

# A1. Making Observations

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You will have the opportunity to observe, using our laser-mirror apparatus, some different objects making sounds.

In your notebook:

1. Create an observation table like the one below.
2. In the left column, record the names of the sound sources you observe.
3. In the right column, record what you observe happening to the laser dot when the mirror is placed on each object.
4. Make sure to leave a lot of room to add new rows for each sound source.

Sound source	Observations

## A2. Making Predictions

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### **Turn and talk**

1. What do you think we will see the laser dot do when we strike the drum?

# B1. Making Predictions

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## Turn and talk

1. What do we expect to see the laser dot do when we drop the rock on the table?
2. What we will see the laser dot do if the table doesn't vibrate?
3. What will we see if the table does vibrate?

## B2. Making Predictions

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### Turn and talk

1. What differences, if any, do you think we would see if we dropped a larger rock on the table?

# C1. Comparing and Sharing Noticings

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Use the observations you made in the observation table from the previous step to respond to the following questions in your notebook:

- Do objects besides musical instruments vibrate when they make sounds? What claim can you make in response to this question, using your observations from our tests with our laser-mirror apparatus?
- What evidence do we have to suggest that objects vibrate when they make sounds?

# D1. Making Predictions

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## Turn and talk

1. What do you think we will see the laser dot do if we placed the mirror on the surface of the speaker we observed in our earlier lessons?

# E1. Making Predictions

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In your notebook, record your prediction:

- How do you predict the movement of the laser dot will change if the speaker were making louder sounds?

# F1. Scientists Circle

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- What did our observations from the laser-dot tests tell us about how objects move when they make sounds?
- How did the movement of the dot change when the speaker made different sounds?
- What does this tell us about how the speaker's movement changes when it makes different sounds?

# G1. Adding to the Model Tracker

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Add your new understandings to your Model Tracker.  
Complete the Model Tracker for Lesson 3, which should be taped in your notebook.

Lesson question	Evidence	What did we figure out?	How can we represent this?
What are the affordances and limitations of sharing a model tracker this way?			