Xylophone:

Based on the size of the robot, it can only play 8 notes small size xylophone.

Easy to teach and make music.

About $40 each set.

Simple setup, no need to wire anything unless we want to.

Light weight.

Need external recorder to record the music if kids want their work at the end.

Nao can easily use the stick to hit the notes and play.

Finger drum pad:

At least 8 touch pads can be played, more than 8 notes, not just notes but also beats and more than enough.

The cheapest one is about $70 (Akai Professional LPD8 laptop pad controller).

A bit hard to teach and make music.

Need to connect to a computer and may have latency while playing the board depend on the audio card of that computer (shouldn’t be a problem and may have ways to avoid the latency).

Less than 1lb.

Automatically save music files from the computer and can be easily post edit and share them with families.

Nao may have some hard time to hit the pad and make sounds, need to be tested.

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|  | xylophone | Finger drum board |
| Price | $41 | $70 |
| Setup | Very easy, just put in front of NAO and make sure NAO can hit it. | Need to wire up with a computer and better have a external speaker to amplify the sounds. |
| Size | Small, light weight. | 13’’, less than 1lb. |
| Music complicity | 8 notes, simple music. | 8 pads, but with the software we use, it can create more than thousands of notes or rhythm . |
| Teaching capability | Easy to teach, and easy to play for both children and robot. | After setup and learn by researchers, should be not to hard to teach and play by children, but still may have trouble to let the robot to play. |
| Post process | Need external recorder to record the music if children need their works. And for the quality of music may not that good, have lot of noise around. A bit hard to do mix. | Automatically saved in the computer with high quality and easy to do some mix and share with families. |
| Link of products | <http://www.guitarcenter.com/Trophy/8-Note-Childrens-Xylophone.gc> | <http://www.guitarcenter.com/Akai-Professional/LPD8-Laptop-Pad-Controller.gc#productDetail> |