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HW 11: Brush your teeth

HW: Brush Your Teeth

1. **Identify the problem, metric, be specific**
   - **Problem:** You need to clean your teeth to maintain oral hygiene (Objective: remove food particles, plaque, and bacteria for healthy teeth and gums).
   - **Question:** What is the best way to brush your teeth to ensure cleanliness and prevent dental issues?
   - **Why the question:** Brushing your teeth correctly is important for preventing cavities, bad breath, and gum disease, and for maintaining overall health.
2. **What do I need to know to answer the question?**
   - **Action point:** Understand the proper technique and tools for brushing teeth effectively.
   - **What needs collecting:**
     - Toothbrush type (manual or electric).
     - Toothpaste type (fluoride, sensitivity, or whitening).
     - Duration of brushing (recommended 2 minutes).
   - **Beginning data:** Have a toothbrush, toothpaste, and clean water ready.
   - **Collect data for:** Ensuring proper brushing technique (e.g., angle, strokes) and coverage of all areas of the mouth.
3. **Identify all things I need to know before brushing**
   - **Budget:** Choose a toothbrush and toothpaste within your budget while meeting your oral care needs.
   - **What raw data:** Consider your dental health requirements (e.g., gum sensitivity, plaque buildup).
   - **Inferences:** Based on your needs, decide on the best brushing technique and whether flossing or mouthwash is necessary afterward.
4. **Organize the data and decide what I need to collect**
   - **Data Cleaning:** Rinse your toothbrush with clean water before applying toothpaste.
   - **Outliers:** If you have dental appliances (e.g., braces or retainers), adjust your brushing technique to clean around them thoroughly.
   - **Make data usable:** Apply a pea-sized amount of toothpaste to the brush, ensuring it is evenly distributed.
   - **Data Relationships:** Understand the relationship between proper brushing technique and oral health to prevent cavities and gum issues.
   - **Apparent vs. Inferred:** Don't assume vigorous brushing is better—gentle, thorough brushing is more effective and prevents enamel damage.
5. **Find and identify the relationships**

- ○ **Look for:** The connection between brushing technique (e.g., circular motions, proper angle) and the cleanliness of teeth and gums.
  - ○ **Outliers:** Sensitive areas or gum irritation may require a softer brush or different toothpaste.
  - ○ **Percentage:** Dedicate equal time to each quadrant of your mouth (approximately 30 seconds per quadrant).
  - ○ **Chart:** Visualize a systematic approach (e.g., start with top left, then top right, bottom left, bottom right) to ensure complete coverage.
  - ○ **Root cause:** Ensure proper technique and tools are used to avoid issues like gum recession or missed spots.
6. **Find a solution**
   - ○ **Undo the problem:** If teeth still feel unclean after brushing, adjust the technique or brush for a longer duration.
   - ○ **Change the situation:** Use additional tools like floss or an interdental brush to clean hard-to-reach areas, or consult a dentist for advice.
7. **Presentation/Tell a story**
   - ○ **Opportunities:** Brushing your teeth effectively promotes oral health, boosts confidence with fresh breath, and contributes to your overall well-being.