

STEM from Home

Simple Machines: Health and Fitness

Very often, the first thing that comes to mind when we talk about health is any physical activity such as running, walking, swimming and more. Fitness is much more than just remaining physically active. It also includes eating healthy meals that provide us with adequate nutrition, staying calm, and following a lifestyle that reduces stress. It is important for everyone to eat healthy meals and exercise regularly.

In this pack, you will learn more about how to maintain a healthy lifestyle. Your tasks are to make an app that tracks your daily exercise and design a balanced meal plan that can provide essential nutrients to you and your family.

Main Activity: **Fit as a Fiddle**

Introduction

In this activity, you will focus on building your fitness by tracking your physical activity! When we spend more time at home, we often neglect exercise. It is very important to exercise regularly as not only does it help to build a stronger heart, bones, and healthier muscles but also improves concentration. When you are able to pay more attention to any task including studying, you get better results such as higher exam scores.

In this activity, you'll learn how to use App Inventor to make an app that tracks how much exercise you've done. You can [access this activity here](#).

What You Will Need

Hardware

- A computer capable of accessing App Inventor
- An internet connection

Software

An Android phone or tablet

What you will learn

1. Taking text input from the user and display it
2. Storing information in a list
3. Using a loop to read the elements of a list
4. Saving information to a file on the phone
5. Loading and displaying information from a file
6. Making your own procedures
7. Using the phone's sound recorder and play back a sound you've recorded



Bonus Activities

Activity 1: Good Food

In this activity, you will play a game with your family members or friends. This game will help you learn about the food items that are good for you. Just as exercise is important for fitness, so is a healthy diet. Eating food that is good for the body and mind provides you with important nutrients that support development.

Players have to guess the name of the food item by asking up to 5 questions that can only have yes or no answers! The key to winning the game is to guess the name of the fruit or vegetable within the 5 questions that can be asked.

There are 12 fruits and vegetables listed in the activity template provided to you. All of them are good for you and provide you with some of the nutrients you need to keep healthy.

[Access the template for this activity.](#)



Challenge Activity: Mighty Meal

Introduction

This activity emphasizes on an essential requirement for remaining healthy and fit – a balanced meal! A diet that is healthy and well balanced includes a variety of foods because each food has a unique mix of nutrients—both macronutrients (carbohydrate, protein, and fat) and micronutrients (vitamins and minerals).

Your challenge is to create a weekly meal plan for you and your family that will help provide these essential nutrients. Your 'Mighty Meal' Chart or the weekly plan will include what you can have for breakfast, lunch, and dinner on each day of the week. Remember to include fruits, vegetables, whole grains, and healthy proteins! You can even add recipes of your favorite meals from those you mention in the weekly plan. You may read more about what goes in a healthy eating plate at [The Nutrition Source](https://www.nutritionsource.org/).

Your Mighty Meal Chart (weekly meal plan) can be hand drawn or created digitally using [Docs](#) or [Presentation](#) software, it's up to you!

