**SCIENCE:**

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

**Human Physiology & First Aid**

Learners explore human anatomy, wound healing processes, and infection prevention while evaluating first aid effectiveness and predicting complications using case studies and experimental analysis.

**Potential ACT Science Standards Covered in this Unit**

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

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

1. **(16–19) Identifying functions of human skin and circulatory system**
* Recognize key parts of the skin and blood flow pathways
* Understand how skin and blood vessels respond to injury
* Match first aid steps to body system functions (e.g., stopping bleeding)
1. **(20–23) Understanding wound healing stages**
* Describe stages: hemostasis, inflammation, proliferation, and remodeling
* Identify where common treatments support the healing process
* Match first aid materials (like gauze or antiseptic) to healing stages
1. **(24–27) Analyzing immune responses to injury**
* Interpret basic data on inflammation (e.g., redness, swelling)
* Understand how white blood cells respond to infection risk
* Analyze short passages or charts about immune reactions to wounds
1. **(28–32) Evaluating effectiveness of first aid treatments**
* Compare treatment options based on outcomes in experimental data
* Assess variables (e.g., time of application, type of wound, treatment used)
* Interpret results from charts or case-based data
1. **(33–36) Predicting complications based on case studies**
* Synthesize information from graphs, symptoms, and treatment histories
* Predict outcomes like infection, scarring, or healing delays
* Justify treatment plans based on scientific reasoning

**Why This Matters for ACT Preparation?**

By engaging in science-based activities using the First Aid Kit, students:

✅ Apply biological concepts to real-world medical situations.
✅ Strengthen data interpretation skills using healing timelines, immune responses, and treatment outcomes.
✅ Develop experimental analysis skills by evaluating effectiveness of first aid procedures.
✅ Practice critical thinking through predicting complications and interpreting scientific information—key skills on the ACT Science section.