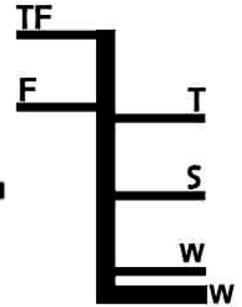
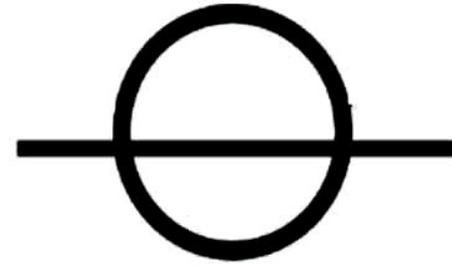
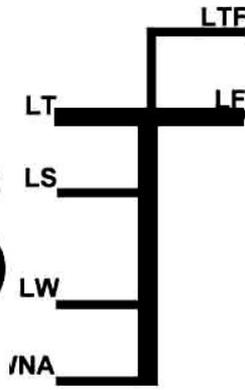


BRIS



TIDES ?



Proxi and Perri Bench Mark Scores

Theme	Proxi and Perri Benchmark Score out of 10	How can we raise the score?
Heritage	9	?
Water	4	?
Biodiversity	6	?
Energy	9	?
Hydro-poetics	5	?
Future	7.5	?



Energy

We all need energy. Where does it come from?

Users	How do they get it ?	Where does it come from ?	What made it ?
Plants			
Insects			
Fish			
Animals			
You			



Energy

We all need energy. Where does it come from?

Users	How do they get it ?	Where does it come from ?	What made it ?
Television			
Warm Radiator			
Car			
Mobile Phone			
Calculator			



Link the picture to the word -



Oil

Coal

Gas

Nuclear

Bio Mass



my future
my choice



~~Oil Coal Gas Nuclear Bio Mass~~



my future
my choice

Link the picture to the word -



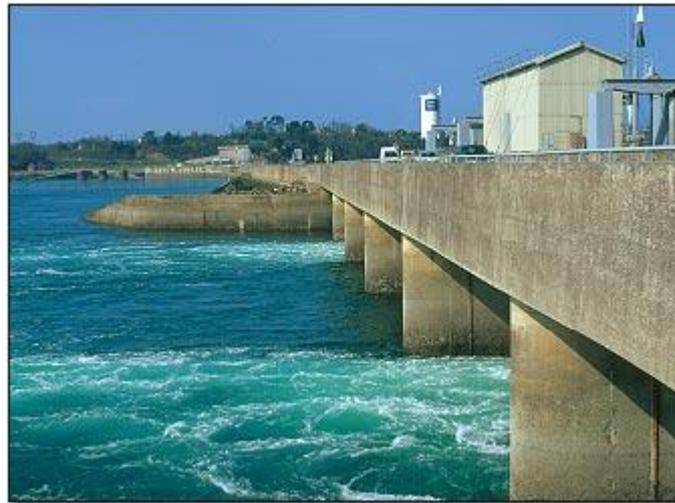
Solar

Wind

Wave

Hydro

Tidal





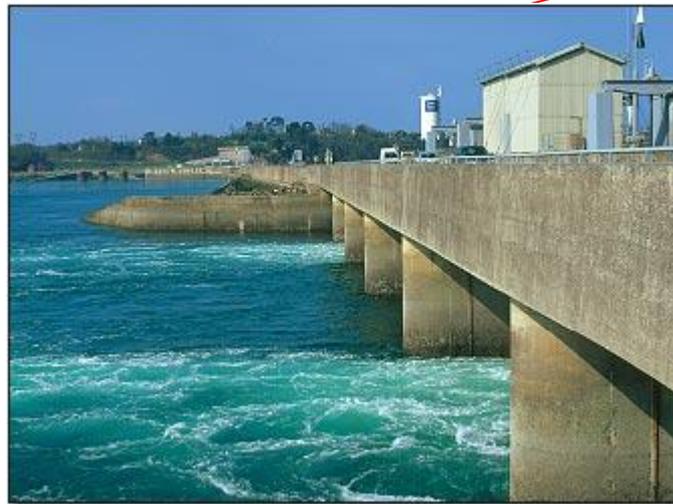
Solar

Wind

Wave

Hydro

Tidal



Energy

We all need energy. Where does it come from?

