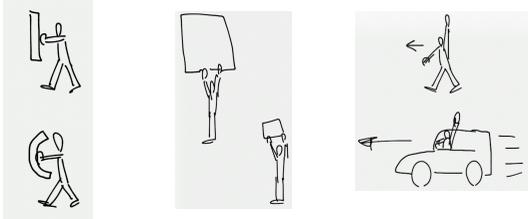


Week 18 Free Fall

1 Free Fall or Not?

1. Sketch what the ticker tape looked like for falling. Was it an acceleration?

2. What are three things that drag depends on?



3. For each of the following situations, decide whether they are:

- A) Perfect Free Fall - no air drag.
- B) Close to Free Fall - not much air drag.
- C) Not close to Free Fall - a lot of air drag.

_____ Jumping out of an airplane with a parachute.

_____ Jumping out of an airplane with no parachute (during the first few seconds.)

_____ Dropping a ball to the ground.

_____ Jumping out of a spaceship above the atmosphere.

_____ Dropping a dandelion seed.

4. Come up with your own example of each one:

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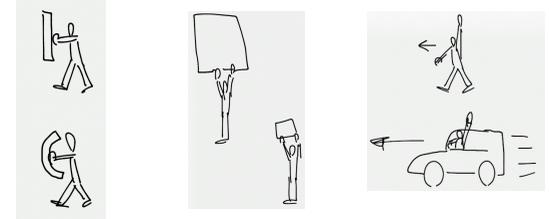
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5. What is...

a) The actual acceleration due to gravity in free fall on Earth?

b) What do you think we're going to round it to, to make calculations easy?

c) Using the rounded number, how much speed do you gain every second in free fall here on Earth? What is it in miles per hour every second?

6. Using the rounded number in meters/second, how fast would you be going after falling for...

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b) two seconds?

c) three seconds?

d) ten seconds?

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