Thinking about Graphs

In the example below, Delenn is being pushed by Amna in a rolling desk chair. The graph on the top shows the distance Delenn has traveled from where she started. The graph on the bottom shows how her speed changes as she moves along the path of motion.

1. Circle on the graph the place(s) where the speed was highest/fastest. Draw a box around the place(s) on the graph where the speed was the lowest/slowest.

2. Describe the forces that acted on Delenn to increase her speed. ____________________________

3. Why does Delenn start to slow down? ___________________________________________
Patterns of Forces

1. Pull up the video you recorded of someone in your group jumping rope. Open the graph drawer for this video. Select the graph for “along path.” Draw the graph for speed in the space below.

2. On the drawing of your graph above, circle the places on the graph where the person jumping was moving the fastest.

3. Next, draw a box around the places on the graph where the person jumping was moving the slowest.

4. Using the feature in the app place push/pull stickers on the appropriate places in the video.

5. Let’s think more about the patterns you notice related to force. Describe where in the path of motion there is a force pair acting on the person jumping. (Hint: This probably happens more than once.)
6. Describe where in the path of motion is the person jumping is moving the slowest/fastest. (Hint: This probably happens more than once.)

7. Use the space below to describe the overall patterns in the forces related to the person jumping. Make sure to talk about how speed and force influence each other in this case.