Scientific Aspect (more detail):

Reference one:

1st device: The key scientific aspect to consider in the first device in reference one is the use of scientific language, and correct units. Heart rate (beats per minute), Blood pressure (millimetres of mercury). The technology utilised is PPG, in which a light is emitted towards you skin, which is absorbed in order to detect blood flow changes and measure the user's heart rate. In the second page of the app, it asks questions such as symptoms, and past activities, in order to contextualise the users heart rate, and give a proper diagnoses. (For example a person that just performed physical activity would have a higher heart rate, and they would need to inform the system for a more accurate diagnoses).|

2nd device: Similar to the smart health monitor, the watch like monitors heart rate using PPG technology. The analytics from this device may also be used to measure the stress level and body battery. It also uses scientific units. The activity and movement of the user is monitored using the accelerometer, which is used to derive metrics such as: steps and calories burnt.

3rd device: The smart glucose monitor uses CGM technology (continuous glucose monitoring). The device is permanently strapped, hence its collecting data throughout the day, where tiny sensors measure sugar continuously. Once again, measures in scientific units (millimoles per litre). It can be used for diabetes and insulin management, and the data collected can be sent to the doctor that the user consults, so that they take further action.

4th device: The smart scale measures body water percentage, visceral fat (dangerous fat around organs), muscle, and body fat percentage. Probably uses BIA technology, in which a small current is shot at the body to measure resistance. (Different tissues conduct electricity differently). Which is how they derive all of these metrics.

Reference two:

Informs the user of risks that are related to your data being sold. It describes data science and how exactly this happens. Algorithms and personalisation. After sharing some data about a related topic, that same topic might continue repeating itself in google search ads or in social media, which is a sign of data being sold. And how data remains in servers after an account is deleted, or how terms and conditions are used to make users give up ownership of their data unknowingly.

It talks about how location data, can let organisations know where you are in real time using GPS tracking, and also describes device cross linking, and how information is collected from all connected devices.

Reference three:

App developer: Data science analytics are used to get more information on a user, and is sold to other organisations, to conduct more personalised and tailored marketing.

Teenage user: Data science used in GPS tracking, heart rate monitor (PPG technology), targeted advertising (behavioural data analysis).

Senior user: Continuous glucose monitoring technology (CGM) with a separate sensor that transmits data into an app, which is shared with doctors for further analysis, or virtual

consultance. Medical professional: Impact on health care systems, reduced testing costs, reduced number of visits, more convenient, and requires proper IT infrastructure (external firm).

Reference five:

Physical activities associated with burning calories and losing weight. Health monitoring using weighing scale (for weight gain, weight loss, or other conditions). Positive affirmations employing behavioural science.