Synthesis:

Reference one:

The reference synthesizes language and science with the primary goal being to communicate medical information about the user in a manner in which they easily understand.

The smart health monitor integrates language by into the interface by providing clear imperatives and instructions for the user in order to calculate an accurate heart rate measurement; “Please keep still the reading will take up to 30 seconds”. The reference simultaneously integrates a scientific element, with a wave diagram of the heart rate and a measurement (in numbers) of the heart rate in beats per minute.

The device likely integrates PPG technology, which shoots light into the user's skin, which is absorbed by the body, and is used to calculate the blood flow and find the heart rate.

On the second page it asks questions such as “what were you doing 15 minutes before the measurement”, helps in identifying certain trends in the heart and the reason for them in order to provide a more accurate measurement.

Finally, on the measurement result page it shows the blood pressure result highlighted in bright red, and an alert message. The alert message directly signifies a health risk, and the bright red employs colour psychology implying a warning or danger. The blood pressure is measured in correct units: mmHg, thus increasing the reliability of the product.

Thus, by providing direct instructions, being straightforward with the user, conveying messages through colour psychology, and identifying potential threats, the health monitor integrates language, while simultaneously applying disciplinary knowledge from science using PPG technology, visual diagrams, and correct units of measurement, in order to synthesize them and communicate medical information about the user.

The smart glucose monitor’s app has a warm orange background providing a sense of optimism and confidence. The juice box in the center, and the text “You need a boost!” highlights a medical risk and a low sugar level. The recording is made more credible with the numerical measurement of the glucose in correct units (mmol/L). The orange box in the middle symbolizes a quick boost of energy in order to get back on track. The device likely uses CGM (Continuous Glucose Monitoring) technology in order to provide the users sugar levels in regular intervals. This data from the device is sent to the app and proccessed in a visual way for the user in the second and third pages. The reference aims to synthesize the disciplinary knowledge of language and science, in order to convey medical data to the user in a concise manner and provide actionable advice. It does so by, using beverages as a symbol for a sugar boost, using scientific technologies such as CGM, and proccessing the data down to a simpler more understandable level, and still using correct units of measurement in order to build credibility.

The smart watch uses accelerometers in order to track movement and infer steps and calories burnt. Similar to the health monitor it may use PPG or HRV technology to measure heart rate too, thus employing scientific disciplinary knowledge. The smart watch app has personalation features like none of the other ones, with a personal coach, and motivational

techniques. The challenges promote fitness and health (yoga, strength training, running sleeping), and motivate the user by using interesting names with two words that correspond with each other. For example sibbilance is exmployed in “Sleeping sloth”, and “Super strength”, and “Higher Further Faster”, references the Olympic motto. By personalising and gamifying the experience, using conventional motivation techniques, while still provided accurate data metrics in proper measurements using technologies such as HRV, PPG, and accelertometers, the reference successfully synthesizes language and science to communicate medical data in a clear and concise manner.

The smart scales device is an unconventional weight monitoring device that provides more information than just weight. After stepping on the scale some data metrics are transmitted to the connected applicatio. It displays the weight with convenient option to switch from kg to pounds. It also employs personalisation with the users account on the top left.
It shows the progression of the users weight and body fat percentage across a month. The visualised data, makes goal setting easier for people who want to gain/lose weight. It also calculates other metrics such as subcutaneous fat and visceral fat, employing medical jargon to enhance credibility. The device is able to measure these metrics using BIA technology which sends a current across the body, and measures the resistance of varyings tissues, etc, in order to measure these metrics. Thus, by make the app more personalized for the user (for user engagement), visually displaying the weight progress of the user (for simple goal setting), and employing medical jargon (to build credibility), while integrating BIA technology, the smart scales technology synthesizes language and science in order to communicated medical data to the user in a concise way.

When synthesizing this resource the key points are: the purpose of synthesizing language and sci in reference one is to communicate the users medical data in a concise manner, so that the user can avoid illnesses, consult a professional, track biometric data, and even get motivation to perform physical activity.

The smart health monitor provides clear instructions and has a formal tone in order to get an accurate reading of the heart rate. The heart rate is measured using PPG/HRV technology and is displayed in correct units with wave diagrams, employing scientific disciplinary knowledge.
It also tracks blood pressure, employing color psychology and alerts, to signify health hazards.

The smart health watch uses accelerometers to measure movement and distance, and similar heart rate trackers as device 1 to measure the pulse of the users wrist (where the watch is worn). It has a somewhat informal tone, as it isnt monitoring for any diseases, so it can remain informal. It does its best to personalise the experience with a personal coach, and motivating tools. It has challenges that promote physical activities to keep the user engaged, with creative names that have two or more words that correspond each other (sibbilance, olympic moto, alliteration, devices are used.)

The smart glucose monitors glucose in regular intervals using CGM technology (continuous glucose monitoring). It records the last reading of the glucose level and displays it on the first page. If the level is low it shows a juice box as a symbol of a sugar boost. In the next page it goes deeper into the data, as the users glucose level over a sustained period of time is shown, it also shows what the median, and what it should be. These simplify the glucose levels of person, and makes the data easy to share with medical professionals for further consultation. Does not use much text to communicate information, rather images graphs, and short sentence, to ensure its clear concise and not overwhelming.

The smart scale personalises the experience with user icon across all pages, it makes it convieneint to convert weight from kg to lbs, shows weight progress over a sustained period of time to make weight and goal tracking easier, and measures other sub metrics using BIA technology (already mentioned), and some medical jargon (subcutaneous), to build credibilty.