Name: _____ Date: _____

Science 10 – Skills – Scientific Notation

Learning Goals

1. I can convert values between scientific notation and standard notation.

Express each of the following numbers using scientific notation:

1.	325	_____	11.	0.361	_____
2.	70	_____	12.	0.042 8	_____
3.	96 400	_____	13.	0.005 73	_____
4.	5 921	_____	14.	0.000 543 8	_____
5.	6 587 324 000	_____	15.	0.000 05673	_____
6.	42.372	_____	16.	0.507	_____
7.	2 538	_____	17.	0.004 83	_____
8.	3 621.471	_____	18.	0.000 000 000 9	_____
9.	362.516	_____	19.	0.000 421	_____
10.	42	_____	20.	0.000 005 4	_____

Expand each of the following numbers:

1.	3.64×10^{4}	_____	11.	2.97×10^{-4}	_____
2.	3.9734×10^{5}	_____	12.	3.88×10^{-2}	_____
3.	6.285×10^{3}	_____	13.	5.65×10^{-1}	_____
4.	6.7978×10^{0}	_____	14.	3.7283×10^{-4}	_____
5.	5.8643×10^{2}	_____	15.	4.763×10^{-3}	_____
6.	2.973×10^{1}	_____	16.	5.9267×10^{-1}	_____
7.	3.487×10^{3}	_____	17.	8.654×10^{-2}	_____
8.	2.9265×10^{5}	_____	18.	2.5416×10^{-3}	_____
9.	8.7321×10^{4}	_____	19.	9.865×10^{-5}	_____
10.	6.14300×10^{3}	_____	20.	8.673×10^{-7}	_____

Name: _____ Date: _____

Science 10 – Skills – Significant Digits

Learning Goals

1. I can determine the number of significant digits in a value.
2. I can perform simple calculations following significant digit rules.

1. State the number of significant digits in each measurement.

_____a. 2804 m
_____b. 2.84 km
_____c. 5.029 m
_____d. 0.003068 m
_____e. 4.6×10^5 m
_____f. 4.06×10^{-5} m
_____g. 750 m
_____h. 75 m
_____i. 75,000 m
_____j. 75.00 m
_____k. 75 000.0 m
_____l. 10 cm

2. Round the following numbers as indicated:

a. To four significant digits:

3.682417	21.860051	375.6523	112.511	45.4673
_____	_____	_____	_____	_____

b. To one decimal place:

1.3511	2.473	5.687524	7.555	8.235
_____	_____	_____	_____	_____

c. To two decimal places:

22.494	79.2588	0.03062	3.4125	41.86632
_____	_____	_____	_____	_____

3. Calculate the answer with the correct number of significant digits.

a. 6.201 + 7.4 + 0.68 +12.0 = _____
b. 1 600 + 1.62 + 1.200 = _____
c. 8.264 - 7.8 = _____
d. 10.4168 - 6.0 = _____
e. 1.31 × 2.3 = _____
f. 5.7621 × 6.201 = _____
g. 20.2 ÷ 7.412 = _____
h. 40.002 ÷ 13.000005 = _____

Name: _____ Date: _____

Science 10 – Skills – Measurement and Significant Digits

Learning Goals

1. I can make an accurate measurement using appropriate tools.
2. I can identify the number of significant digits in a measurement.

Line to Measure	A	B	C

Discussion

1. Why are all the measurements for each line not the same?

2. How many significant digits are in:
    a. The measurements with ruler A?

    b. The measurements with ruler B?

    c. The measurements with ruler C?

3. Give an example of when you would use a measuring tool that is <u>less</u> accurate.