



## The Chemistry of Brass Casting

### Grade 8 Science

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

You saw the process of brass casting in the video. Casting metal involves knowing about elements and chemical reactions.

*Using what you have learned about elements and chemical reactions, complete the following.*

1. Compare *elements*, *mixtures*, and *compounds*.

ELEMENTS	MIXTURES	COMPOUNDS

2. Is brass an element, mixture, or compound? Explain.

---

---

---

3. Explain why brass is an alloy?

---

---

---





## The Chemistry of Brass Casting, page 2

### Grade 8 Science

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

4. Using the Periodic Table, enter the information about brass in the chart below.

ELEMENTS THAT FORM BRASS	SYMBOL OF EACH ELEMENT	ATOMIC NUMBER OF EACH ELEMENT	ATOMIC MASS OF EACH ELEMENT	STATE OF MATTER AT ROOM TEMPERATURE OF THIS ELEMENT	NUMBER OF OUTER ENERGY LEVEL ELECTRONS OF EACH ELEMENT

5. Using your completed chart, explain how many protons are in each element that makes up brass.

---

---

6. What is ductility? Is it a *physical* or *chemical* property? Explain.

---

---

---

7. Using the periodic table, tell whether the following are *metals*, *nonmetals* or *metalloids*.

- A. Argon \_\_\_\_\_ C. Cadmium \_\_\_\_\_  
B. Antimony \_\_\_\_\_ D. Carbon \_\_\_\_\_

8. Which of the elements listed in the question above has chemical properties similar to the elements that make up brass?

---

