**🎓 Activity 3: 📊 Interactive Table – “Properties vs. Uses”**

**🎙️ Activity Introduction 🎙️ *(Mic Icon)***

“Every metal has a secret power—some are shiny, some are strong, some resist rust. In this activity, click on different metals or alloys in the table. Discover what makes each special and how that connects to how we use them in daily life.”

**👨‍💻 Developer Guide Instructions**

* **Activity Type**: Clickable Table / Diagram Exploration
* **Interface Design**: Interactive table with two sections:
  + **Column A**: List of metals/alloys (e.g., Copper, Aluminium, Steel, Gold, Brass, Bronze, Stainless Steel)
  + **Column B**: Clickable “Hotspot” icons that reveal **property** and **common use** when selected.
* **Visual Behaviour**: Clicking a metal opens a pop-up card (modal) or expands a section under the row with text and icon.
* **Audio Integration**: Voice-over narrates the property and use upon reveal.
* **Hints**: Shown on screen before selection.

**🖥️ Learner Instructions (On-Screen)**

1. Click on a metal or alloy name in the table.
2. Read the property and common use when it appears.
3. Think about why this property makes the material suitable for that use.

**💡 Hint (On-Screen)**

* “Think about which materials are used where water or heat are involved.”
* “Is the metal meant to conduct electricity, or hold up heavy weight?”
* “Does the use require beauty, strength, or both?”

**📋 Activity Content – Table with Properties and Uses**

|  |  |  |
| --- | --- | --- |
| **Metal / Alloy** | **Property** | **Common Use** |
| **Copper** | High electrical conductivity | Electrical wiring, motors |
| **Aluminium** | Lightweight and corrosion-resistant | Cans, aircraft, ladders |
| **Steel** | Strong and durable | Construction beams, vehicles |
| **Gold** | Shiny and unreactive | Jewellery, circuit boards |
| **Brass** | Attractive, corrosion-resistant alloy | Musical instruments, decorations |
| **Bronze** | Hard and resistant to wear | Medals, sculptures |
| **Stainless Steel** | Resists rust and staining | Kitchen sinks, medical tools |

**🎙️ Activity Conclusion**

“Fantastic work! You have connected each material’s property to how it is used in the real world. That is how scientists and engineers think—by linking structure to function.”

**✅ Key Takeaways:**

* **Metals** are chosen for uses based on durability, conductivity, appearance, and corrosion resistance.
* **Metal uses:** Aluminium (pots, planes), Copper (cables), Iron (tools), Sodium (detergents), Gold/Silver (jewellery).
* **Alloy uses:** Stainless steel (cutlery, surgical tools), Brass (instruments, handles), Bronze (statues, medals), Duralumin (aircraft frames).
* Everyday **items from alloys** include spoons, keys, locks, taps, and bells.