STATION GUIDE

Station #1

Watch the presented video, complete the table below. Identify one **surprising** fact or idea, one **interesting** fact or idea, and one **troubling** fact or idea from the video.

S *One surprising fact or idea.*	
I *One interesting fact or idea.*	
T *One troubling fact or idea.*	

Station #2

1. Watch the provided demonstration.
2. Choose two group members to try out the Inuit Stick Pull.
    a. Participants should sit facing each other, legs extended, and soles of feet touching. They should hold the short stick between them, with one student's hands on the outside of the stick and the others on the inside of the stick.
    b. The task is to try to pull the stick away from your opponent or pull them off the floor, using only your hands. Players may not jerk or twist the stick, and if their hands begin to slip, they are not allowed to re-grip.
3. In the space below, record the characteristics of each participant (muscular, tall, short, lean, anything that could contribute to them winning the match).
    a. Record Characteristics Below:

What happened when both students pulled on the stick with equal force?
Who moved more? What can you infer about force and mass?
How is Newton's 3rd Law demonstrated in this activity?

Station #3: Seal Hop

- Watch the provided demonstration.
- Choose two group members to try out the Seal Hop.
- Each participant should move forward in a push-up position, with flat palms or balled up fists only. One participant should wear a weighted backpack.
- Members not participating will mark the distance that each participant should "seal hop" between.
- One group member should time each student and record it.
- Compare the time to complete the task between the participant with the weighted backpack and the one without.

How did adding mass affect the motion of the seal hopper?
What force(s) were acting against the participants during this movement?
What can you infer about the connection between mass and acceleration?
What can you infer about the relationship between force, mass, and acceleration?

Station #4: Scissor Broad Jump

- Watch the provided demonstration.
- In the space below, draw a diagram showing the jumper in mid-air. Include labeled force arrows that are acting on the jumper such as gravity, the push-off force, air resistance, etc.

- Attempt the activity.

What forces are at work when the athlete jumps forward?
How does the direction and strength of the jump affect distance?
How would adding mass change the jump?

Station #5: Kneel Jump

- Watch the provided demonstration.
- Create a diagram in the space below showing the action-reaction force pairs. Make sure to label it and identify the direction of the push and the direction of the resulting motion.

What is the action force in the movement? What is the reaction force?
How is Newton's 3rd Law shown when the athlete leaves the ground?
What role does body position play in maximizing force?

Station #6: Wrist Carry

- Watch the provided demonstration.
- Review the images provided.
- Observe the differences in effort required to lift each type of participant and discuss how mass affects the amount of force needed as a group.

Which body type would require the most force to lift? Why?
How does this connect to Newton's Second Law? (F=ma)?
What variables could be adjusted to increase or decrease the difficulty?