**MATH:**

**ACT Math Alignment – Practice for First Aid**

**Measurement and Data Analysis**

Students apply mathematical principles to emergency response, including wound area calculations, dosage computations, and burn percentage estimations using proportional reasoning and real-world data analysis.

**Potential ACT Math Standards Covered in This Unit**

This unit connects to ACT math skills in five key areas:

**ACT Math Rating Scale – Problem Solving & Data Interpretation**

1. **(16–19) Understanding basic wound size measurements**
* Use basic arithmetic to measure and compare wound lengths and widths.
* Identify appropriate bandage sizes based on measurements.
1. **(20–23) Applying unit conversions in medical dosages**
* Convert between metric and customary units (e.g., mg to g, mL to L)
* Use ratios and proportions to adjust dosages based on patient weight
* Solve word problems involving real-life dosage instructions
1. **(24–27) Analyzing statistical trends in injury data**
* Interpret tables and charts showing types of injuries and their frequency
* Calculate mean, median, and mode of injury cases
* Recognize patterns in seasonal or activity-based injury reports
1. **(28–32) Interpreting proportions in burn treatment calculations**
* Use the Rule of Nines to calculate body surface area affected by burns
* Work with percentages and proportions to determine fluid needs
* Apply multi-step problem-solving involving surface area and volume
1. **(33–36) Using mathematical models to predict recovery times**
* Build and interpret linear models based on healing rates
* Apply functions and equations to simulate recovery scenarios
* Use multiple variables to analyze factors affecting recovery (e.g., age, injury size, care level)

**Why This Matters for ACT Preparation**

By incorporating real-world scenarios from First Aid Kit applications, students:

✅ Strengthen arithmetic, unit conversions, and proportion skills—core ACT math concepts.
✅ Apply data interpretation and modeling to injury treatment and recovery planning.
✅ Build critical thinking and problem-solving abilities through practical, health-based contexts.

These math-based activities help students connect academic skills to meaningful, real-life medical situations—just like they'll be expected to do on the ACT and beyond.