

## CONDUCTING A COMPLETE BLOOD COUNT (CBC)

### Set-up and Key

- RBC – Cinnamon Imperials/Red Hots candies (heart-shaped if available, not gummies)
- WBC – Dried Lima Beans (small)
- Platelets – Lentils (dark)

		Set up		
		1. Add in all blood cells. 2. Fill the tubes with water up to the 50ml mark, except Stations 2 and 4. These should be filled to a noticeably lower volume, at your discretion.		
Station #	Simulated Condition	RBC	WBC	Platelets
1	Control/Normal Sample	10	13	2 “splashes”
2*	Infection + dehydration (High WBC, Low Plasma)	10	30	2 “splashes”
3	Thrombocytosis (High Platelets)	10	13	4 “splashes”
4	Polycythemia + dehydration (High RBC, Low Plasma)	20	13	2 “splashes”
5	Anemia (Low RBC)	5	13	2 “splashes”
6	Leukopenia (Low WBC)	10	5	2 “splashes”
7	Thrombocytopenia (Low Platelets)	10	13	1 “splash”
8*	Leukemia (High WBC)	10	20	2 “splashes”
9	Sickle Cell Anemia (Low RBC, Sickle-Shaped)	5-7 Cut in half and trim to make shape.	13	2 “splashes”

\*Stations 2 & 8 can be difficult for students to distinguish, so it is acceptable for their answers to be reversed. This is a good point for class discussion about the difficulty of making a diagnosis from a single test/sample as well.