

Brainstorming: Get those brain cells warmed up!

- 1. If you were exploring a new ecosystem, like deep in the ocean, or on a distant planet, how would you determine whether a specimen you are observing is alive or not?**
- 2. What do you think it means to be alive?**
- 3. How is “dead” related to being living? Can something that was never living be dead? Why/why not?**
- 4. Does everything living have to have the same qualities or characteristics?**
- 5. What characteristics may non-living things have that make them appear alive?**

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- ◆ Create a list of qualities (characteristics) that living things must have
- ◆ Now choose and circle 10
 - ◆ These will be used on your data sheet for tomorrow's activity

Living or Non...That is the Question



OBJECTIVE:

- ◆ In this activity you will observe and compare unknown specimens in order to compile a list of what characteristics you believe living things have to have. The list will allow you to compare these specimens and then help you to determine whether each is living, non-living, or dead. Finally, you should also be able to use your data to decide which characteristics *ALL living things must have.*

What to do as you observe the unknown specimens...

- ◆ **Make observations:** Really observe each unknown specimen. Remember, observations mean using all your senses (*when appropriate*). Do not let your preconceived idea of what the unknown specimen might be, but really observe it! Take a moment to write a brief description of the item above the unknown specimen's number.
- ◆ **Follow Directions:** Some unknowns may have special instructions, be sure to follow those exactly.
- ◆ **Mark an "X."** Now, using your list of characteristics, place an "X" in the corresponding column in the data table IF you think that unknown specimen has that characteristic. It doesn't matter if you are ultimately correct in your understanding of what you observed. As long as you can defend why you selected the characteristic you did, you fulfilled the purpose of the lab!
- ◆ After you have made all of your observations, review the data you collected, and in the bottom row of the table, indicate whether you believe the unknown to be *Living (L)*, *Nonliving (NL)*, or *Dead (D)*.

