




# Take Me to the Candy Shop!

Using candy to make teaching  
Anatomy and Pathophysiology even  
sweeter



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for slides!**






**Bobbie Kite**  
**BSN, RNC-OB,**  
**CPhT**

## **Professionally:**

- L&D/OB Nurse for 20 years
- Certified Pharmacy Tech, Old and New
- Health Science Teacher at Lubbock-Cooper High School x2 years
- Teach Pathophysiology and Pharm Tech



## **Personally:**

- Married to a pharmacist for 23 years, 3 kids
  - Love Dr. Pepper, cheese, sugar, cooking, gardening, the lake, 90's Rap, and Jesus!
  - Dislike Chick-fil-a, T.Swift, mean people, whining, and cold butter!
- 

- Introducing new complicated concepts
- Teaching progression of a disease process
- Reteaching anatomical structures or physiological process of the human body.

# Using Candy Labs

## Considerations:

- Budget
- Allergies
- Time

# Hematology: Blood Composition & Anemias

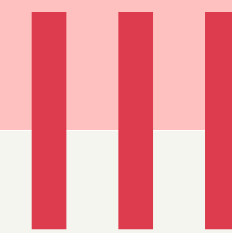
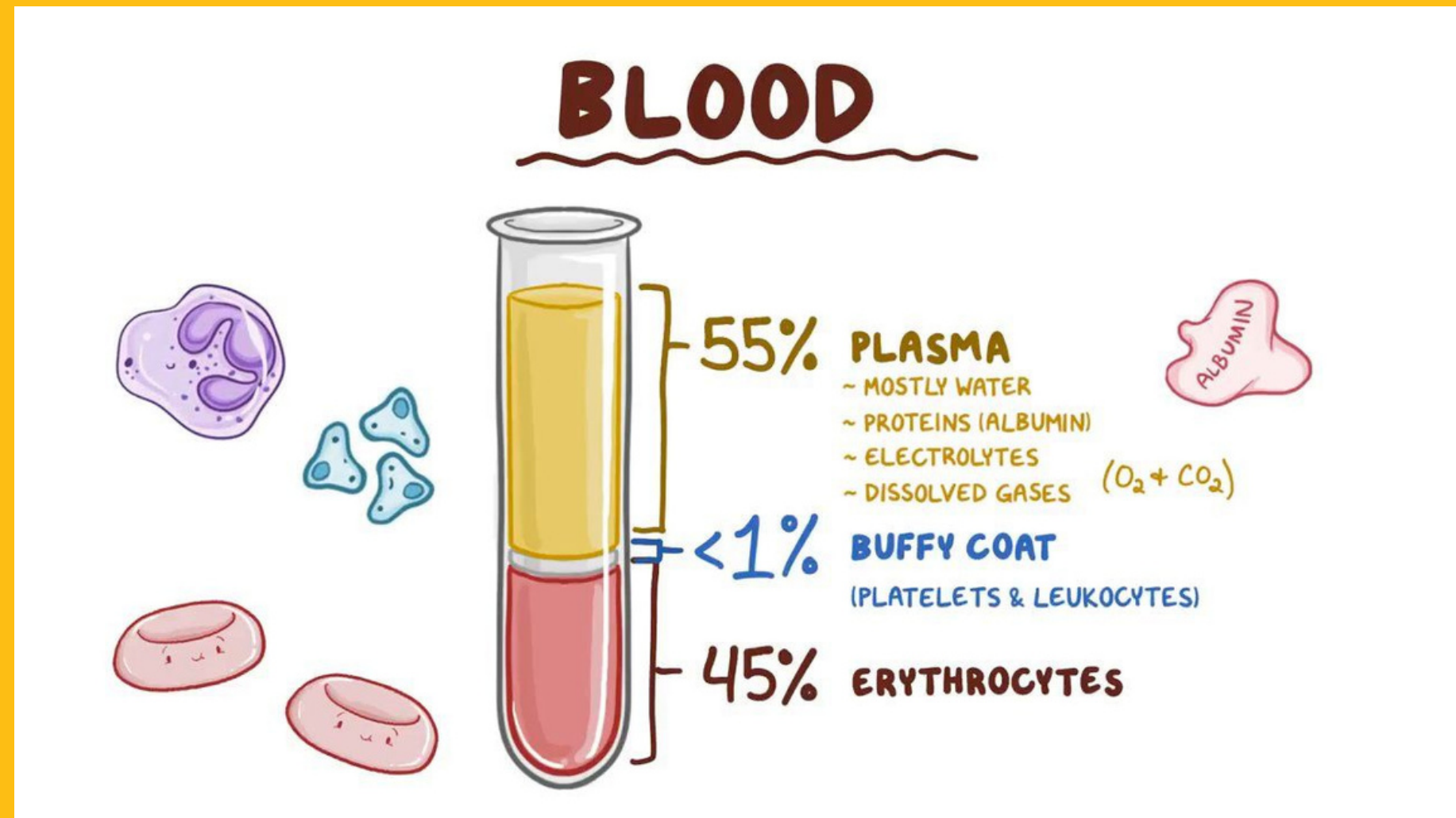
## Objectives:

- Understand the 4 major component of the blood
- Differentiate between types of anemia

## Teacher Notes:

- Introduce the material with fill in the blank notes.
- Build with candy to reinforce understanding

# Blood Composition



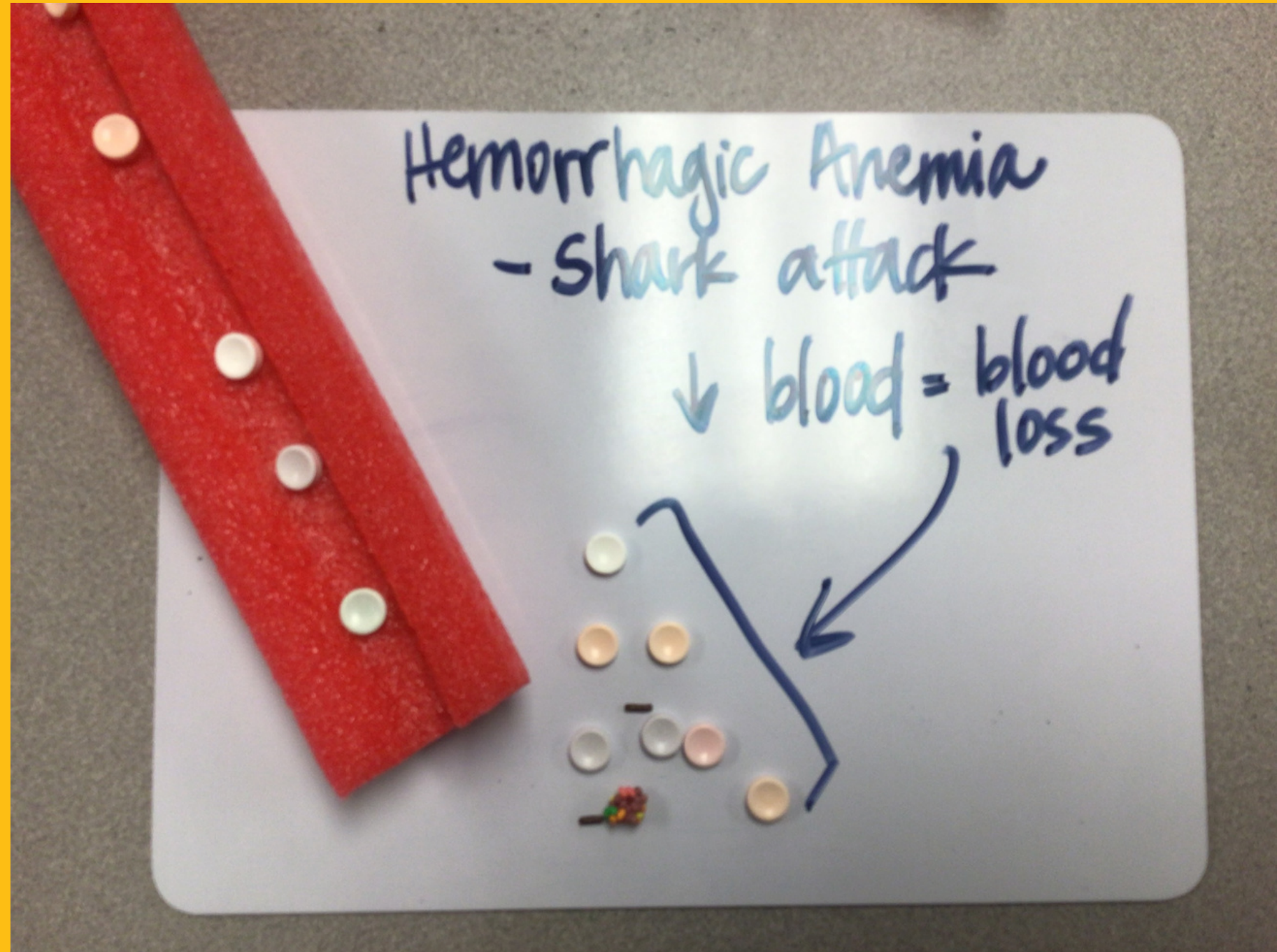
- build with candy
  - Smarties=RBCs
  - Gum/Sprinkles= Platelets
  - Nerd Clusters= WBCs