Energy types	How do we get that ?	Will it run out?	What made it ?
Coal			
Gas			
Oil			
Bio Mass			
Nuclear			
Solar			
Wind			
Hydro			
Tidal			



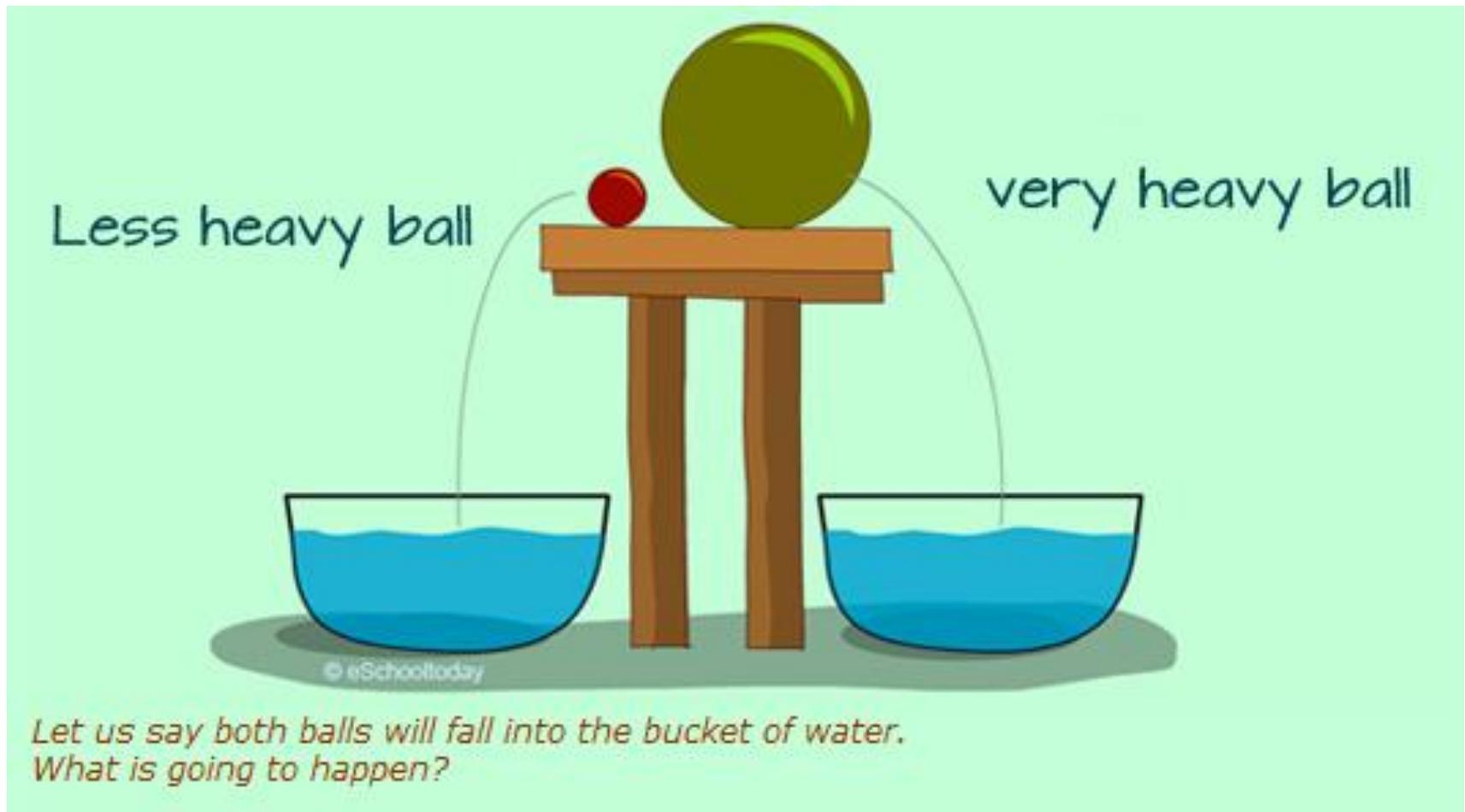
Energy

We all need energy. Where does it come from?

Energy types	How do we get that ?	Will it run out?	What made it ?
Coal	From the ground	Yes	The sun by growing plants
Gas	From the ground	Yes	The sun by growing plants
Oil	From the ground	Yes	The sun by growing plants
Bio Mass	Grow it /gather it	No	The sun
Nuclear	Uranium	Yes	Radio active metal
Nuclear	Atomic Fusion	No	Nuclear reaction
Solar	Solar Panels	No	The sun
Wind	Wind Mills	No	The wind / the sun
Hydro	Dams	No	The water cycle / the sun
Tidal	Barrages / Turbines	No	The Moon



Potential Energy



Kinetic Energy



You will notice that the smaller ball makes a little splash as it falls into the bucket. The heavier ball makes a very big splash. Why?

