ENERGY!

Energy what is it?

Verse 1:

If something's gonna cause an object to 1._____,
Whether tiny as a photon or as big as the moon,
We can calculate how much movement that could be,
And that number is a thing that we call 2._____.

And it's measured in 3._____*. I don't mean like precious jewels, I mean like James Joule*

Verse 2:

It can be stored in stretched 4._____ or the movement of a ball,
The 5._____ of two magnets or the bonds in 6._____,
Between the apple and the earth, if an apple wants to 7._____,
The 8._____ of atoms, mass of anything at all.
But whenever there's a change we shifted energy,
By 9._____, heating, 10._____ or electricity,
It will go to a new store, that's what we observe,
'Cos there's a fundamental law that says that energy's 11._____.

Chorus:

It can't be made or destroyed.
There's many ways it is stored.
12._____ means it's shifted to new stores.
And the energy after is the 13._____ as before.

Verse 3:

So, let's think about the energy of gases in a tin,
The 14._____ are moving fast and bouncing within,
The faster that they move, the 15._____ that they are,
And a measure of their average speed is temperature.
And since particles 16._____ that will store energy too,
And means that it will take more 17._____ to make the particles move,
So, every substance has its own 18._____,
And different latent heat to change the state it can be.

Chorus

So what's power? Power is how fast you can move the energy, how many joules every second, or 19._____.
So if somebody asks you 'what's the unit of power?' you say 'yes it is!'

Bridge:

But in the real world, we find that energy escapes,
Like when your coffee gets cold that's why we 20._____,
And air resistance and 21._____ make cars decelerate,
So, they are aerodynamic and then we 22._____.

Chorus

Complete the following tasks

1. Fill in the blank keywords - if you are not sure, there are clues on the next page.
2. Circle sections in **red** that describe **stores of energy**.
3. Circle sections in **green** that describe **transfers of energy**.
4. Circle sections in **blue** that describe **what energy is**.
5. Rewrite each verse in a sentence or two in language suitable for an exam.

Each of these words is used once.

specific heat capacity fall lubricate change hotter

particles watts energy friction elastic same

attract nuclei repulsion move work pushing

destroyed joules lighting chemicals conserved

Definitions

1. Change position.
2. The ability do work to make something quicker, hotter or higher.
3. The unit of energy.
4. Something that stores energy by being stretched.
5. Pushing away.
6. Substances.
7. Move because of gravity.
8. The part of atoms that contains most of its mass.
9. Using a force.
10. Transferring energy with electromagnetic waves.
11. The same before and after a change.
12. Become different.
13. Not different.
14. Small pieces of matter.
15. Higher temperature.
16. Pull toward.
17. Transfer of energy.
18. A number given to each substance to describe how many joules it takes to heat up one kilogram by one degree.
19. Unit of power.
20. Prevent thermal energy escaping.
21. A force caused by two surfaces rubbing together.
22. Making something slippery with oil or grease.