\*not proportional\*

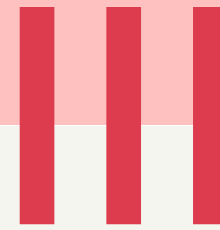
Normal  
blood

55% plasma  
40-45% RBC's  
<1% WBC's  
<1% Plasma

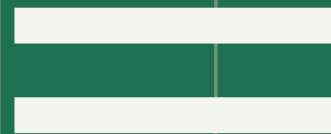




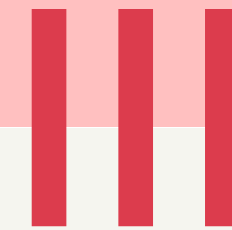
# Hemorrhagic Anemia



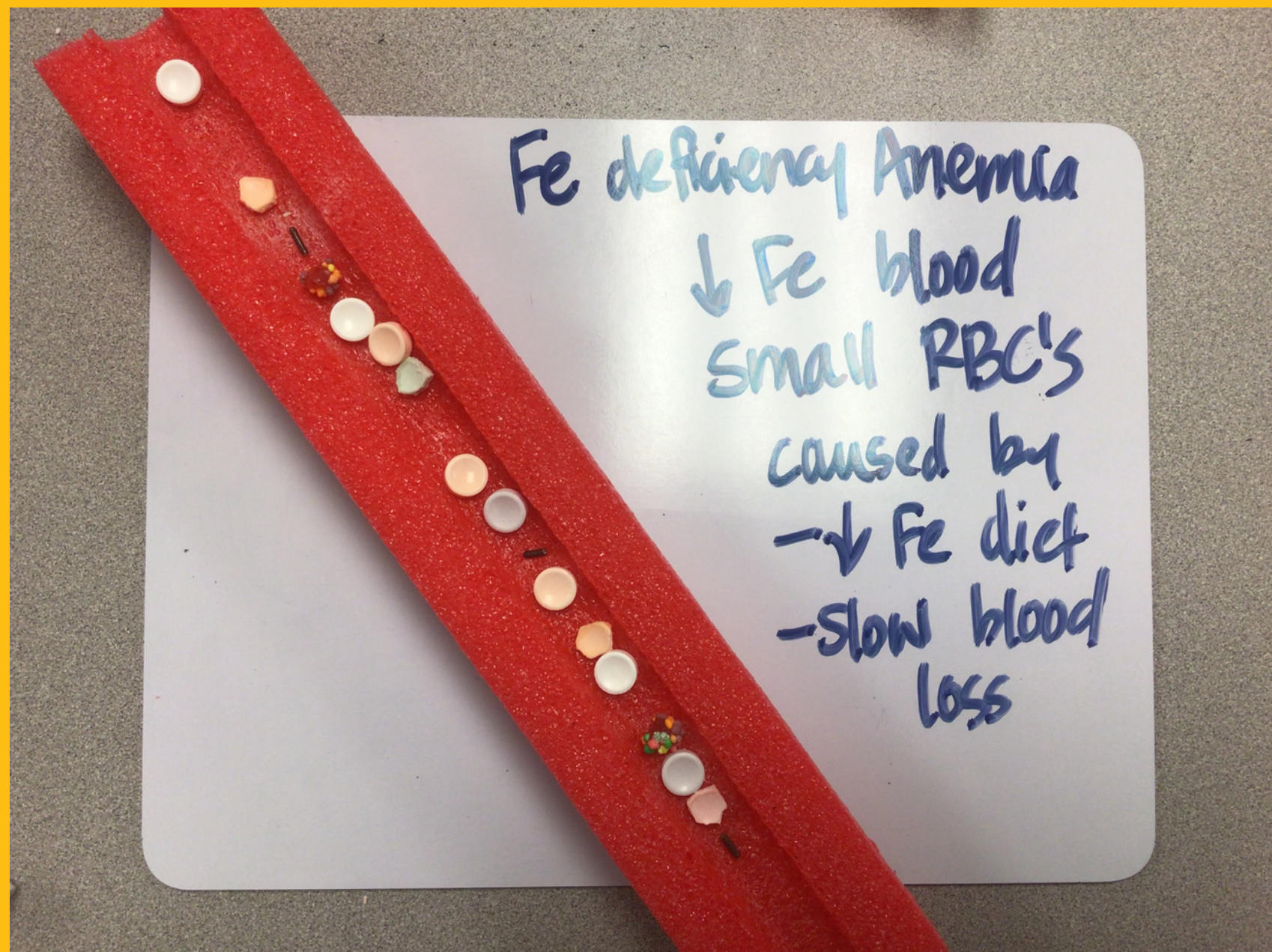
- Caused by blood loss
  - loss of all blood components



