

1.2 Measurements and scientific tools

Name:

Worksheet

Learning objectives:

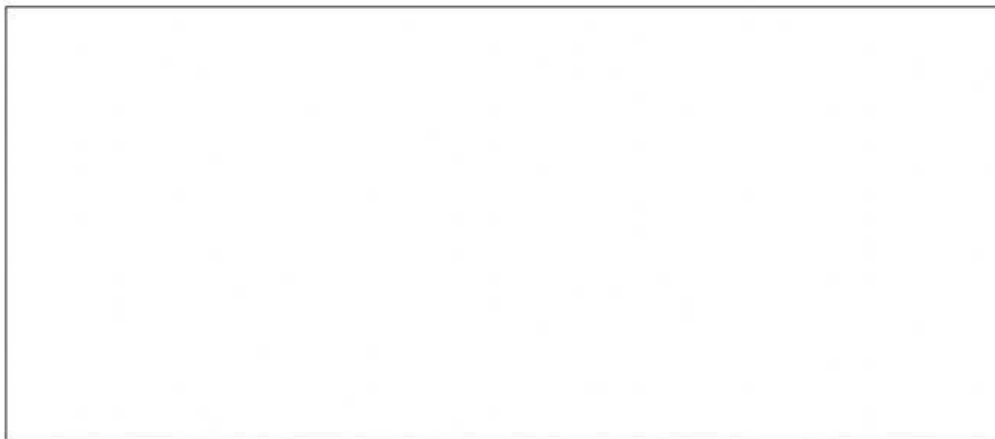
- Distinguish between quantitative and qualitative measurement
- Distinguishes between accuracy and precision
- Concludes Why should you use significant digits
- Define some scientific tools used by scientists
- Investigates some scientific tools used by Life Scientists

Fill in the blanks.

1. There are 5 birds on the tree is a _____ measurement while the birds are brown in color is a _____ measurement.
2. The length of the book is 18 cm. Here, cm is the _____ and is the unit of _____.
3. Fill the table.

| Quantity measured | Unit |
|---------------------|------|
| Length | |
| Mass | |
| Time | |
| Temperature | |
| Intensity of light | |
| Electric current | |
| Amount of substance | |

4. Watch the video below and answer question 5.



5. Convert the following

- a) 50cm = _____ m
- b) 0.235 m= _____mm
- c) 75.25 L = _____ kL
- d) 0.8942 kg = _____g

6. _____ explains how close a measurement is to its true value while _____ explains how close a measurement is to the other measurements taken in the same way.
7. Choose the correct explanation for the following images.











8. Watch the video below on the rules of significant figures and answer question 9

9. How many significant figures are there in the following numbers?

- a) 5.033-
- b) 0.009-
- c) 200000-
- d) 200.00-
- e) 53-
- f) 9.005-
- g) 90.0410-

10. Match the images to the names of the tools and uses.

| Image | Name of the tool | Uses |
|---|--------------------|---|
|  | Science journal | Used for researching information and analyzing data |
|  | Graduated cylinder | Used to record notes |
|  | Thermometer | To measure length |
|  | Computer | To measure liquids |
|  | Meter scale | To measure temperature |
|  | Microscope | Measures force |
|  | Spring balance | To observe microscopic organisms |
|  | Balance | Measure mass |