



READERS' GUIDE:

Teddy Mars Almost a World Record Breaker

by Molly B. Burnham

Guide By Christine Paglia Baker

STEM QUESTIONS

1. All ten of Lee Redmond's fingernails measure 28 feet, 4.5 inches when their lengths are combined (pages 2-3). Estimate how many inches long one nail is based on the length of all ten nails combined.
2. How much longer, in inches, is Stephen Taylor's tongue (3.86 inches) than Teddy's tongue (1.3 inches)?
3. On page 71, Teddy says: "The chances that he'll (Mr. Marney) stay my alarm clock are as good as me beating the record for the largest rubber duck collection (5,631)."
 - a. What does Teddy mean when he says "the chances are as good as"?
 - b. Is it likely that Teddy will beat this record?
 - c. What does that tell you about the chances Mr. Marney will continue to be a human alarm clock for Teddy?
4. "Orders pour out of Grumpy Pigeon Man like the 120 million (seriously, 120 million) red crabs that pour out of their burrows once a year on Christmas Island, the record for highest crab density. (You don't want to know why.)" (page 71).
 - a. What do you think crab density means? Why do you think so?
 - b. Write the number 120 million in at least 2 other forms (hint: in digits, in words, or in expanded form)
 - c. How do you think people count 120 million crabs?
5. On page 74, Teddy says: "Strange but true...this week could only have been worse if I was Wim Hof and spent 1 hour 52 minutes and 42 seconds buried up to my neck in ice." Round the amount of time Wim Hof spent up to his neck in ice to the nearest hour, and to the nearest minute
6. On page 76, Teddy reports that "The fastest time to push an orange for a mile with the nose is 24 minutes 36 seconds." Convert this time to minutes using a decimal (you can use a calculator).





READERS' GUIDE:

Teddy Mars Almost a World Record Breaker

by Molly B. Burnham

Guide By Christine Paglia Baker

7. On page 108, Teddy tells us that the farthest a watermelon seed has been spat is 75 feet 2 inches. The farthest a cherry pit has been spat is 93 feet 6.5 inches.
- Make an estimate of how much farther the cherry pit was spat than the watermelon seed.
 - Find the actual answer, in feet and inches.
 - Why do you think a cherry pit would go farther than a watermelon seed?
8. Look at the distances that several projectiles—a cow pat, a brick, a rolling pin, and a paper airplane—have gone (page 108), using the table below:

Type of Projectile	Distance	Relative weight	Most aerodynamic
Brick	146 feet 1 inch		
Rolling pin	175 feet 5 inches		
Cow pat	226 feet		
8 ½ by 11-inch paper airplane	207 feet 4 inches		
Raw egg in shell	323 feet 2 inches		

- Rank the 5 projectiles by how much you think they'd weigh in comparison to one another. Use a 1 for the lightest weight projectile, and a 5 for the heaviest.
- Calculate in feet and inches: how much farther the airplane went than the brick.





READERS' GUIDE:

Teddy Mars Almost a World Record Breaker

by Molly B. Burnham

Guide By Christine Paglia Baker

9. Aerodynamic is a word that means the way air flows around an object as it moves. An airplane is very aerodynamic because it has curved edges that help it to glide through the air. A brick is not aerodynamic because it has sharp corners that make it harder to move smoothly when it's thrown through the air.
- Rank the 5 projectiles by how aerodynamic they seem to you based on their shape. Use a 1 for most aerodynamic and a 5 for least aerodynamic.
 - Compare your rankings. What do you notice?

Answer Key: STEM Questions

1: 28 feet = 336 inches; $336/10$ = around 33.6 inches per nail

2: 3.86 inches - 1.3 inches = 2.56 inches

3: Rubber duck collection

- "The chances are as good as" means it's just as likely or unlikely that one thing will happen (Teddy beating the record) as another unrelated thing (Mr. Marney being a human alarm clock for a long while).
- Is it very unlikely that Teddy will beat this record. This means that it is also very unlikely (in his opinion) that Mr. Marney will continue to be a human alarm clock for Teddy?





READERS' GUIDE:

Teddy Mars Almost a World Record Breaker

by Molly B. Burnham

Guide By Christine Paglia Baker

4. Crab density
 - a. Crab density means how many crabs live in one part of the world. I think so because...(answers vary)
 - b. Possible answers include: 120,000,000; one hundred twenty million; 100,000,000 + 20,000,000
 - c. Answers vary
5. Nearest hour: 2 hours; nearest minute: 1 hour, 52 minutes
6. $36/60 = 0.6$, so the answer is 24.6
7. On page 108, Teddy tells us that the farthest a watermelon seed has been spat is 75 feet 2 inches. The farthest a cherry pit has been spat is 93 feet 6.5 inches.
 - a. 94 inches - 75 inches = 19 inches farther
 - b. 18 feet 4.5 inches
 - c. Because a cherry pit is heavier (answers vary)

8.	Type of Projectile	Distance	Relative weight	Most aerodynamic
	Brick	146 feet 1 inch	5	5
	Rolling pin	175 feet 5 inches	4	3
	Cow pat	226 feet	varies	4
	8 ½ by 11-inch paper airplane	207 feet 4 inches	1	2
	Raw egg in shell	323 feet 2 inches	2	1

9.
 - a. See suggestions above
 - a. 207 feet 4 inches - 146 feet 1 inch = 61 feet 3 inches farther
 - a. See suggestions above
 - a. The lightest, most aerodynamic objects go furthest (answers vary)