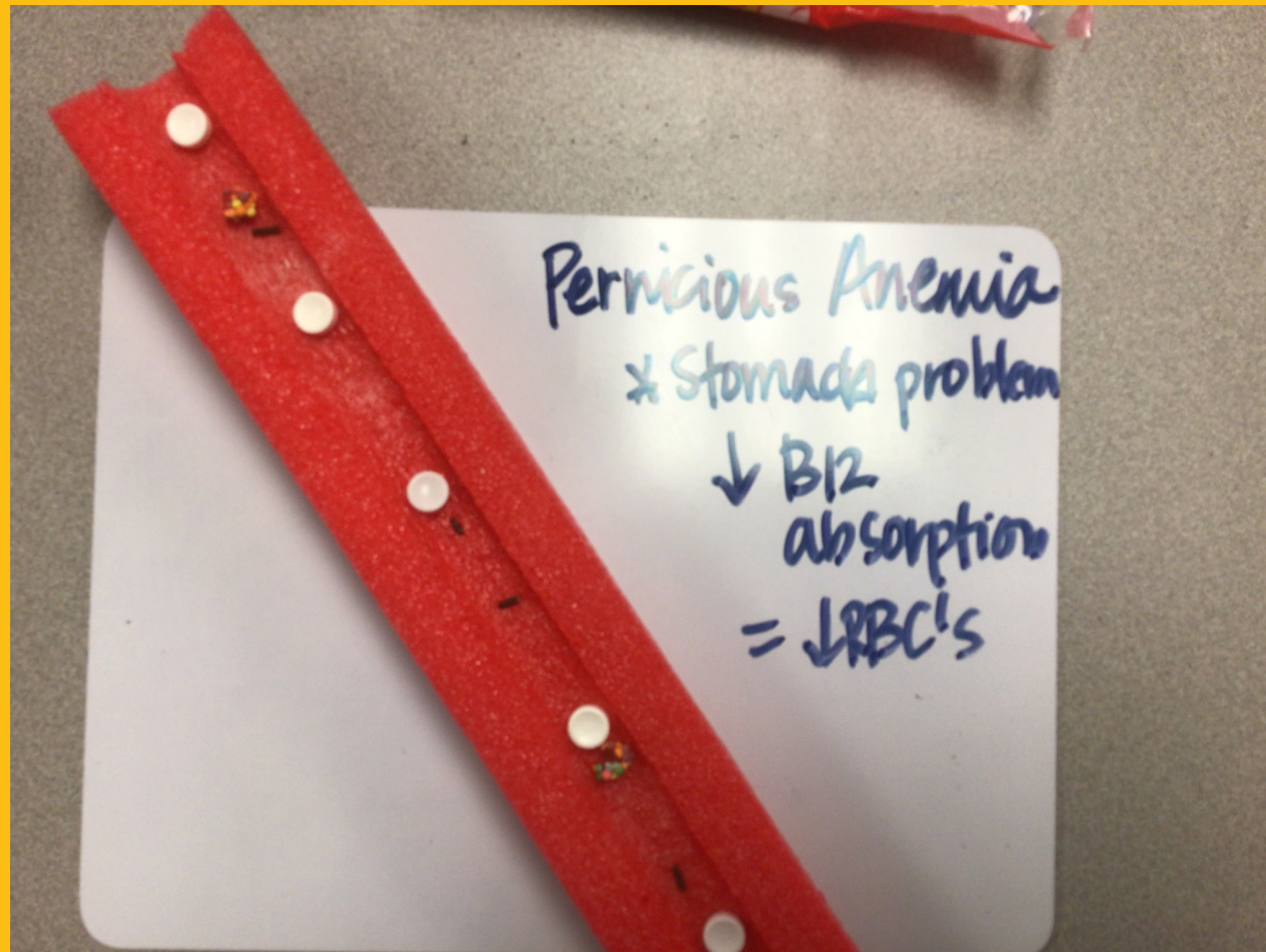
# Iron Deficiency Anemia



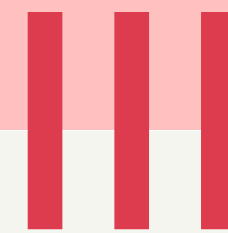
- often slow chronic blood loss
  - affecting only RBC, number and size



