Real life applications of everything that you have learned so far

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Teaching is a habitual activity

One of the habits of mind that a physics teacher should strive to develop is “noticing physics everywhere”. A habit of practice that follows from noticing physics in an everyday phenomenon is capturing it and incorporating it into student learning. Today we will see an example of such noticing and incorporating.

To learn more about habits, read

Etkina, E., Gregorcic, B., & Vokos, S. (2017) Organizing physics teacher professional education around productive habit development: A way to meet reform challenges. Physical Review, Physics Education Research, 13, 010107.

Watch the following video and think of different ways we can use it to apply everything we learned so far in physics. In other words, what physics principles or ideas can be used to explain and analyze what is going on?

https://www.youtube.com/watch?v=_sCp1igJ3j8

Links.

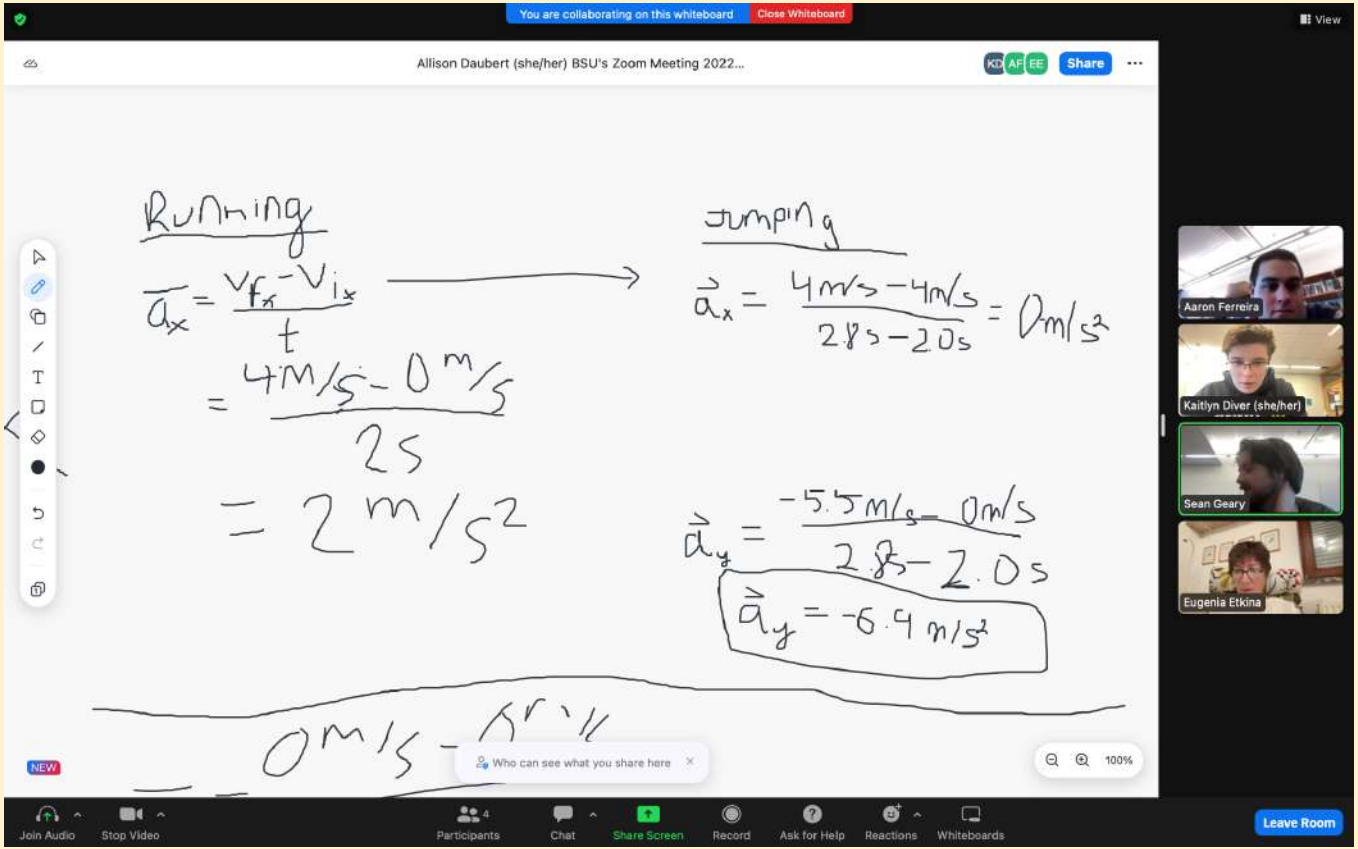
The document with the problems that we will be working on today

