

Name _____

Cell Phone Case Crush and Drop Test

Supplies: Mock cell phone Constructed cell phone case meter stick
Science textbooks

Draw and label the parts of your cell phone case:

Crushing Procedure:

1. Put the phone into the case.
2. Set book on top of case and wait 30 seconds. Remove the book.
3. Open the case and inspect the phone for damage. Record observations.
4. If damaged, stop testing the phone.
5. If undamaged add another book, repeat steps 2-4 until damage is noted on the phone

# of books	Observations: Include size and placement of any cracks or crumbles

Independent variable: _____

Dependent variable: _____

Constants: _____

Dropping Procedure:

1. Put the phone into the case.
2. Orient the phone the way you want to test it (flat, on end, on a corner).

3. Hold the phone steady at 50 cm height
4. Let drop!
5. Make observations about the collision (landing) - did it land the way you wanted? Did it bounce?
6. Open the case and inspect the phone for damage. Record observations.
7. If damaged, stop testing the phone.
8. If undamaged, add 50 cm to the drop height and then repeat steps 4-7.

Drop Height	Observations: collision, bounce?, size and location of damage
50 cm	
100 cm	
150 cm	
200 cm	
250 cm	

Independent variable: _____

Dependent variable: _____

Constants: _____

Questions:

1. What forces were acting on the case in the crushing test? The dropping test?

2. When were the forces balanced during the crushing test? The dropping test?

3. During the dropping test, what is happening to the phone that is inside of the case? (Think of the guy inside of the van during the crash test)