**🎯 Activity 1: 📘 Table Complete – “Fill the Atom Info”**

🎙️ **Activity Introduction** 🎤  
“Chemists use tables to organise facts about atoms. In this challenge, your job is to complete missing information using what you know about atomic number, mass number, protons, and neutrons. Some values are already filled in. Use them to solve the rest. Let us complete the atom profiles!”

👨‍💻 **Developer Guide**

* Use a responsive editable table layout with 5 rows.
* Lock correct entries after submission to prevent editing.
* Auto-highlight incorrect entries with red border.
* Add “Check Answer” and “Try Again” buttons per row.
* Trigger feedback narration after completion.
* Include reset table option.

📜 **Learner Instructions (On Screen)**

1. Use the periodic table logic:
   * Atomic Number = Number of Protons
   * Mass Number = Protons + Neutrons
2. Click into the empty cells and type your answer.
3. Use the Check button to get feedback on each row.
4. Try to complete all rows correctly.

💡 **Hint**

* Atomic Number = Protons
* Mass Number = Protons + Neutrons
* Neutrons = Mass Number – Protons
* Use addition and subtraction carefully

📊 **Activity Content**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Element** | **Protons** | **Neutrons** | **Atomic Number** | **Mass Number** |
| Oxygen | 8 | 8 | 8 | 16 |
| Fluorine | 9 | 10 | 9 | 19 |
| Sodium | 11 | ❓ | 11 | ❓ |
| Neon | ❓ | 10 | 10 | ❓ |
| Nitrogen | ❓ | ❓ | 7 | 14 |

💬 **Facilitative Feedback Per Cell**

**Sodium Row:**

* Neutrons = 12 → ✅ Correct! 23 (Mass) – 11 (Protons) = 12 Neutrons.
* Mass Number = 23 → ✅ Great! 11 (Protons) + 12 (Neutrons) = 23.

**Neon Row:**

* Protons = 10 → ✅ Correct! Atomic number equals protons.
* Mass Number = 20 → ✅ Correct! 10 + 10 = 20.

**Nitrogen Row:**

* Protons = 7 → ✅ Correct! Atomic number = protons.
* Neutrons = 7 → ✅ Correct! 14 (Mass) – 7 (Protons) = 7 Neutrons.

❌ **If Incorrect (any field):**

* Check your calculation: Mass Number is the total of protons and neutrons.
* Remember: Protons always equal the atomic number of the element.
* Neutrons = Mass Number – Protons. Try again!

🎙️ **Activity Conclusion** 🎤  
“Excellent work! You now understand how to calculate the building blocks of atoms. Scientists use these numbers to predict how elements behave. You are well on your way to mastering atomic structure.”