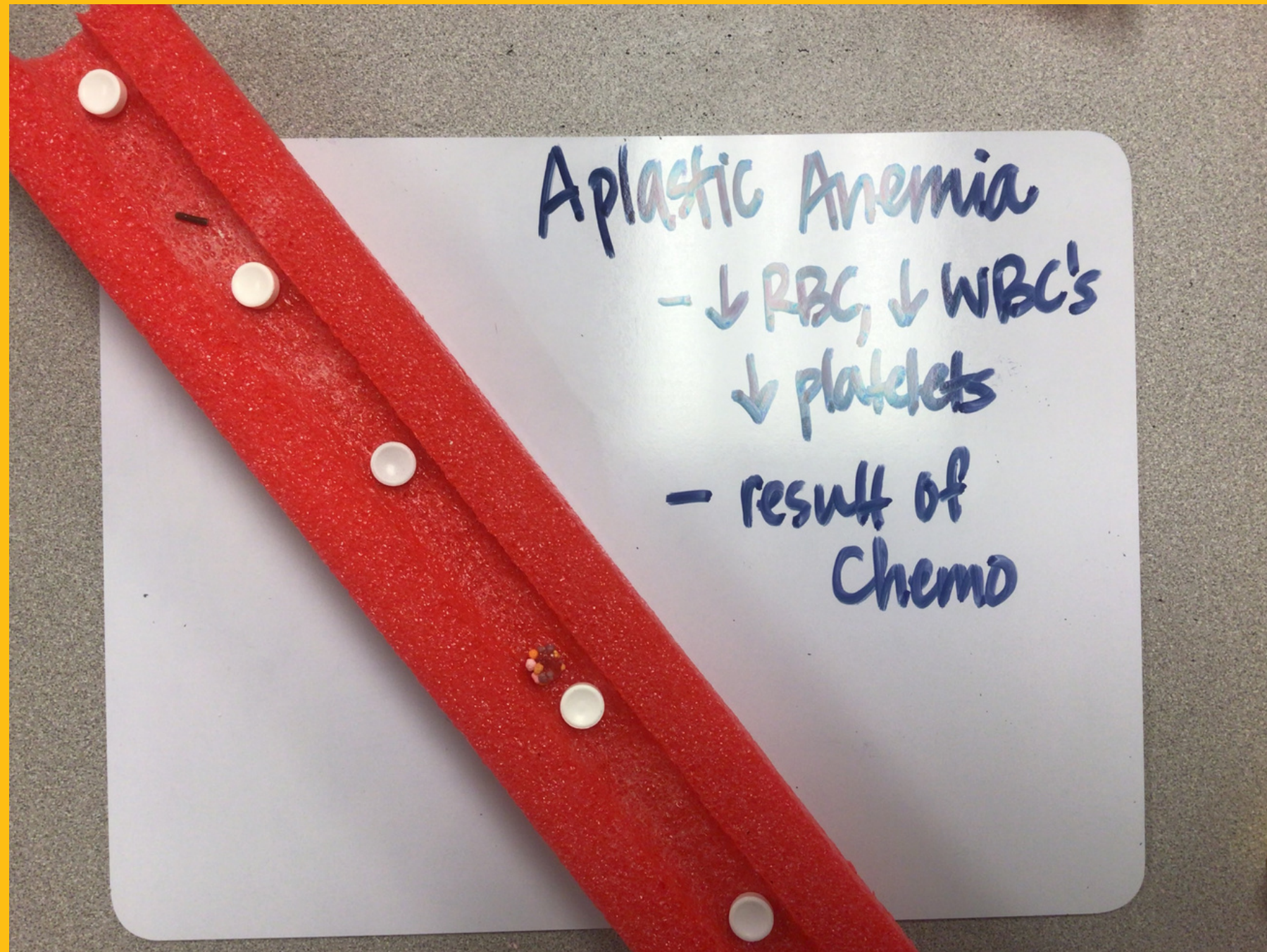




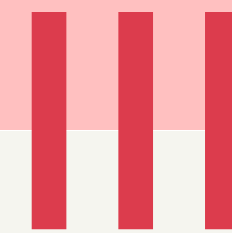
# Pernicious Anemia



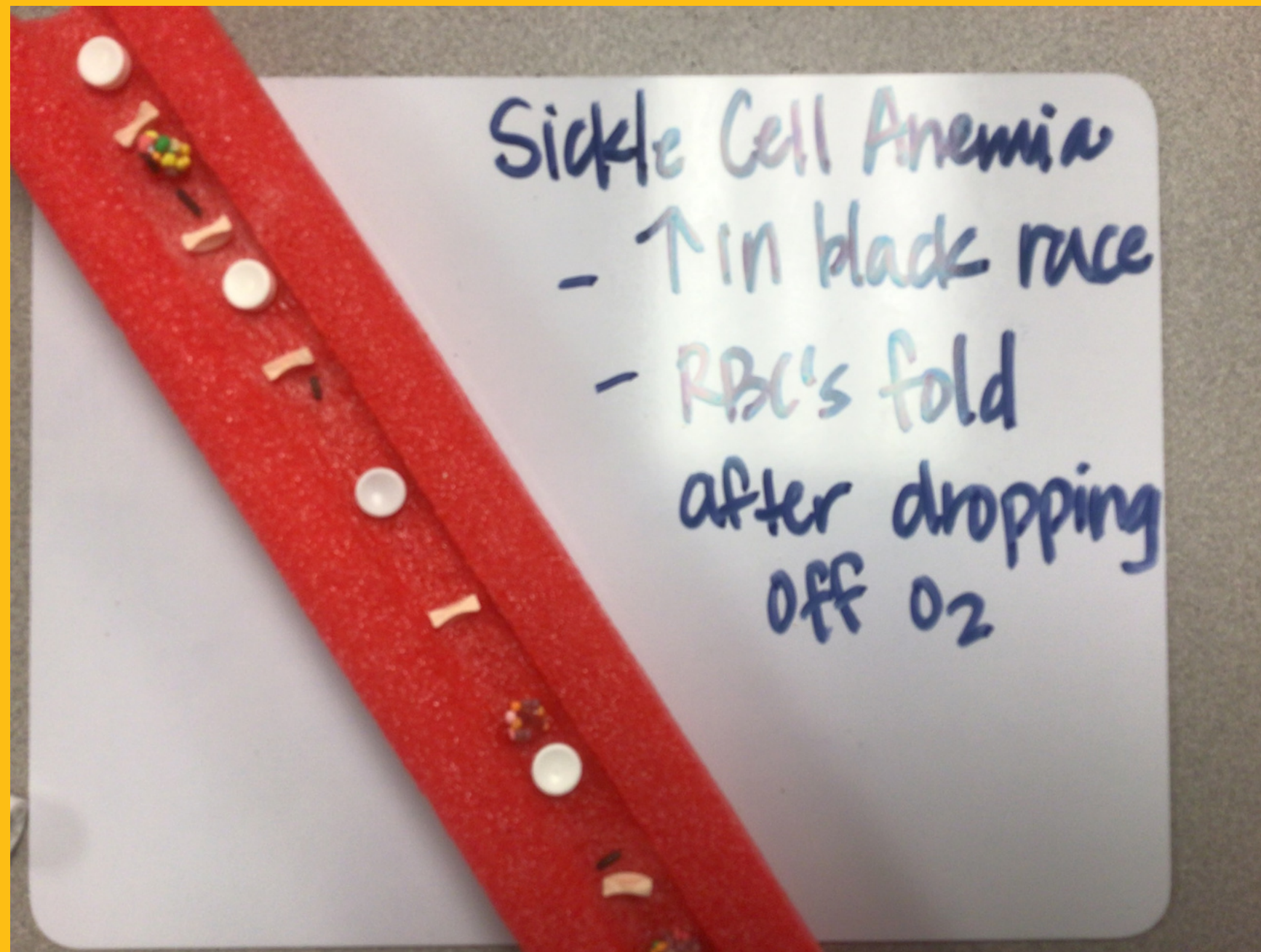
- low to no B12 (folic acid) absorption in the stomach, autoimmune vs dietary deficiency
  - affecting only RBC, number and size (larger-megaloblastic)



# Aplastic Anemia



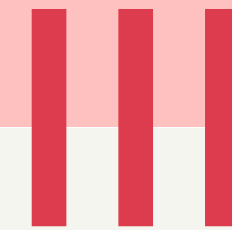
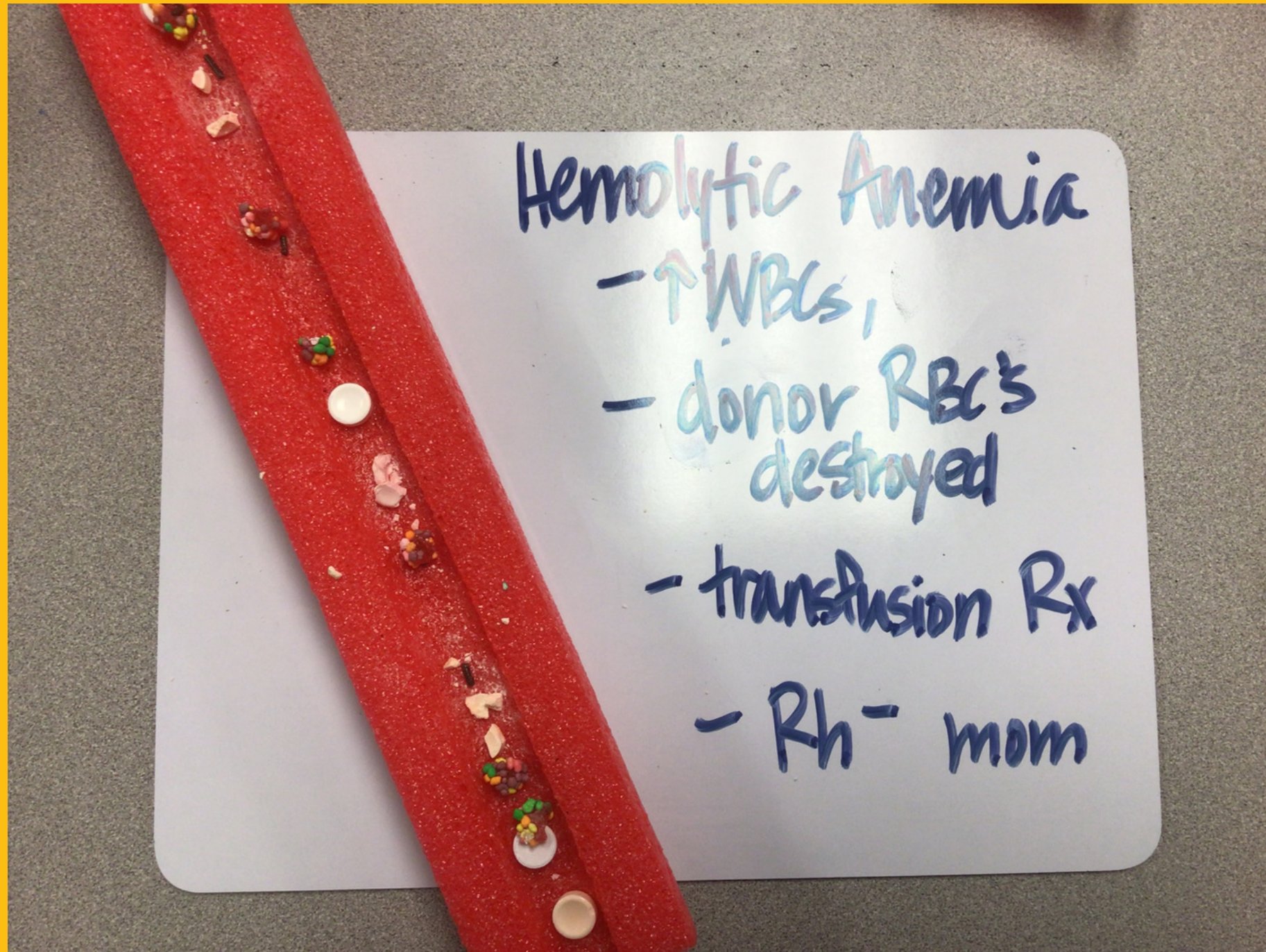
- induced by chemotherapy damage to bone marrow.
- Low levels of all blood components
  - Can discuss thrombocytopenia, leukopenia/neutropenia



