TEAM 16

THOUGHTS BOARD

Throwing together some thoughts, research etc here that may be of use:

POWER USE – UK :

Energy suppliers use kWh to see how much energy you've used, and work out your bills. For example, using 1kWh, you could boil a kettle 10 times, or watch TV for 7 hours.

According to the Department for Business, Energy & Industrial Strategy (BEIS), the average household uses 3,731 kWh per year

household electricity use works out at around 8kWh (242kWh divided by 30 days) for a medium use household.

Before we get into electricity use for individual appliances, it can be really useful to understand demand according to end use. This table shows just that:

End use	**Percentage of electricity**
Cold appliances (fridges, freezers)	63%
Wet appliances (washing machines, dishwashers etc)	10%
Cooking (ovens, microwaves etc)	7%
Lighting (lamps and lights)	6%
Consumer electronics (TV, laptop, phone, games consoles etc)	4%

A desktop computer uses around 0.1kWh per hour. So if you're working for 8 hours, it'll cost you around 10p per day (based on an average energy unit cost of 12.5 p/kWh). A laptop however, runs at 0.05kWh. So for that same working day, you'll only pay 5p.

a 6 litre washing machine uses around 1kWh for an hour's wash

Source:
https://www.ovoenergy.com/guides/energy-guides/how-much-electricity-does-a-home-use.html

Energy Efficient Cooking Appliances Comparison

Appliance	Temperature	Time	Energy	Cost
Electric Oven	350	1 hour	2.0 kWh	$ .16
Electric Convection Oven	325	45 min.	1.39 kWh	$ .11
Gas Oven	350	1 hour	.112 therm	$ .07
Electric Frying Pan	420	1 hour	.9 KWh	$ .07
Toaster Oven	425	50 min.	.95 kWh	$ .08
Electric Crockpot	200	7 hours	.7 kWh	$ .06
Microwave Oven	"High"	15 min.	.36 kWh	$ .03

Source: consumerenergycenter.org

Constellation.

Source:
https://www.quora.com/Does-a-microwave-oven-use-more-energy-than-a-normal-oven

ACCURATE DATA

a massive database of devices and actual usage is here
http://www.tpcdb.com/

however the data is hard to get at. Ultimately having something like this to get user data accurate to the very device they use would be something we can discuss in the project report (instead of just doing it)

RELATIVE DATA

Instead of accurate data we could use relative eg this uses less than that, and give them numbers to use accordingly. A lot easier than kWh

So using table above an oven uses about 5 times the power of a microwave so we could say that **microwave = 1, oven = 5.**

AVERAGE USE – is 8 kWh per day. If an oven using 2kWh = 5 above then the daily average target should be 20?
May have to reduce that to allow for white goods (fridges etc) etc we can't control. According to above they account for 63% of power which is approx 12 on this scale.

So 8 on our scale would be the average use that the user is trying to beat?

TIPS

We could code in tips if we use devices that play of of each other… eg it could recognise that you're cooking a lot with an oven and suggest a microwave meal? Or you're using the kettle a lot – why not drink more water instead?

TIMING DATA

We could just have user input number of hours they did x.

Alternatively we could use a timer – press start and it times the whole thing (may work better on a phone than a webpage). Issues of storing the time if they log off etc – again this may be something to consider in the report rather than implement

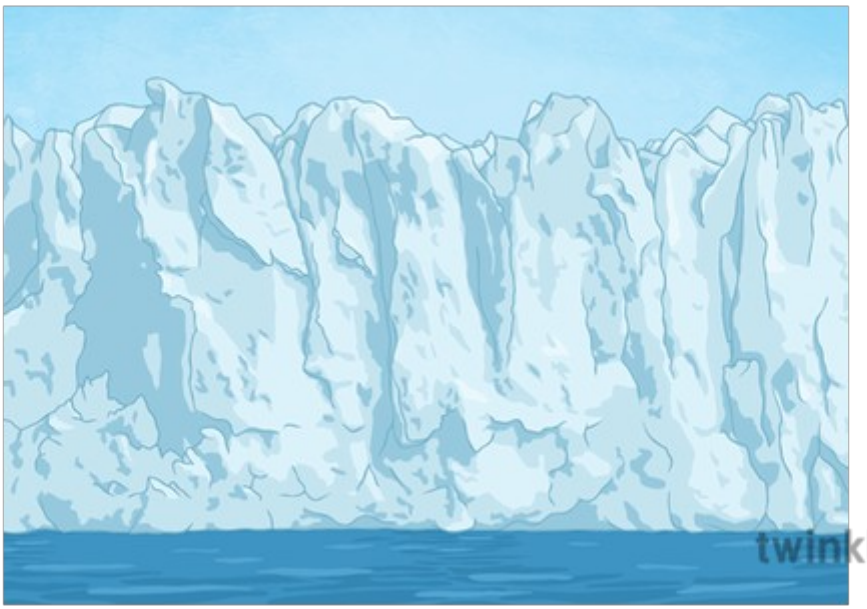
COLOUR SCHEME

If we have a red line down middle of the screen as a daily average (8) with glacier to left of right of that depending on how good the user is doing?

Maybe if we go into the red the glacier changes to warmer colours?

ILLUSTRATIONS OF GLACIERS

Just looked up some illustrations to get an idea of what the bar chart could look like:


twinkl.com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