**💧 Activity 2: “Sort the Water Sources” – Drag-and-Drop Categorisation**

**🎙️ Activity Introduction**

"Different water sources give us different results when we use soap. Some help it foam, while others cause scum. In this activity, you will sort different water sources into soft and hard. Use what you have learned about minerals like calcium and magnesium — and let us get sorting!"

**👨‍💻 Developer Guide Instructions**

* **Bins**:
  + 🟦 Soft Water
  + 🟥 Hard Water
* **Draggable icons**: Rainwater 🌧️, Distilled 🧫, Tap 🚰, Borehole 🕳️, River 🏞️, Sea 🌊, Lake 🏞️, Well 🕳️.
* Correct drops → green snap effect.
* Incorrect → red shake animation.
* Progress bar fills on correct sorts.

**🖥️ Learner Instructions**

1. Drag each water source into the correct bin.
2. Decide whether it is **Soft** or **Hard** water.
3. Watch the bin glow green for correct answers.

**💡 Hint**

"Soft water has few minerals like calcium and magnesium. Hard water contains more minerals — it stops soap from lathering."

**📜 Activity Content**

| **Source** | **Classification** | **Feedback** |
| --- | --- | --- |
| Rainwater 🌧️ | Soft | ✅ “Correct! Rainwater is naturally soft — it has low mineral content.” ❌ “Try again. Rainwater does not contain calcium salts unless polluted.” |
| Distilled 🧫 | Soft | ✅ “Yes! Distilled water is pure and free from minerals.” ❌ “Incorrect. Distilled water is soft because it has no impurities.” |
| Tap 🚰 | Intermediate | ⚠️ “Tap water can vary — some lather, some scum. Location matters.” |
| Borehole 🕳️ | Hard | ✅ “Correct. Borehole water often contains dissolved calcium and magnesium.” ❌ “Remember, borehole water is hard due to mineral content.” |
| River 🏞️ | Hard | ✅ “Good! River water usually carries dissolved salts.” ❌ “Not quite. River water tends to be hard due to minerals.” |
| Sea 🌊 | Hard | ✅ “Yes! Sea water is very hard — it has many salts.” ❌ “Check again. Sea water causes scum with soap.” |
| Lake 🏞️ | Hard | ✅ “Right. Lake water often has mineral runoff from soil.” ❌ “Lake water looks calm but it can be hard due to mineral content.” |
| Well 🕳️ | Hard | ✅ “Correct. Well water gathers minerals from rocks.” ❌ “Remember, well water is commonly hard due to dissolved salts.” |

**🎙️ Activity Conclusion**

"Super sorting! Now you know which natural sources give soft water that lathers, and which give hard water that fights soap. Understanding this helps us make smart choices at home and in the lab."