Forces and Motion

Review Game

Rules

- Participants buzz in after reading the question silently to themselves
  - Each correct response results in 1 point

Rules Cont.

- Incorrect answer: Same question goes to any other person remaining that did not buzz in before - awarded 1 point
    - Next question will go to another set of lab table representatives

- Outside talking amongst lab tables during a round results in deduction of point

Rules Cont.

- First response - only response (cannot change answer)

Question #1

- A direct force that requires contact is called what?

Question #2

- The amount of matter in an object refers to its what?

Question #3

- Finish the following statement: All forces act in _____.

Question #4

- When something acts against another force, the force is _____ it.

Question #5

- The force of an object due to gravity is referred to as its what?

Question #6

- A force becomes stronger when it is _____.

Question #7

- A force that attracts any objects with mass down to Earth is called what?

Question #8

- When counteracting forces are equal, there is no change in motion. Another way of saying this is that the forces _____ _____.

Question #9

- What is the unit that force is measured in? (hint – the unit was recorded for each reading on the force probe lab activity)

Question #10

- Applied force to change speed, acceleration, and friction can change the _____ of an object.

Question #11

- For something to be motionless, how are the forces acting on an object?
  - Extra point – what forces are acting upon it?

Question #12

- For an object beginning to move, how are the forces acting upon the object?

Question #13

- For something moving at a constant speed, how are the forces acting upon the object

Question #14

- What is static friction?

Question #15

- Which force is greater when an object speeds up?

Question #16

- Which force is greater when an object begins to slow down?

Question #17

- Newton's first law states that an object _____ will stay _____ and an object _____ will stay _____.

Question #18

- What will strike the floor with more force, a bowling ball or a pool ball and why?
  - Extra point – which of Newton's Laws does this refer to?

Question #19

- What is an example that can demonstrate Newton's 3rd Law of Motion?

Question #20

- What force must be overcome in order to move an object that was previously motionless?

Question #21

- Draw a free body diagram of an air powered car moving along the floor

Question #22

- Draw a diagram of the Earth orbiting around the sun?
  - Extra point – indicate on the diagram at which the point the Earth will be moving the fastest and the point the Earth will be moving the slowest

Question #23

- Draw a free body diagram of a baseball that is dropped by a hand that falls to the ground

Question #25

- Draw a free body diagram of when this baseball that was dropped strikes the ground

Question #26

- Draw a free body diagram of a textbook being pushed across a table
  - Indicate on your diagram, if the force of friction acting against the book is 2 Newtons, what amount of force will be needed to get the book moving

Question #27

- Draw a free body diagram of the floating magnets activity

Question #28

- Make an interactions chart of 2 cars in the mud tied together by a rope

Bonus Question

- When a roller coaster moves up an incline, what type of energy is collecting to move it forward at a high speed after the initial drop?