https://docs.google.com/document/d/1qjjZC9y9Ts8PE5HHMHCnIe4s3cxJ8x7m/edit

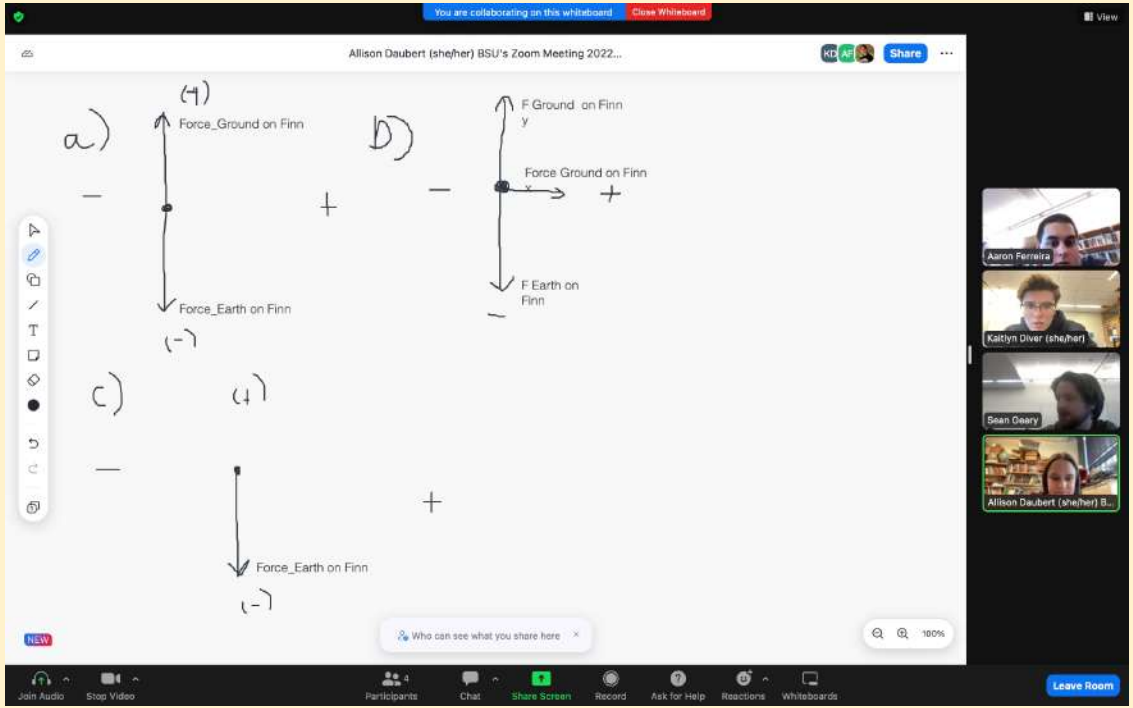
Team 1 Finn’s jump Kinematics

Sketch the graphs on the whiteboard and paste the screenshot here, then proceed answering the rest of the questions

