

Go to this web address

Name _____

<http://gallery.nfstc.org/swf/BloodSpatters.html>

Click the tab that reads "Droplet Flight Dynamics." Answer the following questions from that section.

1. What forces must gravity on the blood overcome?

2. How would you describe the direction of the force of Surface Tension from the diagram?

3. What force can also affect the droplet of blood as the weapon is swung?

CLICK NEXT

4. What causes a passive drop to form?

CLICK NEXT

5. As the droplet falls away from the object, what fluid dynamic does surface tension cause?

6. After oscillation stops, what shape does the falling droplet become?

CLICK NEXT

7. What two forces act on the droplet as it falls?

8. Define terminal velocity.

CLICK NEXT

9. How does terminal velocity differ for a larger droplet?

NOW CLICK "THE 4 PHASES OF IMPACT" TAB

10. What is Impact Phase 1?

11. As the central portion of the droplet collapses, what happens to the displaced blood?

12. What does this form around the collapsing droplet?

13. How does the rim relate to the angle of impact?

CLICK NEXT

14. What is phase 2?

15. What begins to form on the edges of the pool?

CLICK NEXT

16. What creates the satellite spatter?

17. What does the satellite spatter look like if the droplet falls at 90°?

18. Where does wave cast off occur at more acute angles?

CLICK NEXT

19. What is phase 4?

20. What happens to satellite spatters that have enough momentum to break off?

CLICK "VIEW ALL" TO SEE THE ENTIRE PROCESS, THEN CLICK THE "ANGLE OF IMPACT" TAB AT THE TOP

21. What will be the basic shape of a droplet falling in the range of 90-70 degrees?

22. What happens to spines, scallops, and satellites on droplets between 75-40 degrees?

23. What tends to form at highly acute angles, generally below 40° and what could this type of droplet be called?