

Unit 1: Lesson 5- What are some scientific tools?

Vocabulary

1. Microscopic (page 45)-

2. Balance (page 48)-

3. Spring Scale (page 49)-

4. Accurate (page 51)-



Field Trips Page 42-43

1. What are field scientists?

2. What kind of investigations do field scientists do?

3. Some science questions can only be answered by field investigations. For example: How far do elephants call travel in a forest? What tools would a scientist use to answer this question?

4. Why would a scientist repeatedly observe elephant calls in a forest?

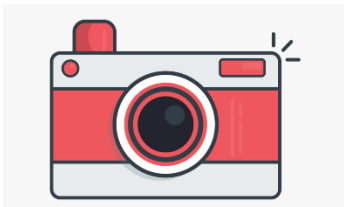
5. What kind of questions about wild elephants could you investigate with a video camera?

6. Why would this investigation need to take place out in the field?

7. What are collecting nets used for?

8. What kinds of field investigations could you do with a hand lens?

9. What are cameras used for?



Into the Lab Page 44-45

10. Why do some scientists study in the lab rather than out in the field?

11. What are some tools that a scientist working in a laboratory would use?

12. What are computers used for in a laboratory?

13. What is one thing all scientists must be comfortable with? Why?

14. What are microscopes used for?

15. What are droppers used for?

16. What is the difference between a light microscope and an electron microscope?

17. What is the difference between a dropper and a pipette?



Measuring Up Page 46-47

18. What is a measurement?

19. What is the international System of Units (SI)?

20. Even though the United States doesn't follow the SI units and uses English measurements, why is it important for scientists to use the SI units instead of English measurements?

21. What are the everyday units used to purchase fruit and cheese in the United States?

22. What units would be used if the United States used the SI units?

23. What are some everyday units of length used in the United States?

24. What is length? How is length measured in the SI?

25. What is time? How is time measured in the SI?

26. What is temperature? How is it measured in the SI?

27. How would the air feel if it were 32°C today? _____

28. Of the SI metric units for measuring length, time, and temperature, which one do you use in your everyday life? _____

Measuring Up Continued... Page 48-49

29. What is a balance? How is mass measured in the SI?

30. Where have you seen a balance being used?

31. How are a triple beam balance and an electronic balance similar and different from one another?

32. Which instrument is used to measure an unknown mass?

33. What is a spring scale? How is force measured in SI?



More Measuring Page 50-51

34. What is volume? How is volume measured in the SI?

35. What is the difference between the cubic meter and liters?

36. How do you find volume of a rectangular prism?

37. How do you find the volume of a liquid?

38. What is the meniscus?

39. What is accuracy?

40. Why is accuracy in measurements important?



Computing Information Page 52-53

41. What are examples of technology that scientists can use to collect data, make calculations, organize their data, and communicate their results?

42. What are some things that scientists use numbers to describe?

43. What can scientists use a computer for in their investigations?

44. How can you collect, record, and analyze information using calculators?

45. What are some advantages of using technology?

46. What are digital probes?

47. What can a digital probe measure?

48. How does a digital probe work?

49. What is the difference between a computer and a digital probe?

