📍 **Station 1: Best Bandage Challenge!**  
**Focus:** Material Properties for Healing  
**NGSS Standard:** 2-PS1-2

### **Goal:**

Test and compare how different bandage materials perform when wet to determine which one stays on the best, sticks the strongest, and is most comfortable to remove—just like a real bandage used for healing skin.

**Materials:**

* Different types of bandages (fabric, plastic, gauze, paper towel with tape)
* Spray bottle with water
* Paper "skin" or sponge
* Timer

**Student Directions:**

**STEP 1: Prepare the Surface:**  
Lay out your paper “skin” or sponge flat on your desk. This will be the pretend “arm.”

**STEP 2: Apply Bandages:**  
Carefully stick each bandage type onto a section of the “skin.” Press firmly like you're treating a real cut!

**STEP 3: Simulate Sweat:**  
Lightly spray all bandages with the water bottle. This simulates sweating or rain. Start your **timer for 1 minute**.

**STEP 4: Observe:**  
After one minute, check:

* + Which bandages are still sticking?
  + Did any fall off or peel?

**STEP 5: Test Strength:**  
One by one, gently pull each bandage off.

* + Which one was easiest to remove?
  + Which one stuck the strongest?

### 📊 **Record Your Results:**

| **Bandage Type** | **Stayed on when wet?** | **Easy to remove?** | **Strong hold?** |
| --- | --- | --- | --- |
| Fabric | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| Plastic | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| Gauze & Tape | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |
| Paper Towel + Tape | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No |

### 💬 **Wrap-Up Reflection:**

🩹 **Which bandage would you choose for a real cut? Why?**  
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💡 **What kind of material works best in wet or sweaty conditions?**  
→ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Station 1: Best Bandage Challenge!**

**📍 Activity Summary:**

**Focus:** Material Properties for Healing  
**NGSS Standard:**

* **2-PS1-2** – *Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.*

**✅ ITEEA STEL Standards – Elementary Level**

**STEL 1A** – *Everyone can design solutions to problems.*  
→ Students test materials to determine which bandage works best for protecting wounds.

**STEL 4A** – *The use of materials is determined by their properties.*  
→ The activity focuses on real-world application of material strength, stickiness, and moisture resistance.

**STEL 7A** – *Technological products and systems are created to meet human needs.*  
→ Bandages are examples of products designed to solve health-related problems.

**STEL 8A** – *Testing and evaluating are part of the design process.*  
→ Students observe, test, and compare materials under simulated conditions, collecting data to make informed decisions.

**✅ Common Core Math Standards – Elementary Level**

**CCSS.MATH.PRACTICE.MP2** – *Reason abstractly and quantitatively.*  
→ Learners assess and compare qualitative and quantitative characteristics (e.g., strength, stickiness) to evaluate performance.

**CCSS.MATH.PRACTICE.MP4** – *Model with mathematics.*  
→ Students organize and interpret test results using a data table and apply reasoning to real-life scenarios.

**CCSS.MATH.PRACTICE.MP5** – *Use appropriate tools strategically.*  
→ Students use spray bottles, timers, and their senses to test each material consistently.

**CCSS.MATH.PRACTICE.MP6** – *Attend to precision.*  
→ Precise timing, observations, and consistent methods support accurate conclusions about each bandage.

**✅ Summary**

This activity integrates **NGSS** goals by helping students understand how **material properties influence real-world function**. It aligns with **ITEEA STEL standards** through problem-solving, testing, and evaluating for human-centered design. Math practices are naturally embedded as students **compare results**, use tools, and **draw conclusions from structured data**.