

## Student Worksheet: Nucleation

Researcher \_\_\_\_\_

### Part 1. Growth of bubbles

What factors affect the growth of bubbles over time State your claim and provide evidence in the table below.

Factors that increase nucleation	Factors that decrease nucleation
Evidence:	Evidence:
Evidence:	Evidence:
Evidence:	Evidence:

### Part 2. Mentos and Diet Coke

Based on the Mentos and Diet Coke activity, complete the following questions.

<b>Key Questions</b>	NOTES:
How is Diet Coke a colloid?	
How does water "resist" the expansion of bubbles?	
What parts of the Mentos candy break the surface tension of water?	



Draw a picture of how a Mentos candy might look with lots of nucleation sites for CO<sub>2</sub> and bubbles forming.

By comparison, draw a marble as it sinks through the Diet Coke.

Explain in your own words why Mentos in Diet Coke results in a geyser.

What other substances lower the surface tension of water?

What does nanotechnology have to do with nucleation?



*National Nanotechnology Coordinated Infrastructure*

[www.nnci.net](http://www.nnci.net)

This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Development and distribution funded by the **National Science Foundation**