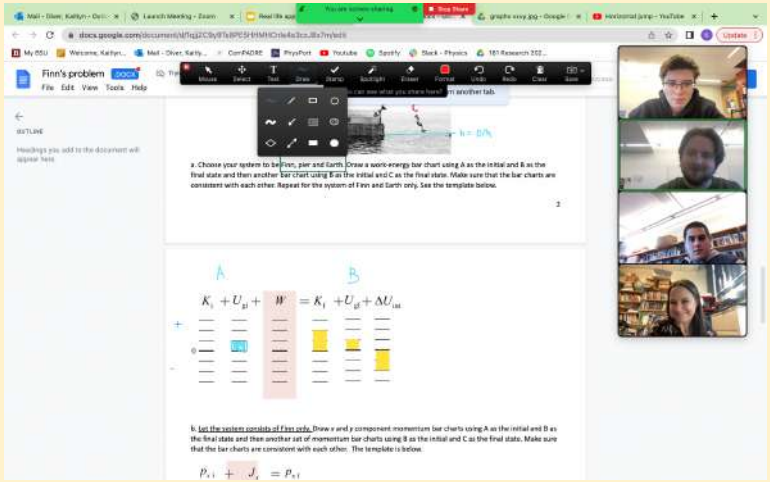
Team 1 Finn's jump Kinematics

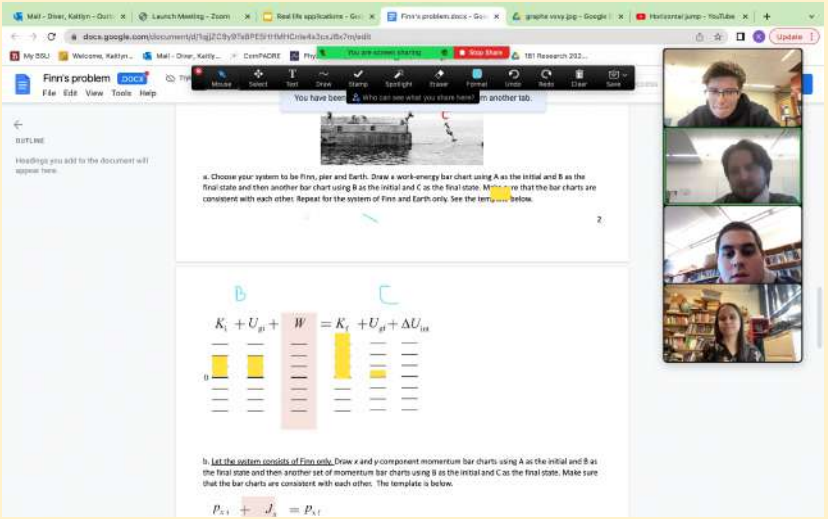


Team 1 Finn's jump Dynamics



Team 1 Finn's jump Energy

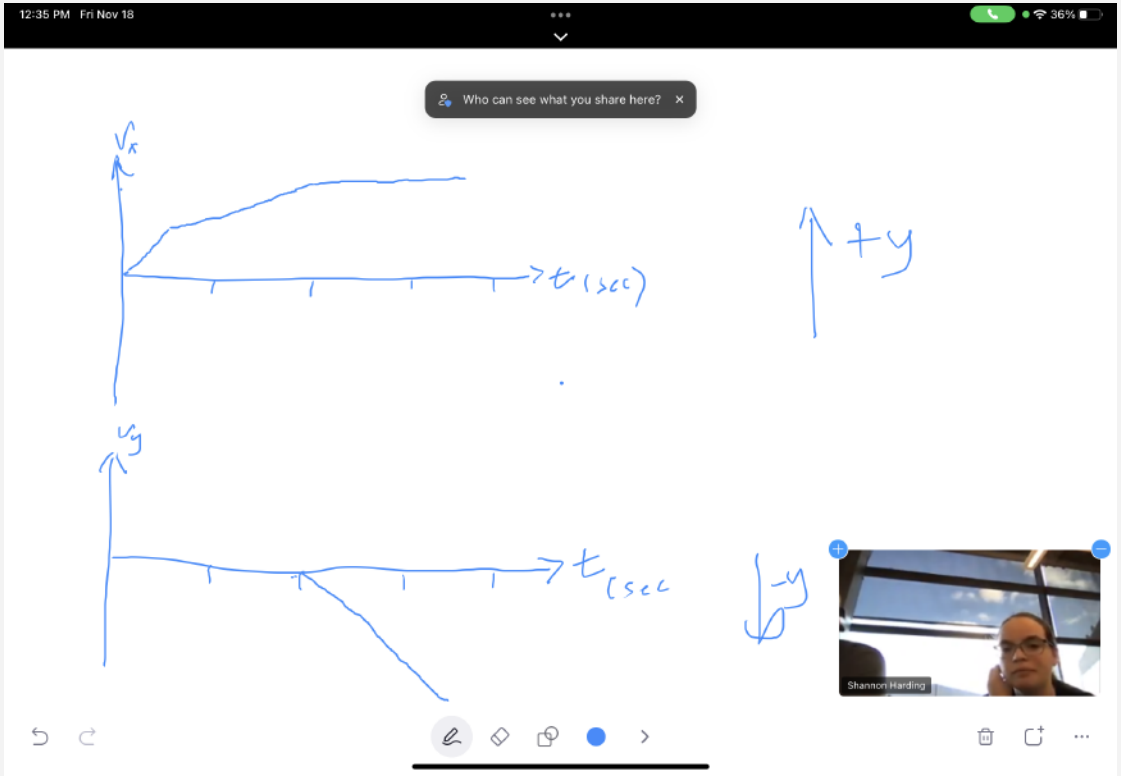




