**🔍 Activity 3: Click-the-Scum – “Where is the Evidence?”**

**🎙️ Activity Introduction**

"Let us investigate where hard water leaves its mark in the home! Explore the bathroom and find all the hidden signs of scum, scale, and mineral stains. Look closely — water never lies!"

**🛠 Developer Guide Instructions**

* Use a **detailed bathroom illustration** with **4 clickable hotspots**.
* Each hotspot reveals a **label box** with a **visual hint** and **voiceover explanation**.
* Disable random clicking — **all hotspots must be explored** to complete the activity.
* Maintain a **click memory tracker** to show “Explored” status for each hotspot.
* Trigger a **completion animation** when all clues are found.

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

* "Look around the bathroom picture and click where you think there is evidence of hard water."
* "Each hotspot will reveal an explanation about water hardness."
* "You must find and click all clues to complete the investigation."

**💡 Hints (On-Screen)**

* "Check places where water is often used."
* "Look at surfaces that are frequently in contact with soap or boiling water."
* "Hard water leaves visible marks over time."

**📜 Activity Content – Hotspots and Explanations**

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| **Hotspot** | **Hint** | **Explanation** |
| 🚿 Showerhead | "Water sprays from here daily" | Scum builds up on showerheads when calcium in hard water reacts with soap, creating a white or grey film. |
| 🚰 Sink Tap | "Where you wash your hands" | Hard water minerals settle at outlets like taps, forming white scale that can block water flow. |
| 🛁 Bathtub | "Where you relax after a long day" | After bathing, hard water leaves a thin film of soap scum on the tub surface, caused by minerals combining with soap. |
| ☕ Kettle Spout (optional) | "Where boiling happens" | Limescale forms in kettles when calcium salts in hard water are deposited during repeated boiling. |

**🎙️ Activity Conclusion**

"Excellent observation! You identified all the spots where hard water shows its effects. Now you can trace evidence like a real water detective."

**✅ Key Takeaways:**

* **Hard water advantages:** Provides minerals (Ca/Mg), safer in lead pipes, pleasant taste.
* **Hard water disadvantages:** Wastes soap, forms scum/scale, blocks pipes, lowers heating efficiency.
* **Soft water advantages:** Saves soap, gentle on skin/fabrics, prevents scale, no stains on clothes.

**Soft water disadvantages:** Lacks minerals, may dissolve lead, flat taste, unsuitable for low-sodium diets (if softened with sodium).