Data Journey Box

**The "Data Journey" Device Activity**

**Core Concept:** Understanding that data moves through paths (networks), and how different actions can protect or expose that data.

**Goal:** Students will physically experience sending data, observe its journey, and learn how "protection" (like encryption or secure connections) impacts its visibility.

**Device:** a puzzle box or Da vinci puzzle box to teach how people can send message to each other.

**Activity Play-Through:**

1. **Introduction:** "Today, we're going to send secret digital messages on a journey. We'll learn how to keep them safe!"
2. **Sending Unprotected Data:**
   * "Choose a type of data you want to send." (Student presses a button, gets a token).
   * "Now, guide your data token along the path, but leave the 'Protection Gate' off."
   * As the token moves, encourage another student (the "observer") to try to intercept/perceive it at the "Observer/Interceptor" station.
   * **Discuss:** "Was it easy for the observer to see/feel your data? Yes, because it was unprotected!"
3. **Sending Protected Data:**
   * "Now, let's send another piece of data, but this time, activate the 'Protection Gate' first!" (Student presses button for token, activates gate).
   * "Guide your data token along the path."
   * The "observer" tries to perceive the data.
   * **Discuss:** "Was it harder for the observer to see/feel your data this time? What made the difference? The 'Protection Gate' (encryption/security)!"
4. **Experimentation:**
   * Let students experiment with different data types and turning the "Protection Gate" on and off.
   * Introduce scenarios: "What if this was your bank information? Would you send it with the 'Protection Gate' on or off?"

**Making it Engaging:**

* **Storytelling:** Frame it as "secret agents" sending coded messages or "treasure" across a dangerous landscape. The "Protection Gate" is their shield.
* **Sensory Feedback:**
  + **Sounds:** Distinct sounds for button presses, gate activation, and data token arrival. Maybe a "whoosh" when data is protected.
  + **Textures:** Varying textures on pathways and tokens to convey different types of data or levels of security.
  + **Lights:** Use flashing, fading, or color-changing lights to indicate status (e.g., green for protected, red for unprotected).
* **Clear Labeling:** All parts of the device should be clearly labeled with large print, Braille, and icons.
* **Collaborative Play:** Encourage students to take turns as the "sender" and the "observer," allowing them to experience both sides of data flow.