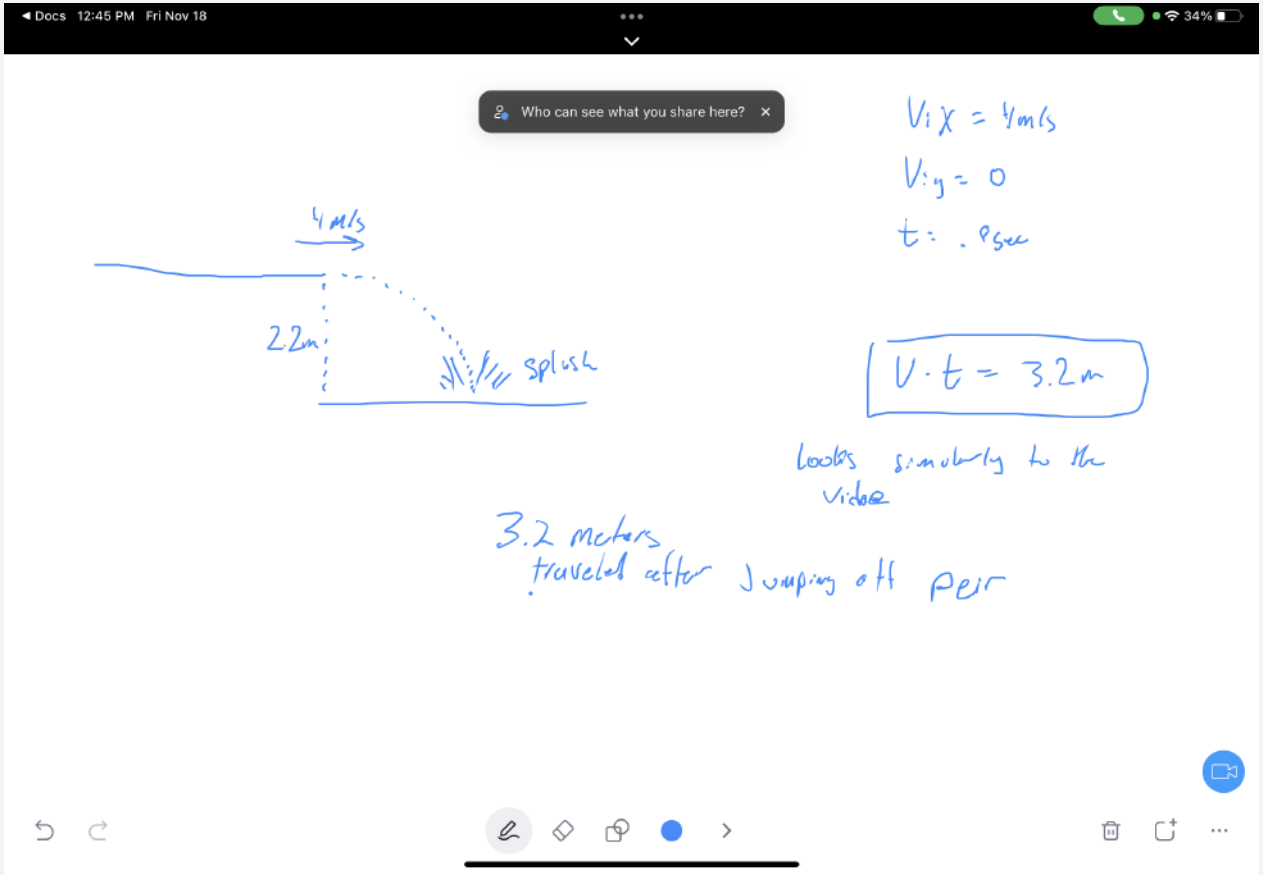
Team 2 Finn’s jump Kinematics

Sketch the graphs on the whiteboard and paste the screenshot here, then proceed answering the rest of the questions

