155
Graduate Fellowships	155
Fellowships for Advanced Scholars in Science	155
Advanced Science Education Activities	156
Undergraduate Education in Science	158
College Teacher Programs	160
Instructional Improvement	164

	Page
Special Projects for Undergraduate Education	166
Undergraduate Research Participation	168
Pre-College Education in Science	169
Activities for Secondary School Students	173
Pre-College Teacher Education Activities	174
Special Projects in Pre-College Science Education	179
Public Understanding of Science	180
INSTITUTIONAL PROGRAMS	181
Institutional Grants for Science	182
Graduate Science Facilities	183
Science Development	186
University Science Development	187
Departmental Science Development	190
College Science Improvement	191
COMPUTING ACTIVITIES IN EDUCATION AND RESEARCH	193
SEA GRANT PROGRAMS	197
SCIENCE INFORMATION	203
Discipline-Oriented Information Systems	205
Federal Science Information Activities	210
General Science Information Activities	210
INTERNATIONAL SCIENCE ACTIVITIES	213
Strengthening U.S. Science	213
International Nongovernmental Scientific Organizations	216
Development Assistance Programs	217
United States Exhibit in Brazil	218
SCIENCE PLANNING AND POLICY STUDIES	219
Identification of Current and Future Issues Requiring Policy Decisions	220
Evaluation of the Needs of Science and the Role of Science in Society	222
Development of the Basic Tools for Science Planning and Policy Formulation	224
 APPENDICES	
A. National Science Board, NSF Staff, Special Commission, Advisory Committees and Panels	229
B. Financial Report for Fiscal Year 1968	253
C. Patents Resulting from Activities Supported by the National Science Foundation	257
D. National Science Foundation-Supported Scientific Confer- ences, Symposia, and Advanced Science Seminars Held During Fiscal Year 1968	259
E. Publications of the National Science Foundation Fiscal Year 1968	267
INDEX	269