For the baby respiratory monitor we need to simulate different patterns of motion.
Using Arduino write an app to control a stepper motor at different rates and patterns (be imaginative, simulate long and short breaths)
Then write a python script to take parameters and commands to control the motor over USB port to the Arduino.
Feel free to reuse code from the web or other projects.

Google searches:
stepper motor with arduino tutorial
using python with arduino to control stepper motor
using python with arduino
using python with arduino stepper motor
respiration rates for babies

Sites:
https://learn.adafruit.com/adafruit-arduino-lesson-16-stepper-motors?view=all
http://playground.arduino.cc/Interfacing/Python
http://forum.arduino.cc/index.php?topic=336156.0
http://www.emedicinehealth.com/pediatric_vital_signs/article_em.htm

Breath rates for babies (Up to date)
35-40 breaths per minute
Short breaths greater than 40
Long breaths less than 35

Python and Arduino tests
Sites:
http://www.instructables.com/id/Arduino-and-Python/
http://playground.arduino.cc/Interfacing/Python
https://learn.adafruit.com/arduino-lesson-17-email-sending-movement-detector/python-code
https://learn.adafruit.com/arduino-lesson-17-email-sending-movement-detector?view=all#installing-python-and-pyserial

Simulation of motion
As short breaths have a higher respiratory rate the stepper motor will be moving faster than normal
As long breaths have a lower respiratory rate the stepper motor will be moving slower than normal
Normal is considered a default speed (based on Adafruit stepper motor lesson)