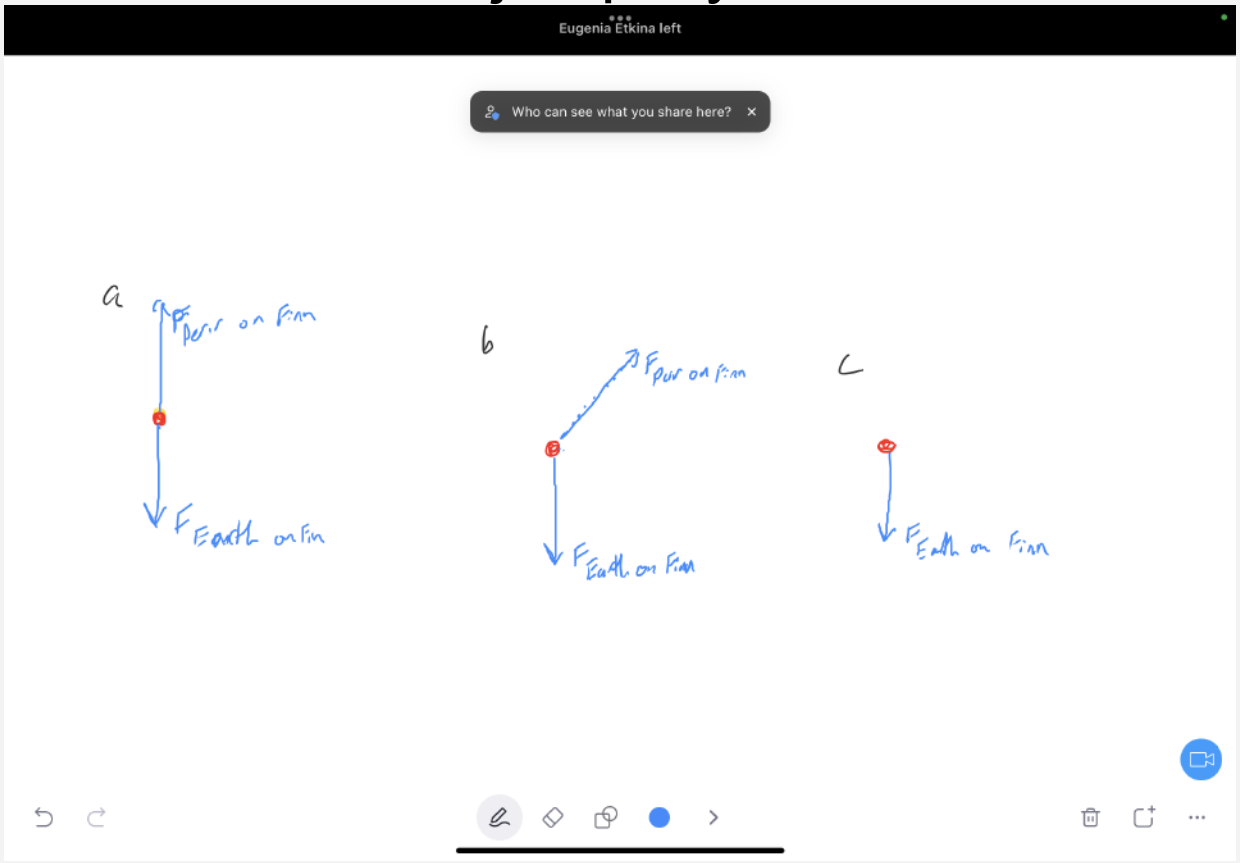
Team 2 Finn's jump Kinematics



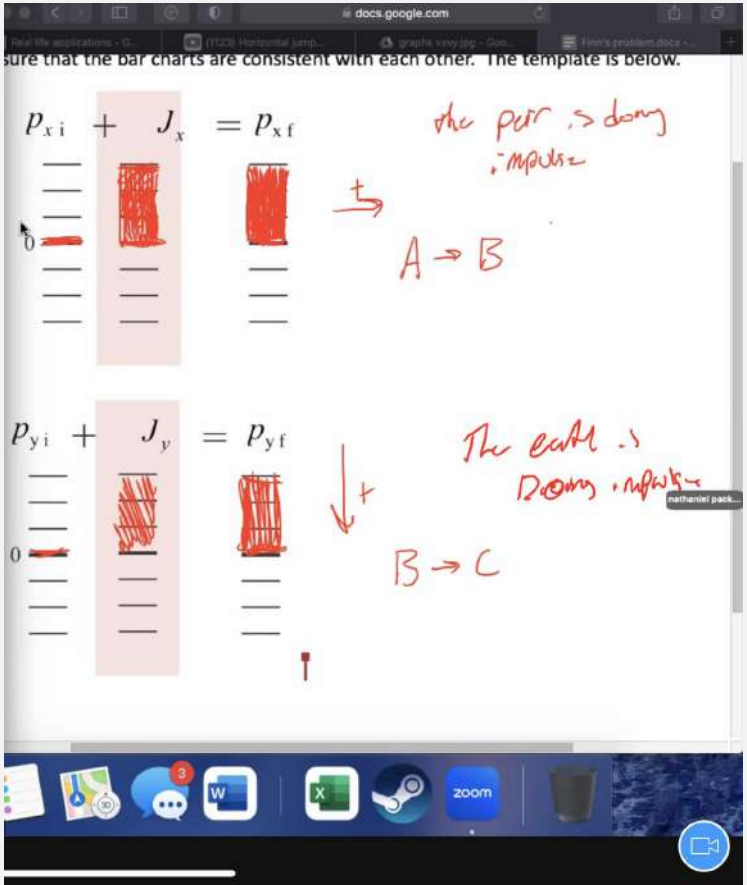
Team 2 Finn's jump Kinematics



Team 2 Finn's jump Dynamics



Team 2 Finn's jump Momentum



What did you learn today? In what ways did today’s lesson help you develop the habit of mind of seeing physics everywhere and a habit of practice of capturing this everyday physics and incorporating it into your students’ learning?

Link to solutions

https://docs.google.com/document/d/1mholURQIezZHB2qhStyOm9eBUpxgrK9C/edit