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1 Understanding Our Environment



Learning Outcomes 1

Case Study Saving the Reefs of Apo Island 2

1.1 Understanding Our Environment 3

- We live on a marvelous planet 3
- What is environmental science? 3
- Environmental science is a global subject 4

1.2 Problems and Opportunities 4

- What persistent challenges do we face? 4

Active Learning Finding Your Strengths in This Class (in-class activity) 5

- There are also many signs of hope 6

1.3 Human Dimensions of Environment Science 7

- Affluence has environmental costs 8
- Sustainability is a central theme 8
- Where do the rich and poor live? 8

Exploring Science How Do We Know the State of Population, Poverty, and Other Issues? 9

- Indigenous peoples are guardians of much of the world's biodiversity 10

1.4 Science Helps Us Understand Our Environment 11

- Science depends on skepticism and accuracy
- Deductive and inductive reasoning are both useful 12

- The scientific method is an orderly way to examine problems 12
- Understanding probability reduces uncertainty 13
- Experimental design can reduce bias 13
- Science is a cumulative process 14

Active Learning Calculating Probability 14

Exploring Science Why Do Scientists Answer Questions with a Number? 16

- What is sound science? 16
- Is environmental science the same as environmentalism? 16