**Sticky Situation: The Wonders of Glue**

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**Read the article “Sticky Situation: The Wonders of Glue” and then answer the following questions.**

1. What element in the surrounding water do mussels use to bind to three DOPA side chains to form a cross-linked framework?
2. What is special about fish glue that makes it work well when bonding leather?
3. (a) The key to the “stickiness” of a gecko’s feet are Van der Waals forces. What are the three types of attractive forces referred to as Van der Waals forces?

(b) Which of the three types of Van der Waals forces do gecko’s use?

1. (a) What molecule is responsible for the adhesive qualities of Superglue?

(b) What was superglue used for during the Vietnam War?

1. What is the main difference between superglue and Gorilla Glue?
2. One way that glues can work is by taking advantage of electrostatic forces present on the surfaces of the objects being bonded. Describe how electrons are responsible for creating these electrostatic forces.