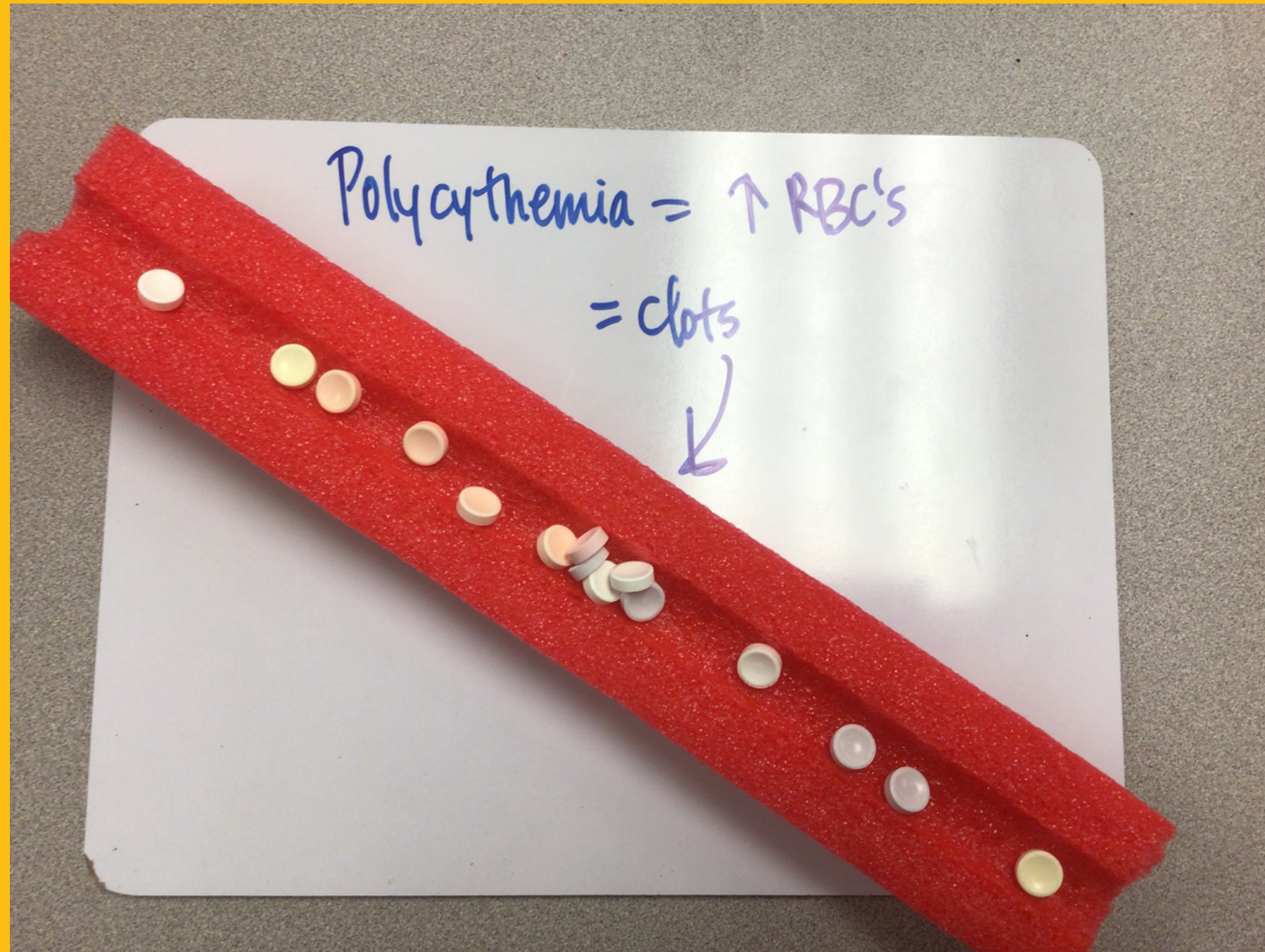
# Sickle Cell Anemia

- sickling of cell after O<sub>2</sub> dropped off
- causes ischemic pain from clots in small capillaries
- Black race is a predisposing factor.
- Both parents are carries

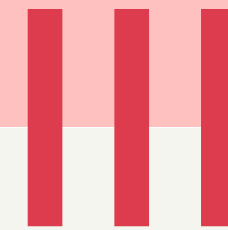
# Hemolytic Anemia



- Immune system attacks red blood cells
- seen in transfusion reactions and Rh incompatibility
- Discuss issues with spleen, liver, & kidneys



# Polycythemia



- Primary/Vera (Neoplastic) vs. Secondary (increased EPO)
- Risk of clots
- Discuss blood doping (Lance Armstrong)

