**MATTER AND CHEMISTRY**

*BATH BOMBS LESSON 1*

**INVESTIGATION QUESTION** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**EXPLORING THE PHENOMENON**

Record the observations you notice of the matter involved, and record what you wonder or question.

|  |  |
| --- | --- |
| **Store-Bought Bath Bombs Demo** | |
| Notice | Wonder/Question |
| *Before adding to water:* | *Before adding to water:* |
| *After adding to water:* | *After adding to water:* |

As you share your personal observations and related questions, make a list of any similar questions you hear during your table group discussion:

**PLANNING AN INVESTIGATION**

Below is a list of materials that you will be able to use.

* Samples of 4 different homemade bath bombs made from 4 different recipes (A, B, C, and D)
* Paper plates
* Clear plastic sealable baggies
* Toothpicks
* Pipettes
* Clear plastic cups
* Water from the sink
* Paper towels for cleaning up
* Thermometer
* Electronic balance
* Ruler
* Stopwatch
* Graduated cylinder

Identify the following for this investigation:

**Independent variable:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Control group:** \_\_\_**Store-bought bath bomb**\_\_\_

**Dependent variable:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Constants:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

With your lab group, discuss what **types of data** would you want to try to collect about the homemade bath bombs to **help you figure out what happens when bath bombs are added to water and what causes it?** Feel free to make a list, draw a picture, and/or write out your ideas.

**MAKING OBSERVATIONS**

|  |  |
| --- | --- |
| **Bath Bombs** | **Homemade Bath Bombs Observations** |
| **A** |  |
| **B** |  |
| **C** |  |
| **D** |  |

What was noticed about the home-made bath bombs? How did the results from the homemade bath bombs compare to our results from the store-bought bath bomb?

**SHARING INTIAL MODELS**

|  |  |
| --- | --- |
| **Agreement(s)** | **Disagreement(s)** |
|  |  |

As you share with your table group/class, record the agreements and disagreements you have observed.

**DISCUSSION: THE INITIAL CONSCENSUS MODEL**

Choose one norm from the sheet that you personally will work on for the rest of class. Why is it important to you?

Draw a picture of our whole-class consensus model.

What questions need to be answered in order to further develop our model?

Record any other experiences that either:

* Reminds you of what you saw with the bath bombs
* Reminds you of other phenomena that might happened, due to the same sorts of things that the bath bomb did
* Shared by classmates

|  |
| --- |
| **Related Phenomenon** |
|  |

**CONCLUSION/SUMMARY**

|  |
| --- |
| **Problem/Question** |
| *What happens when a bath bomb is added to water (and what causes it to happen)?* |
| **Idea(s) for Investigation** |
|  |