**🧠 Activity 1: Alloy Detective – “Where Am I Used?”**

**🎙️ Activity Introduction**

“Welcome, Alloy Detective! Alloys are everywhere — from your kitchen to the skies. Your task is to explore different everyday objects and figure out why alloys are chosen for each. Click an object, think carefully, and pick the correct reason for its alloy use. Let us investigate!”

**👨‍💻 Developer Guide Instructions**

* **Activity Type**: Clickable image hotspots + scenario-based MCQs
* **Interactivity**:
  + Each object is displayed as a high-quality realistic image.
  + On click: an overlay appears with a **1-question multiple-choice quiz**.
* **Hotspots (4)**:
* 🔧 Stainless Steel Spoon
* 🚿 Brass Water Tap
* 🌉 Steel Bridge
* 🥇 Bronze Medal

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

1. Click on any object to reveal its quiz.
2. Read the question carefully.
3. Choose the correct reason why the alloy is used.
4. Review the feedback after your selection.

**💡 Hints (On-Screen)**

* “Think about the properties that make this alloy perfect for the job.”
* “Does the item need strength, resistance to rust, or an attractive finish?”
* “Some alloys mix metals to combine the best features of both.”

**📎 Activity Content**

**🔧 Object: Stainless Steel Spoon**

**Question:** Why is this alloy used here?  
A) It rusts easily  
✅ B) It is strong, shiny, and does not corrode  
C) It is very soft  
D) It is cheap like wood

**Explanation:** Stainless steel is made from iron, chromium, and nickel. The chromium prevents rust, making the spoon hygienic and durable.

**Facilitative Feedbacks:**

* ✅ **“Correct. Stainless steel keeps your spoon strong and rust-free!”**
* ❌ **“Incorrect. Stainless steel is used because it resists rust, not because of softness or cost.”**

**🚿 Object: Brass Water Tap**

**Question:** Why is brass used for taps?  
A) It breaks easily  
✅ B) It resists rust and looks shiny  
C) It conducts electricity  
D) It melts in water

**Explanation:** Brass, made from copper and zinc, does not rust and is safe for water fittings.

**Facilitative Feedbacks:**

* ✅ **“Correct. Brass is durable and corrosion-resistant — perfect for plumbing.”**
* ❌ **“Incorrect. Brass does not rust or melt — it is chosen for durability and appearance.”**

**🌉 Object: Steel Bridge**

**Question:** Why is steel used in bridges?  
A) It is decorative  
B) It is waterproof  
✅ C) It is strong and supports heavy loads  
D) It is used in medals

**Explanation:** Steel, an alloy of iron and carbon, provides strength, durability, and resistance to tension.

**Facilitative Feedbacks:**

* ✅ **“Correct. Steel’s strength supports heavy traffic and long spans.”**
* ❌ **“Incorrect. Steel is chosen for strength, not decoration or waterproofing.”**

**🥇 Object: Bronze Medal**

**Question:** Why is bronze used in medals?  
A) It rusts quickly  
✅ B) It has a beautiful finish and is durable  
C) It is heavier than gold  
D) It melts easily

**Explanation:** Bronze is made from copper and tin. It does not rust, keeps its shine, and is long-lasting.

**Facilitative Feedbacks:**

* ✅ **“Correct. Bronze lasts long and looks great — ideal for awards!”**
* ❌ **“Incorrect. Bronze does not rust or melt easily — it is used for its appearance and durability.”**

**🎙️ Activity Conclusion**

“Well done! You now understand that alloys are chosen not by chance, but because of their unique strengths. From spoons to skyscrapers — alloys help build a safer and smarter world.”