# Hematology: Clotting Process & Clotting Disorders

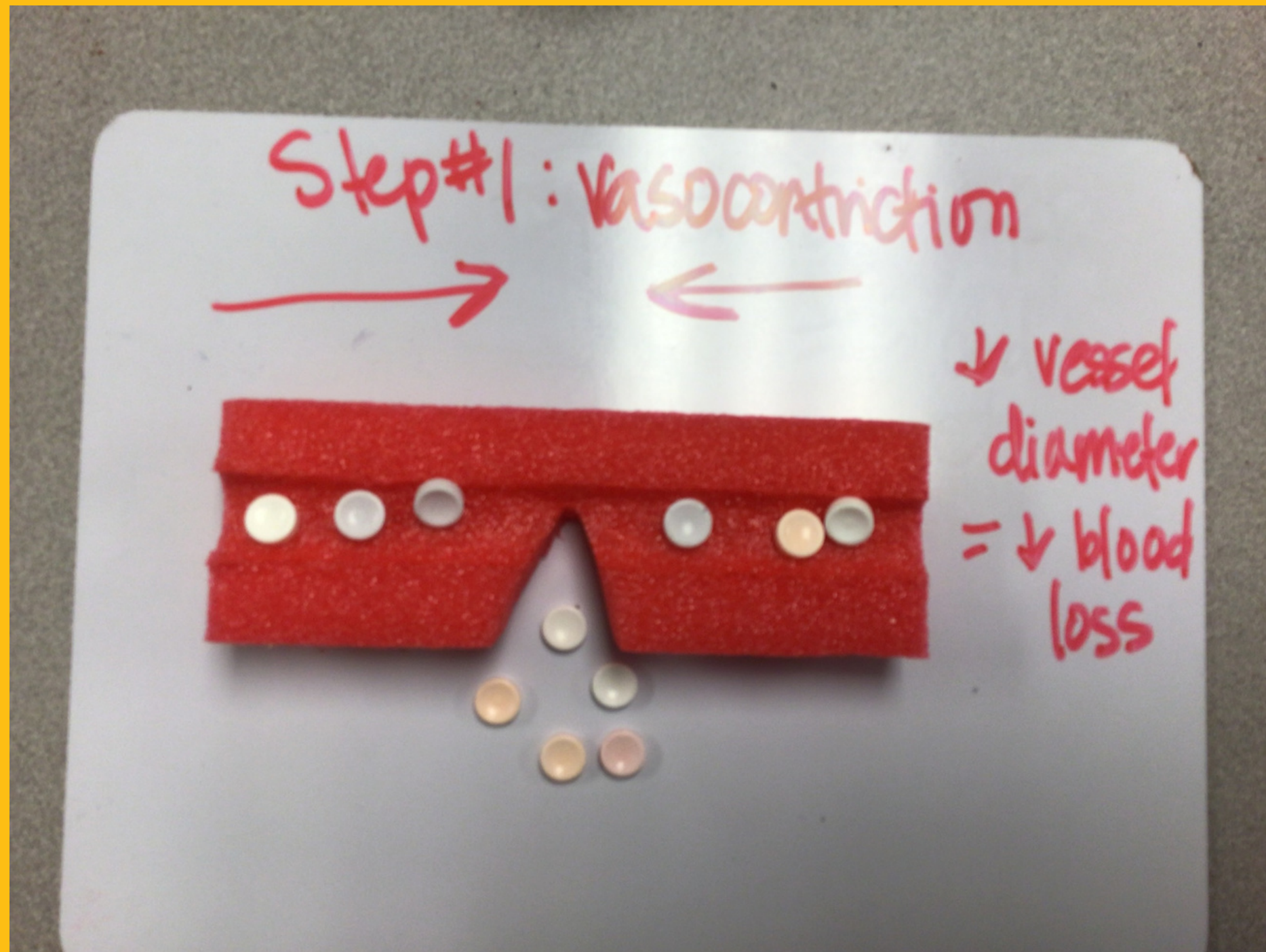
## Objectives:

- Understand the process of blood clotting
- Link to hypertension, inflammatory process, and cardiovascular disease

## Teacher Notes:

- Introduce the material with fill in the blank notes.
- Build with candy to reinforce understanding
- Can be complicated so keep it simple

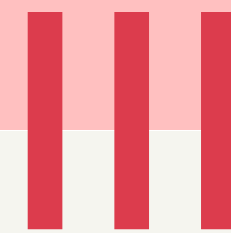
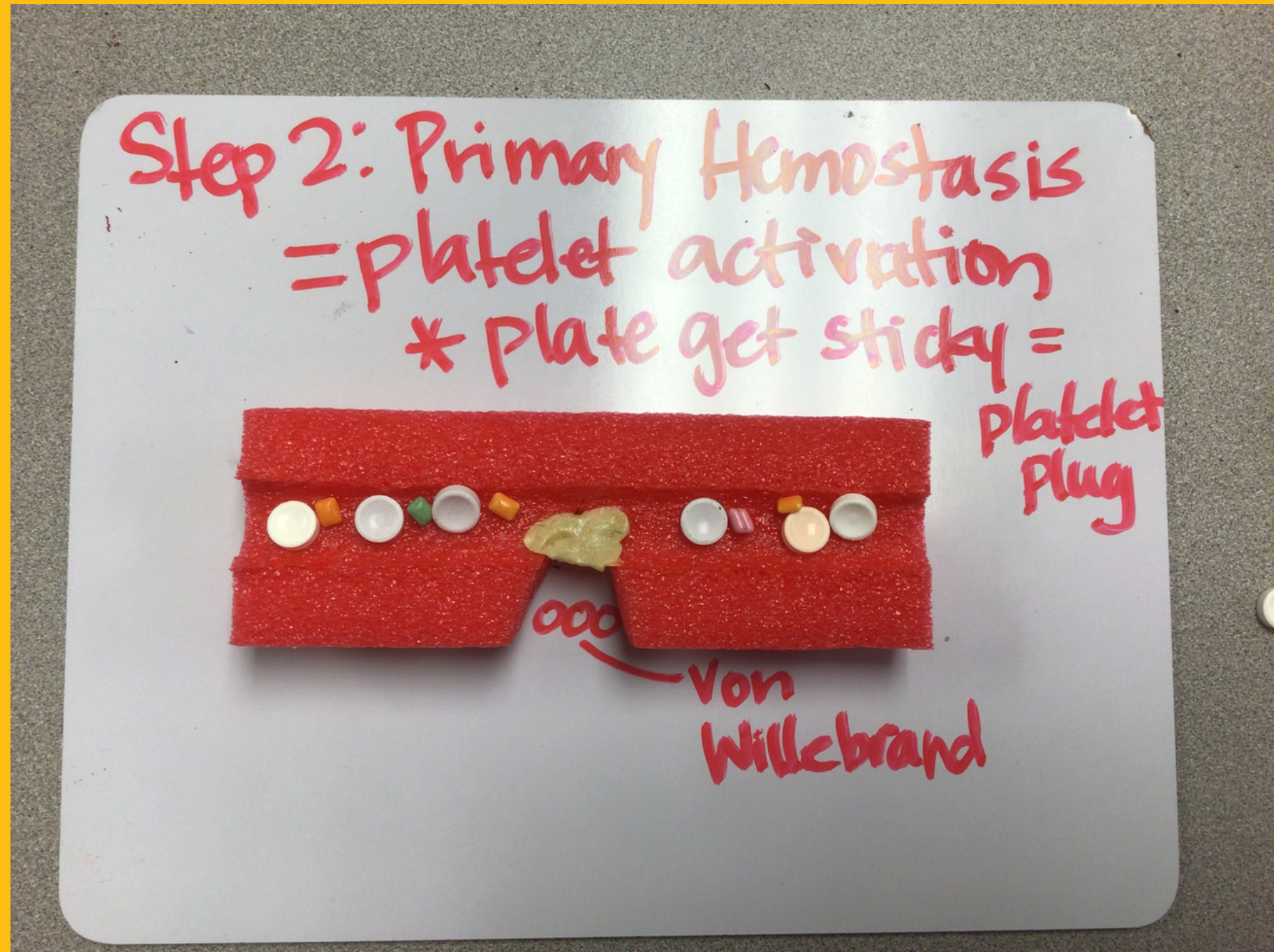
# Clotting Process