Specimens 1-3



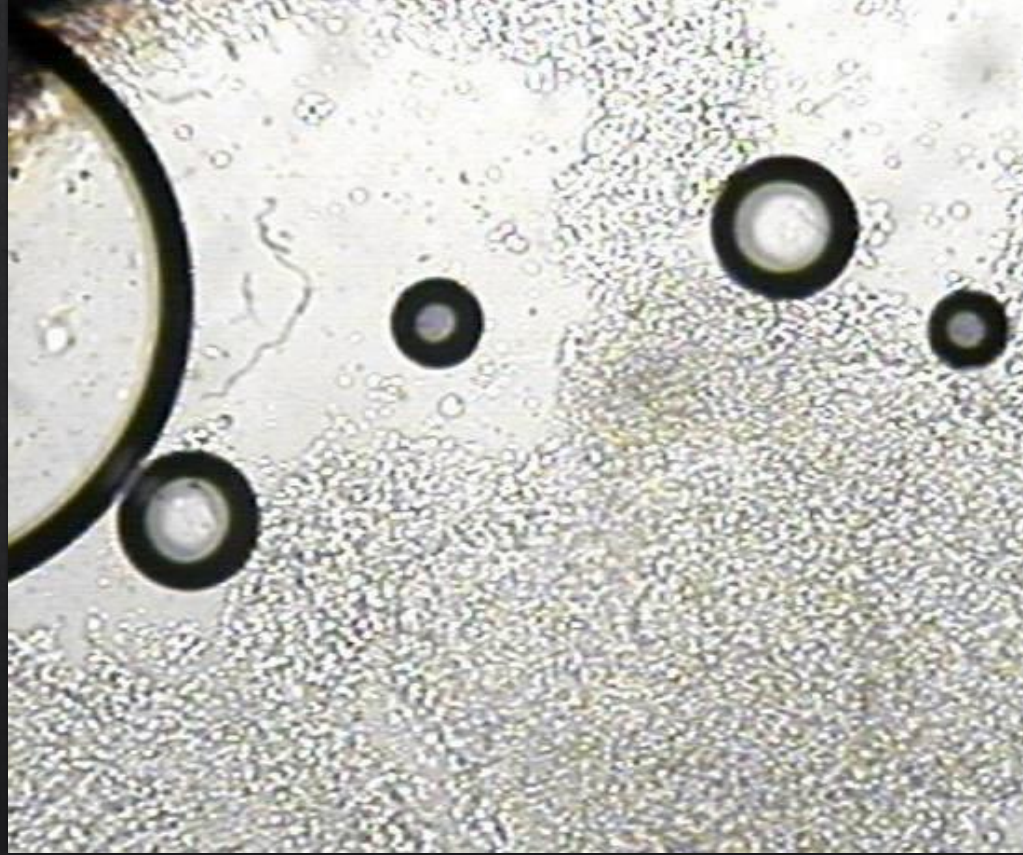
Specimens 4-7



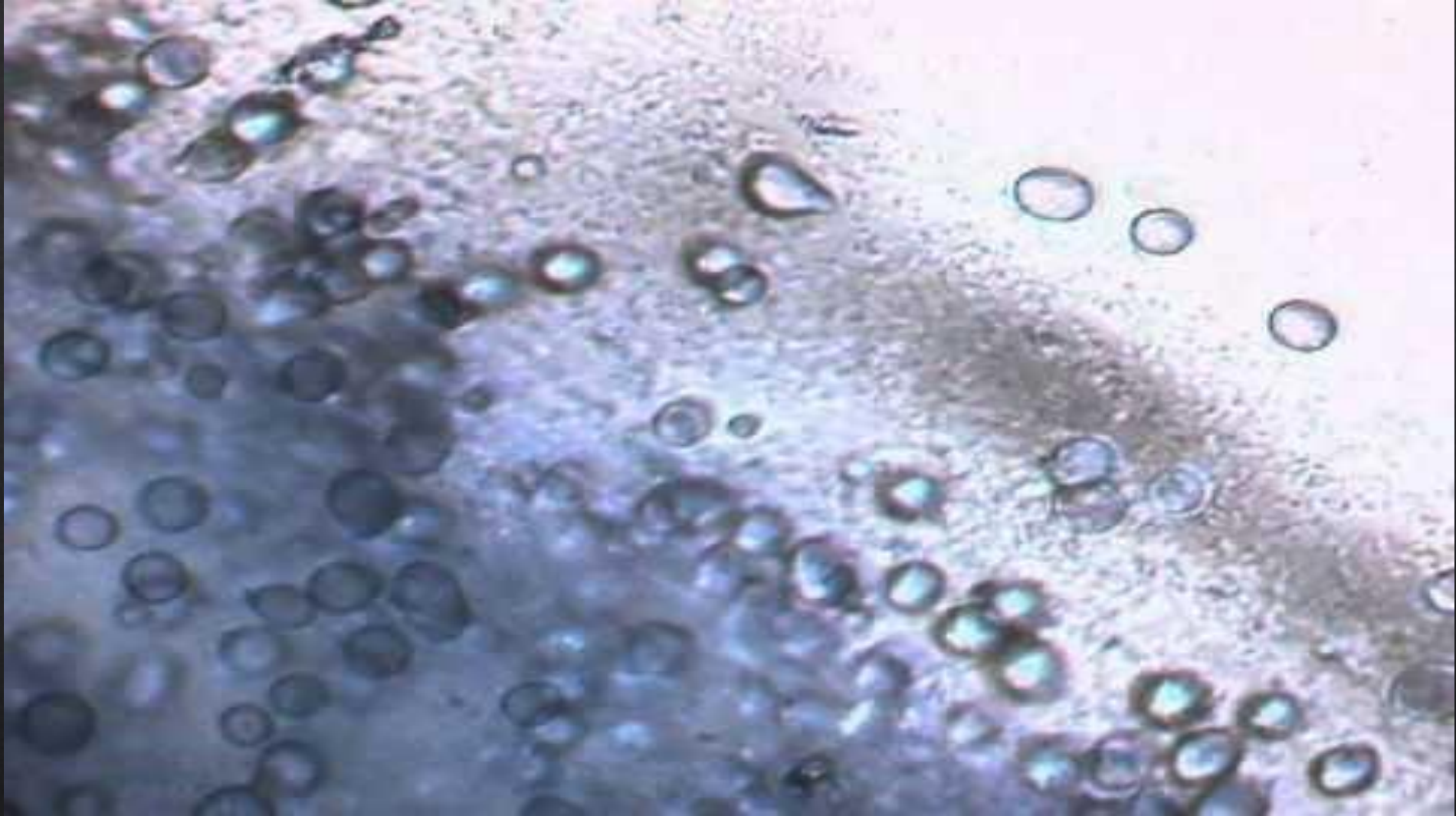
Specimens 8-9



Specimen 10



Specimen 11



Specimen 12



Specimen 13



Specimen 14

◆ Demo 1

Specimen 15

◆ Demo 2