**PHET Build an Atom Simulation – Bohr Models of Elements**

Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

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| Element: Beryllium  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes. You do not need to draw the electron shells.  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Nitrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Fluorine  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| Element: Fluorine  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Beryllium  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Oxygen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**PHET Build an Atom Simulation – Bohr Models of Elements**

Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

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| --- | --- |
| Element: Hydrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Nitrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Beryllium  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

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| --- | --- |
| Element: Neon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Oxygen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Carbon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**PHET Build an Atom Simulation – Bohr Models of Elements**

Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

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| --- | --- |
| Element: Fluorine  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Nitrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Beyllium  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**PHET Build an Atom Simulation – Bohr Models of Elements**

Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

|  |  |
| --- | --- |
| Element: Hydrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Oxygen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Carbon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Using a laptop, in pairs, you will use the phet build an atom simulation to create 3 elements. Draw a Bohr model of the atom, record the symbol for the element and find all of the stable isotopes for each element you create. For neutrons and protons you need to put how many are in the nucleus. For electrons you need to draw a dot for each electron on the electron shells.

|  |  |
| --- | --- |
| Element: Beryllium  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Nitrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Oxygen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  |  |
| --- | --- |
| Element: Hydrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Neon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Carbon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  |  |
| --- | --- |
| Element: Neon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Carbon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Nitrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| Element: Carbon  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:    Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Fluorine  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |
| Element: Hydrogen  Symbol:\_\_\_\_\_\_\_\_\_\_  Bohr model:  Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopes  Mass:\_\_\_\_\_\_\_\_  Mass:\_\_\_\_\_\_\_\_ |

How do you make an atom neutral?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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What is the difference between isotopes?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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