

Crafting Lab Skills: Printable Handouts

Activity 1: Beads in Blood Tubes

Objective: Visualize components of blood in the tube.

Materials: - Clear plastic tubes or blood tube - Red beads (RBCs) - White beads (WBCs) – Pink beads (Platelets) - Funnel or spoon - Optional: Labels for tubes

Instructions: 1. Fill approximately 40% of the tube with red beads. 2. Add a thin layer of white beads (~5%). 3. Add pink beads (~30%) to represent platelets. 4. Leave some room in the tube to allow the beads to mix. Shake gently to mix. 5. Discuss proportions and correlate with a real blood sample.

Activity 2: Beads for Order of Draw

Objective: Learn and reinforce the correct order of blood tube collection.

Materials: - String, yarn, or pipe cleaners, key chain or pen supplies - Beads matching tube cap colors: - Yellow (SPS/culture) - Light blue (citrate) - Red (no additive) - Green (heparin) - Lavender (EDTA) - Gray (fluoride) - Tube order chart (optional for reference)

Instructions: 1. Provide students with color guide for tube tops. 2. Students string beads in the correct order of draw. 3. Use in quiz games or timed review challenges.

Activity 3: Play Dough Red Blood Cell Morphologies

Objective: Understand and recognize red blood cell (RBC) morphologies.

Materials: - Play dough - Toothpicks & flags for labels - Morphology chart

Instructions: 1. Students create a normal biconcave disc RBC. 2. Challenge students to sculpt specific morphologies: - Spherocytes - Echinocytes - Schistocytes - Acanthocytes - Target cells 3. Compare creations to microscope images. 4. Discuss associated pathologies.

Classroom Supply Checklist

General Craft Supplies: - Beads (multiple colors) - Pipe cleaners, yarn, or string - Plastic tubes/containers - Play dough (red and white) - Labeling tools (tape, pens, paper) - Printed reference charts (order of draw, morphology images) - Scissors, spoons, tweezers, toothpicks

Assessment Worksheet: Crafting Lab Skills Review

Name: _____

Date: _____

1. Fill in the blanks: - Red beads represent _____. - White beads represent _____. - Pink beads represent _____.

2. Put the blood tubes in the correct order of draw: ____ Lavender ____ Red ____ Light Blue ____ Green ____ Yellow ____ Gray

3. Match the RBC shape to the description:

- | | |
|----------------|---|
| A. Spherocyte | ___ Irregular shape with spiky projections |
| B. Schistocyte | ___ <i>Smaller, dense round cell lacking central pallor</i> |
| C. Echinocyte | ___ <i>Fragmented cell, usually from trauma</i> |
| D. Acanthocyte | ___ Central bullseye appearance |
| E. Target Cell | ___ <i>Evenly spaced blunt projections</i> |

4. Reflection: Which crafting activity helped you the most and why?
