



Force and Friction in Joiner's Shop

Grade 5 Science

Name: _____

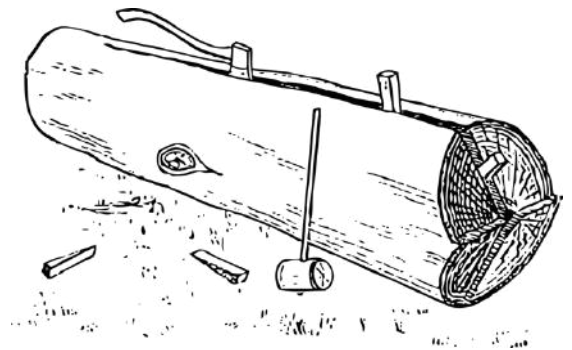
Date: _____

Activity 1:

In the video, Joiner Ben was using a maul to drive the froe into a piece of wood to split it. Circle the best response to the following questions about this activity.

1. What force was acting on the maul.

- A. The force applied by the froe.
- B. The force applied by the piece of wood.
- C. Gravity
- D. Friction



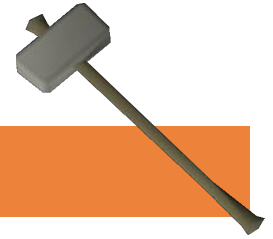
2. Describe how a bigger maul with more mass would it affect the joiner's ability to split the wood?

- A. The greater mass of the maul will result in greater force applied to the froe.
- B. The greater mass will make it easier for the joiner to lift the maul.
- C. The greater mass of the maul will result in less force applied to the wood.
- D. The greater mass of the maul will not affect the joiner's ability to split the wood.

3. Describe how the mass of the wood being split effects the force of the froe?

- A. The greater the mass of wood, the greater the effect the force of the froe will have on it.
- B. The mass of the wood does not affect the force of the froe.
- C. The greater the mass of the wood, the less effect the force of the froe will have on it.
- D. The smaller the mass of the wood, the less effect the force of the froe will have on it.



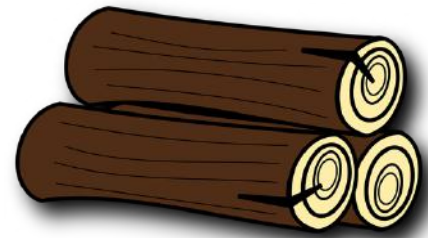


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Activity 2:

Friction was involved when the joiner was turning a piece of wood on the lathe. *Answer the following questions about this friction.*

1. What were two points where friction was being created?
2. How does this friction affect the rotation of the piece of wood on the lathe?
3. How could the joiner observe this friction?



Activity 3:

The maul is traveling 3.5 feet, and it takes 1 second for it to hit the froe. *Use this information to complete the following.*

1. What is the average speed of the maul?
2. Construct a graph that shows how far the maul will travel in 2 seconds.

