



Science Virtual Learning

6th Grade Science:

Parts of an Atom

May 11, 2020



6th Grade Science
Lesson: May 11, 2020

Objectives/Learning Targets:

Students will be able to identify the different parts of an atom.

Warm Up

Watch the study jams [video](#) and then, test your knowledge by taking the quiz.

The screenshot shows an educational interface with a dark blue background. At the top left, there is a small video player thumbnail labeled 'Matter'. The main title 'Atoms: Protons, Neutrons, Electrons' is displayed in large, bold, orange and yellow text. Below the title, a paragraph of text reads: 'An atom is a tiny particle in matter, and atoms are made of protons, neutrons, and electrons. Some matter, like your body or your book, is made of lots of different kinds of atoms, but elements are made up of only one kind of atom.' To the right of the text is a diagram of an atom with a central nucleus containing red '+' signs and blue '-' signs, surrounded by black elliptical orbits with blue '-' signs. A cartoon character with glasses and a green shirt stands next to the diagram, gesturing towards it. In the top right corner, there is a 'Print' button. Below the text, there is a green 'PLAY VIDEO' button and a blue 'Test Yourself' button. At the bottom, there is a 'Key Vocabulary' section with a list of terms: nucleus, neutron, proton, and electron.

Matter

Atoms: Protons, Neutrons, Electrons

An atom is a tiny particle in matter, and atoms are made of protons, neutrons, and electrons. Some matter, like your body or your book, is made of lots of different kinds of atoms, but elements are made up of only one kind of atom.

Print

PLAY VIDEO **Test Yourself**

Key Vocabulary

- nucleus
- neutron
- proton
- electron

Background Information

Atom- the smallest component of an element having the chemical properties of the element, consisting of a nucleus containing combinations of neutrons and protons and one or more electrons bound to the nucleus by electrical attraction.

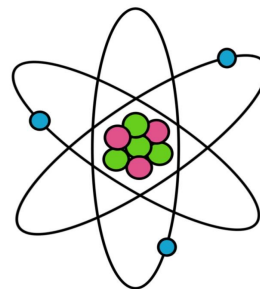
Proton- Located in the nucleus and have a positive charge.

Neutron - Located in the nucleus and have a no charge.

Electron -Located in the electron cloud floating around the nucleus and have a negative charge.

Nucleus- the center of an atom where the protons and neutrons are located. This is the smallest part of the atom.

Parts of an Atom



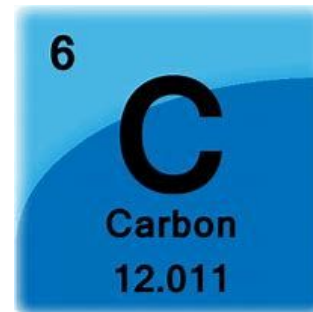
NEUTRON
no charge
part of the nucleus



PROTON
positively charged
part of the nucleus



ELECTRON
negatively charged
surround the nucleus



Background Information

Atomic Number- the number of protons in the nucleus of an atom.

Atomic Mass - The atomic mass is the number of protons and neutrons in an atom.

of Neutrons - To find the number of neutrons in the atom, subtract the atomic number from the atomic mass.

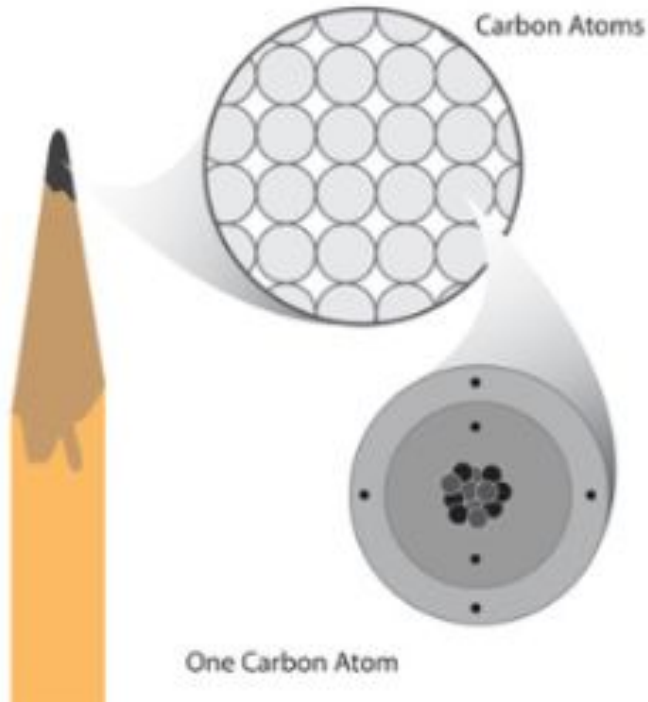
of Protons - The the same as the atomic number on the periodic table.

of Electrons- Is the same as the number of protons.

