# **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_ Binder #\_\_\_\_\_**

# **CRT Review**

7th Grade Integrated Science

**Atoms**

1. Can you see atoms? Why or why not?
2. How are atoms and molecules alike and different?
3. Sketch a **solid**, **liquid** and **gas** in the boxes using dots.
4. Has our idea of what atoms look like changed over time? Why or why not?

**Density**

1. What tool do you use to measure the **mass** of a solid block of wood? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What tool do you use to measure the **mass** of a liquid? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What tool do you use to measure the **volume** of a solid block of wood? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What tool do you use to measure the **volume** of a liquid? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. If a blue liquid stacks on top of a red liquid what do we know about their densities? **Draw a picture.**
6. If a green block floats on top of a red liquid what do we know about their densities? **Add the block to your picture.**
7. If an orange block sinks to the bottom of a red liquid what do we know about their densities? **Add the block to your picture.**
8. What is the f**ormula** for density? (Hint: remember the broken heart) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. If the mass is 25g and the volume is 5cm3 what is the density? **SHOW YOUR WORK**
10. If you have two pieces of **pinewood** and one is the size of your locker and the other is the size of Mrs. Yost’s desk, which one is more dense? **Explain.**

**Motion of Particles**

1. Are particles always moving? Explain.
2. Which particles are moving faster, the ones in a gas or the ones in a liquid? **Explain why.**
3. Which particles are moving faster, the ones in a solid or the ones in a liquid? **Explain why.**
4. Which particles are moving faster, the ones in a gas or the ones in a solid? **Explain why.**
5. If you heat up particles what **two things** happen to those particles?

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. If you put a balloon full of air in the freezer what will happen to its size? **Why?**
2. If you put a balloon full of air in the microwave for 10 seconds what will happen to its size? **Why?**
3. Why is it that when we make sidewalks we make little groves in them? Hint: think of what happens when heat is added to the cement.

**Layers of the Earth**

1. The Earth is made up of layers. Why are these layers where they are located? Hint: think of the “D” word. **Draw a picture.**
2. List these in order from **most** dense too **least** dense: Air, Mantel, Crust, Water, Outer core, and inner core.
3. If you shake up dirt in a test-tube of water what happens if you wait 10 minutes? **Why?**
4. Which will wash farther down the stream-bed sand or rocks the size of your fist? **Why?**

**Cells**

1. What tool do we use to look at Cells with? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Label this cell with these parts. Cell wall, cell membrane, nucleus. Chloroplast, cytoplasm.

This one is green

1. If a cell has a cell wall does that cell come from a lion or a dandy-lion? **Explain.**
2. If a cell does not have a cell wall does that cell come from a lion or a dandy-lion? **Explain.**
3. **Diffusion** is the movement of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ particles from an area of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration to an area of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration.
4. **Osmosis** is the movement of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ particles from an area of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration to an area of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentration.
5. Put these in order from most simple to most complex. Organ, Cell, Organism, Tissue, Organ System.
6. Match these up. **Draw lines.**

Heart Cell

Digestive System Organism

Cat Tissue

One skin cell Organ

Layer of skin Organ System

1. How does the Frog get oxygen in it? Trace a molecule of Oxygen from the air to inside the frog cell.
2. How does the Frog get food in it? Trace a molecule of food from the mouth to inside the frog cell.

**Genetics**

1. List 5 inherited traits.
2. List 5 acquired traits.
3. Sexual reproduction has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ parents.
4. Asexual reproduction has \_\_\_\_\_\_\_\_\_\_\_\_\_\_ parents.
5. Sexual reproduction has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variation in its offspring.
6. Asexual reproduction has \_\_\_\_\_\_\_\_\_\_\_\_\_ variation in its offspring.
7. Offspring of sexual reproduction are \_\_\_\_\_\_\_\_\_\_\_exactly like their parents.
8. Offspring of asexual reproduction are \_\_\_\_\_\_\_\_\_\_\_\_ like their parents.
9. List **5 organisms** that reproduce sexually.
10. List **2 organisms** that reproduce asexually.
11. How does the trait of long necks of a giraffe help it survive? **Explain**
12. Why would this not help if the giraffe lived in the arctic? **Explain.**
13. Think of an animal and tell me of one trait and how that trait helps it survive better. **Be specific.**
14. How have humans changed cows in the last 2000 years? **Explain.**
15. List 3 examples of traits that help polar bears survive in the artic.

**Classification**

1. How are living and once living organisms alike and different?
2. How are living and nonliving organisms alike and different?
3. How do you use classification in your life? **Explain.**
4. Give an example of an organism that is in the Animal Kingdom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Give an example of an organism that is in the Plant Kingdom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Give an example of an organism that is in the Fungi Kingdom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Give an example of an organism that is in the Protist Kingdom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Give an example of an organism that is in the Bacteria Kingdom/Domain. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Why do we classify organisms by body characteristics and not by how they move?
10. List 5 things that you see in the room. Make a classification **Tree** and **Dichotomous Key** for these five items.