Dogbot

Name(s):   **Date:**

NGSS GOALS	BRONZE	SILVER	GOLD	PLATINUM
1. Student work related to this Crosscutting Concept: In this project, we drew and labeled our favorite dogbot design. We explained how the three important parts worked. We described the motion patterns we observed in our dogbot.				
Patterns: Observed patterns of forms and events prompt questions about relationships and the factors that influence them.	• We drew and labeled our dogbot. ☐	• We met Bronze. • We labeled the three important parts of our dogbot. • We drew at least one motion pattern for one of the dogbot parts. ☐	• We met Silver. • We explained how the three important parts worked to create a motion pattern in the dogbot. • We drew at least two motion patterns for our dogbot's parts. ☐	• We met Gold. • We researched and shared with our teacher or classmates the motion patterns in our dogbot that exist in real dogs. ☐
2. Student work related to this Practice: In this project, we built a dogbot and tested different ideas to explore how its eyes, jaws, and tail move.				
Developing and Using Models: Use a model to generate data to test ideas about designed systems.	• We built a working dogbot. ☐	• We met Bronze. • We built three cam designs and tested them on our dogbot's eyes. ☐	• We met Silver. • We changed our model to test the jaw motion with three different peg positions. • We changed our model to test the tail motion with three different pulley set-ups. ☐	• We met Gold. • We proposed and tested at least one new design idea for either the eyes, jaw, or tail. ☐
3. Student work related to this Practice: In this project, we investigated how the different cam, peg, and pulley settings affected the motion of our dogbot.				
Planning and Carrying Out Investigations: Collect data about the performance of a proposed object under a range of conditions.	• We completed our predictions and observations for our dogbot eye movement experiment. ☐	• We met Bronze. • We completed our predictions and observations for our dogbot's jaw experiment. ☐	• We met Silver. • We completed our predictions and observations for our dogbot's tail experiment. ☐	• We met Gold. • We completed our predictions and observations for at least one new design idea for either the eyes, jaw, or tail. ☐

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