**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: BerylliumSymbol:\_\_\_\_\_\_\_\_\_\_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: NitrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: FluorineSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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

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| Element: FluorineSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: BerylliumSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: OxygenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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| Element: HydrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: NitrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: BerylliumSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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| Element: NeonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: OxygenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: CarbonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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| Element: FluorineSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: NitrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: BeylliumSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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

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| Element: HydrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: OxygenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: CarbonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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

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| Element: BerylliumSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: NitrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: OxygenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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| Element: HydrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: NeonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: CarbonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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| Element: NeonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: CarbonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: NitrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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

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| Element: CarbonSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model: Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: FluorineSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |
| Element: HydrogenSymbol:\_\_\_\_\_\_\_\_\_\_Bohr model:Mass:\_\_\_\_\_\_\_\_ | Fill in the nucleus/nuclei for all of the other **STABLE** isotopesMass:\_\_\_\_\_\_\_\_Mass:\_\_\_\_\_\_\_\_ |

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

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