

Name _____

Thumb War Worksheet

*Step 1: Identify a **Problem** to solve*

Which member of your group will win a thumb war competition?

*Step 2: Make a **Hypothesis***

Do you think that the member of your group with the longest thumb or the shortest thumb will win?

_____.

Why? _____

_____.

*Step 3: Do an **Experiment***

First, let's find out the length of our thumbs. Use a ruler to estimate the length of your thumb in centimeters. Make sure to write down the thumb lengths of your other group members!

Team Member	Thumb Length
1.	
2.	
3.	
4.	
5.	

Next, follow the procedure below to conduct your thumb war experiment to see if your hypothesis is correct. Be sure to record your results in step 4!

To play the game, a player hooks the four fingers of their right (or left) hand to the four fingers of the other player's right (or left) hand and clasps firmly. To start the game, both players say "One, two, three, four, I declare a thumb war." Both students then try to *trap, pin, or capture* their opponents thumb for five (5) seconds to win. No cheating! You may only use your thumb to capture your opponent's thumb – you may not use other fingers or your other hand to win! Your arms must stay touching the desk during the thumb war.

*Step 4: Record your **Results***

Team member # vs. Team member #	Result (Who is the winner?)	Repeat Experiment (only when you have finished Step 5!!)
1 vs 2		
1 vs 3		
1 vs 4		
1 vs 5		
2 vs 3		
2 vs 4		
2 vs 5		
3 vs 4		
3 vs 5		
4 vs 5		

*Step 5: Make a **Conclusion***

- 1) Who won the most rounds of thumb wars in your group? _____
- 2) Does that person have the longest thumb in your group? _____
- 3) Was your hypothesis correct (step 2)? _____
- 4) Why do you think you were correct or incorrect? (Why did the person with the longest thumb win OR why did someone who did NOT have the longest thumb win?)

Explanation: After all groups complete the thumb war, the teacher asks each group who won and if they made the correct hypothesis. The teacher will ask how the groups made sure that the person who won did not win by a mere fluke (repetition). The teacher will review with the class the different steps that they took and why they were necessary to determine the outcome of the experiment.

Elaboration: Students will repeat the experiment, keeping the steps of the scientific method in mind.

*Step 6: **Repeat** the experiment.*

If your group finishes early, then you have time to do the final step of the scientific method! Repeat your experiment again to make sure that the results you got the first time are correct. Record your results on the table above in the column that says "Repeat Experiment."