Name_____ Date_____ Class_____

How Big is a Nanometer?
Student Worksheet- Day 2

Purpose A hands-on activity to ascertain the size of everyday objects in nanometers. Students will measure various objects of their choice to convert these measurements into nanometers.

Question(s)

1. What is a nanometer?
2. What instruments are useful for measuring objects on the nanoscale?
3. What is nanotechnology?
4. How large or small is a nanometer?
5. What types of objects should be measured in nanometers?

Directions: Complete questions 1 and 2 in pairs. **Answer questions 3-6 individually.**

1. Use the ruler and line below to answer the questions.

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

a) What is the length of the line in centimeters? _____ cm
b) What is the length of the line in millimeters? _____ mm
c) What is the length of the line to the nearest nanometer? _____ nm

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Development and distribution partially funded by the National Science Foundation

NNIN Document: NNIN-1206
Rev: 07/2010

2. Choose five objects in the classroom to measure.
Measure these objects in centimeters.
Convert your centimeter measurements to millimeter, micrometer and nanometer measurements.

Object Name	Measurement in Centimeters	Measurements in Millimeters	Measurements in Micrometers	Measurement in Nanometers

Answer the following questions on your own.

3. What did *you* learn while doing this activity?

4. What type of objects do *you* think a nanometer is used to measure? Why?

5. Would *you* use a nanometer to measure the size of your car? Why or why not?

6.Would *you* use a nanometer to measure the size of a red blood cell? Why or why not?

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