


N	101 Introduction to Chemistry	
	<b>OBJECTIVES</b> 1. Define Chemistry 2. Identify and describe the five main branches of chemistry 3. Describe the three domains of chemistry 4. Distinguish between pure and applied research 5. Describe how modeling is used in chemistry	

### 101.1 Chemistry

1. What is chemistry?

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### 101.2 Branches of Chemistry

2. What are the five main branches of chemistry?

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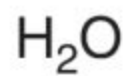
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### 101.3 Domains of Chemistry

3. Identify and describe the three domains of chemistry?




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### 101.4 Pure and Applied Research

4. Distinguish between pure and applied research.

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## 101.5 Modeling in Chemistry

5. How is modeling used in chemistry?

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## 101 Concept Check Exploring Chemistry

1. Chemistry is the study of
  - (1) matter
  - (2) the changes matter undergoes
  - (3) the energy changes that accompany the changes that matter undergoes
  - (4) all of the above
2. Which branch of chemistry explores carbon containing compounds?
  - (1) physical
  - (2) biochemistry
  - (3) organic
  - (4) inorganic
3. Which branch of chemistry examines living organisms?
  - (1) analytical
  - (2) biochemistry
  - (3) physical
  - (4) inorganic
4. Which branch of chemistry explores the components and composition of matter?
  - (1) physical
  - (2) inorganic
  - (3) analytical
  - (4) organic
5. Identify into which domain the underlined item in the statement below can be classified.  
“Copper wire has a density of about 8 g/cm<sup>3</sup>.”
  - (1) macroscopic
  - (2) microscopic
  - (3) symbolic
6. Identify into which domain the underlined item in the statement below can be classified.  
“A water molecule contains two H atoms and one O atom.”
  - (1) macroscopic
  - (2) microscopic
  - (3) symbolic
7. Andy is working on formulations for a new type of paint that will last longer and be more durable on metal surfaces in order to prevent the metals from corroding (rust).  
This type of research can be classified as
  - (1) pure research
  - (2) applied research
8. Bibi is researching new insecticides that will be less toxic to birds and small mammals that may come in contact with it. This type of research can be classified as
  - (1) pure research
  - (2) applied research
9. Derrick is researching the rates of various compounds to see how the reaction rate depends on the solubility of the compound. This type of research can be classified as
  - (1) pure research
  - (2) applied research
10. In order to be useful a model must:
  - (1) closely resemble the real thing in important ways
  - (2) be simpler than the real thing
  - (3) be easier to understand than the real thing
  - (4) all of the above.

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