Carbon Example

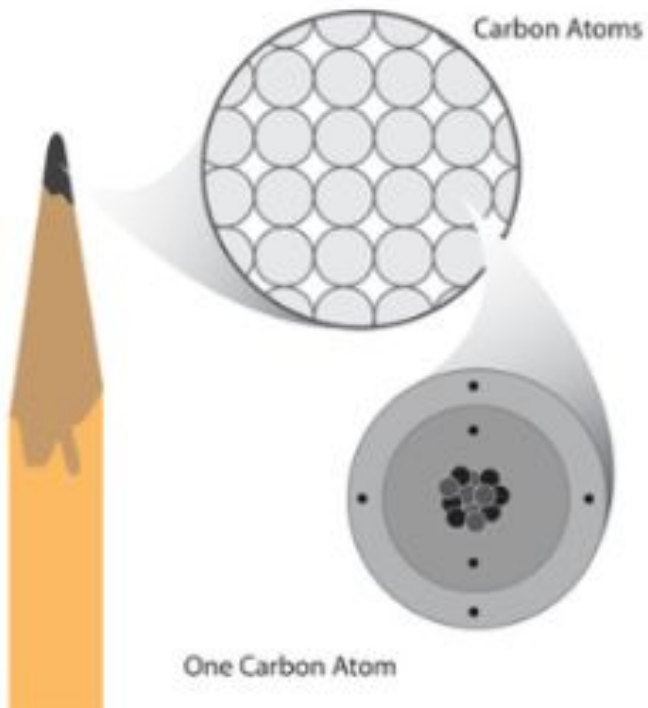
- Atomic #: 6
- Atomic Mass: 12.011
- # of Protons: 6
- # of Neutrons : 6 (12-6=6)
- # of Electrons: 6

Practice



1. What are the 3 tiny particles that make up an atom?
2. Which of these is in the center of the atom?
3. What zooms around the nucleus of an atom?
4. Which one has a positive charge? Negative charge? No charge?

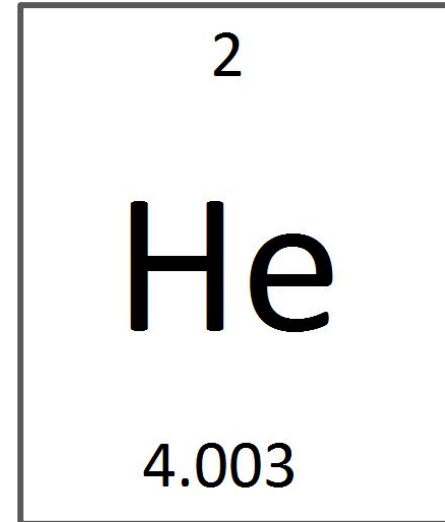
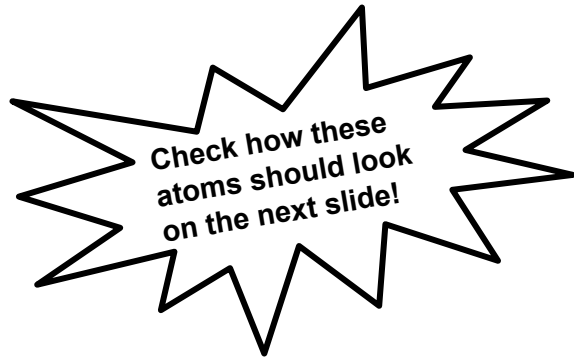
Practice - Answer Key



1. What are the 3 tiny particles that make up an atom? *Protons, neutrons, & electrons*
2. Which of these is in the center of the atom? *Protons & neutrons*
3. What zooms around the nucleus of an atom? *Electrons*
4. Which one has a positive charge? Negative charge? No charge? *Positive- protons, negative- electrons, no charge (neutral)- neutrons*

Practice

Now let's build an atom. Choose one of these elements and draw the atom on your piece of paper. Don't forget to label how many Protons, Neutrons, and Electrons that atom has.

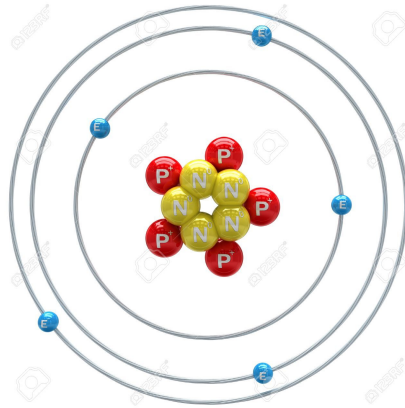


Practice - Answer Key

Your atoms should look similar to these.

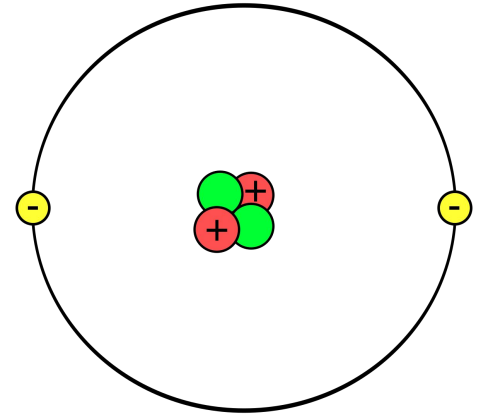
Boron Atom:

5 protons
5 neutrons
5 electrons



Helium Atom:

2 protons
2 neutrons
2 electrons





Additional Practice

1. [Atoms Quizlet](#)
2. Complete the atomic structure [worksheet](#). check your answers with the [key](#). (Use your agenda for a periodic table.)
3. Use this [song](#) to help you remember information about atoms!