Strand 1.1: Foundations of Pre-Technical Studies - Fire and Data Safety

Lesson 1: Understanding Fire Causes

1. **Causes of Fire:**
    - **Flammable Substances:**
        - **Chemicals:** Used in laboratories (e.g., solvents, fuels).
        - **Common Materials:** Such as paper, wood, fabric, and oily rags.
        - **Gases:** Like propane and butane used in workshops.

Lesson 2: Preventing Fire

2. **Preventing Fires:**
    - **Proper Storage:**
        - Flammable materials stored in designated areas with proper ventilation.
        - Separate storage for different types of materials to prevent chemical reactions.
    - **Regular Maintenance:**
        - Checking electrical equipment for wear and tear, frayed wires, or damaged plugs.
        - Ensuring machinery is well-lubricated to prevent overheating.
    - **Safety Protocols:**
        - Clearing workspaces from unnecessary clutter to reduce fire hazards.
        - Displaying and following emergency evacuation plans.

Lesson 3: Firefighting Techniques

3. **Firefighting Techniques:**
    - **Cooling:**
        - Using water hoses or fire extinguishers to cool down the flames.
        - Emergency showers for individuals with chemical burns.
    - **Smothering:**
        - Utilizing fire blankets to cover flames and cut off their oxygen supply.
        - Deploying foam-based fire suppressants to smother liquid fires.
    - **Interrupting:**
        - Using fire extinguishers with appropriate agents for different fire types (e.g., ABC fire extinguishers).

Explanation: ABC fire extinguishers are versatile and effective for three classes of fires - A (ordinary combustibles), B (flammable liquids), and C (electrical fires).

Lesson 4: Data Threat Analysis

4. **Threats to Data:**
    - **Malware:**