## Step 1:

Vasoconstriction

# Clotting Process

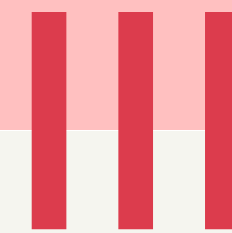


## Step 2:

Primary Hemostasis  
Platelet Activation

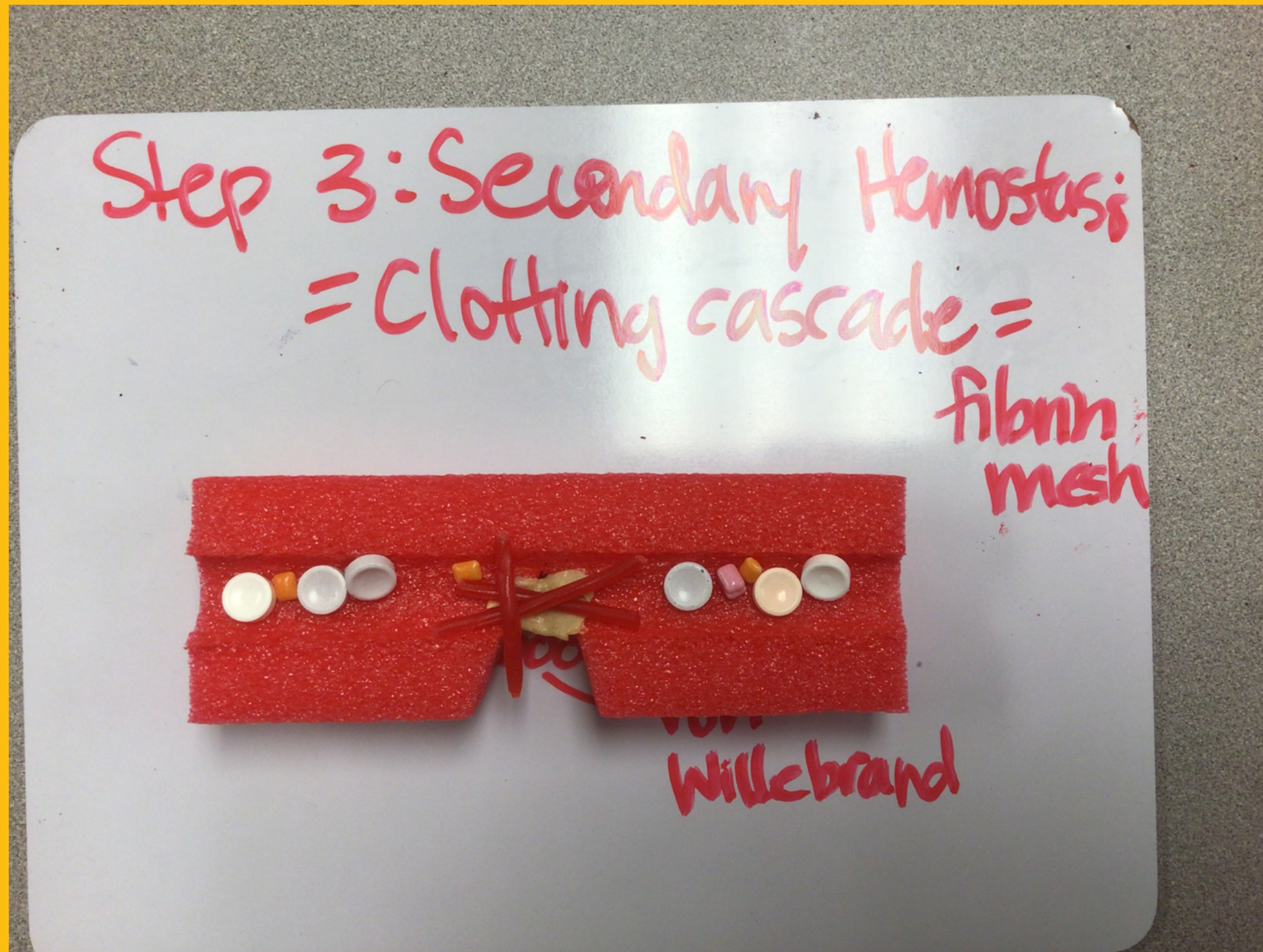


# Clotting Process

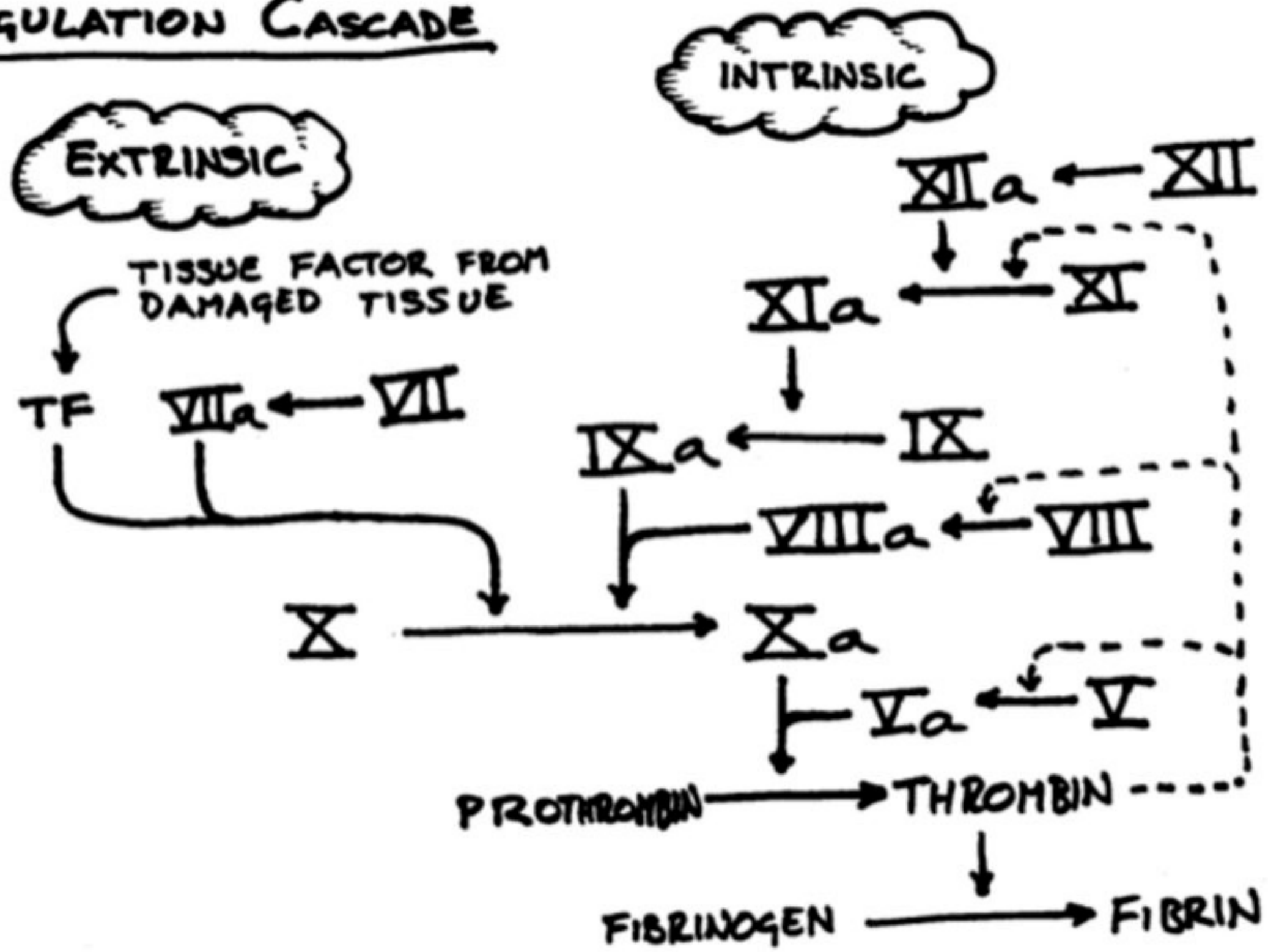


## Step 3:

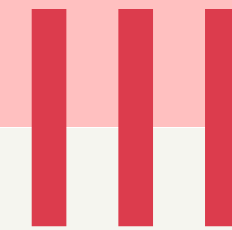
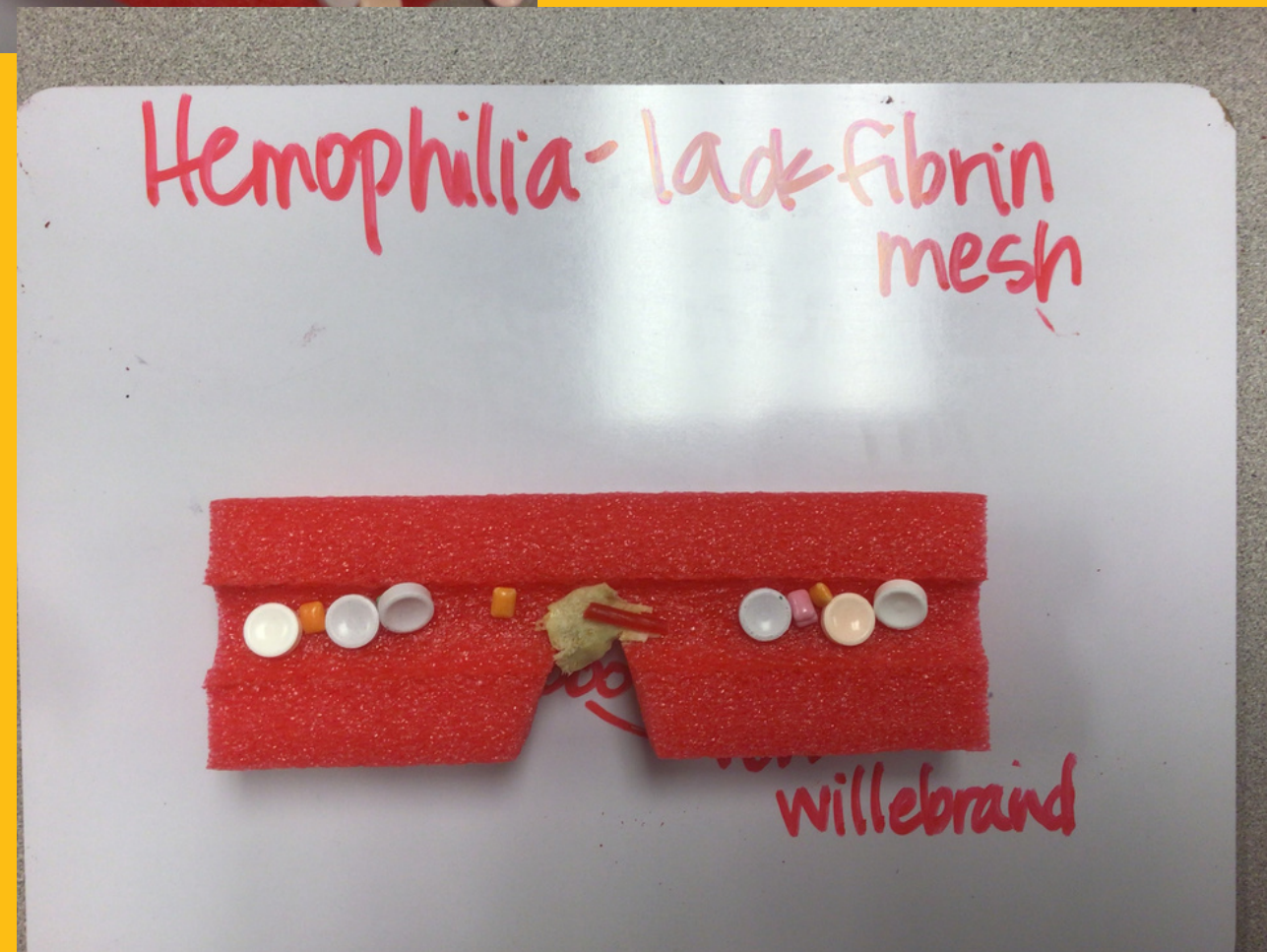
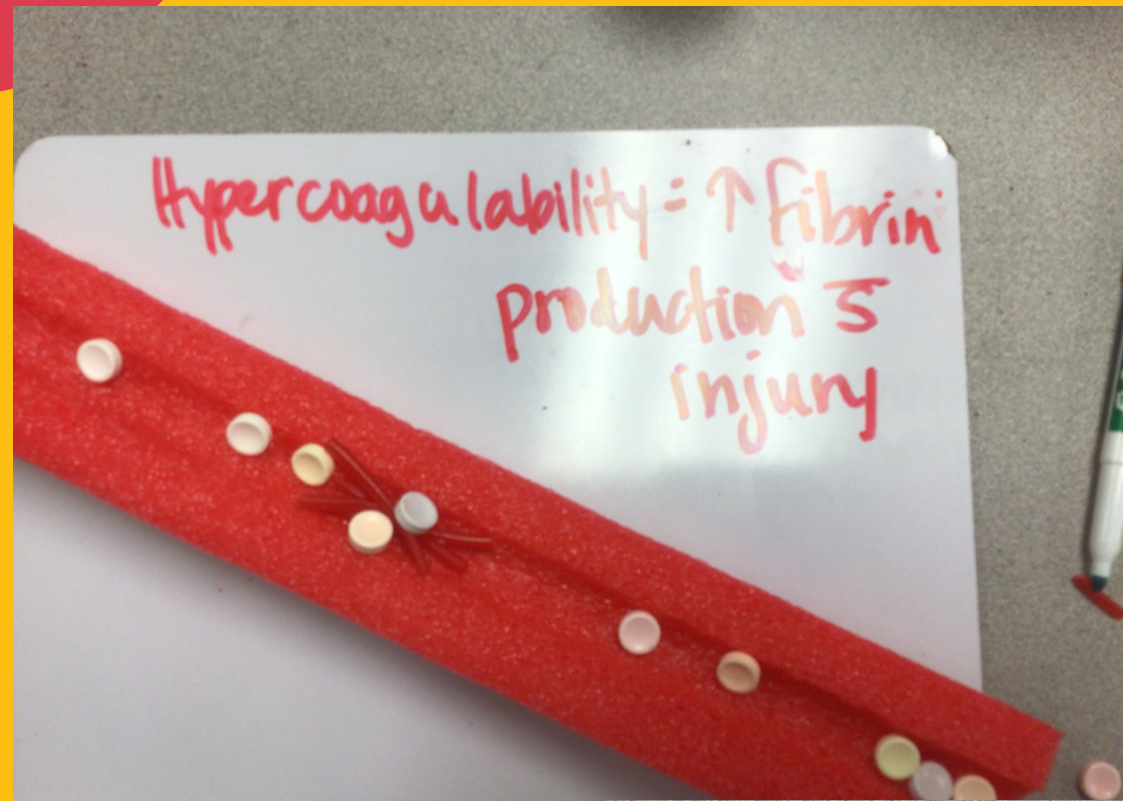
Secondary Hemostasis  
Clotting Cascade



# COAGULATION CASCADE



# Clotting Disorder



- Hypercoagulability
  - Factor V Liden
- Hypocoagulability
  - Hemophilia (low/no fibrin production)
  - Thrombocytopenia (low platelets, poor plug)
  - Von Willebrand Disease



# Giving Credit for Student Work

- Participation is key!
- Turn in photos for a grade
  - built properly = 50%
  - summarized correctly "In your own words" = 50%

\*Can be used as a lab quiz\*