Energy- Explain these key words

Fossil Fuel

Renewable Energy

Kinetic Energy

Potential Energy

Green Energy

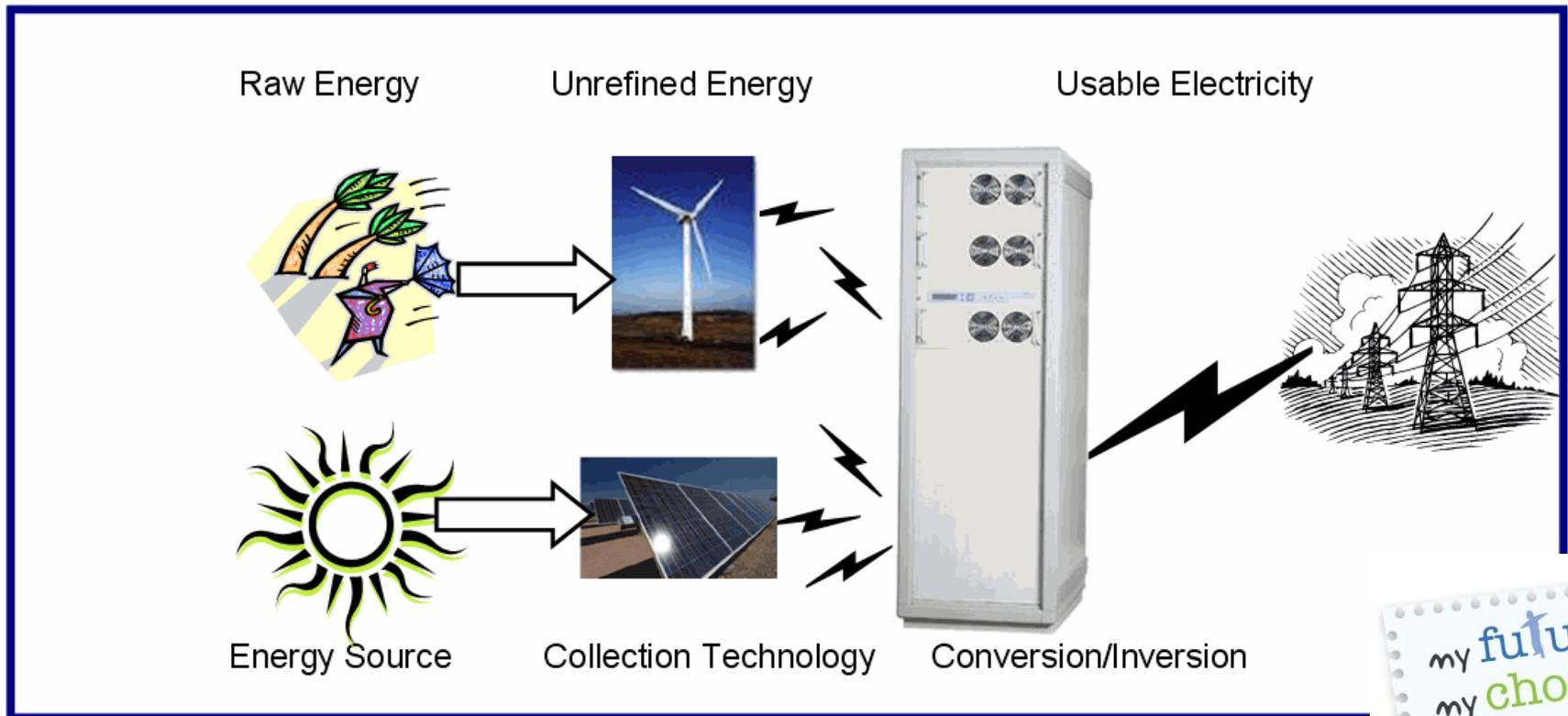


Energy- can be converted from one form into another



The potential energy in wood is released to create heat

You can use the heat to boil water and the steam will power a turbine which turns a generator which makes electricity which can be used to heat your house.



Energy- Tidal Energy

Our coast faces the direction of the tidal currents which are pulled east and west across the Atlantic Ocean by the gravity of the moon.



West

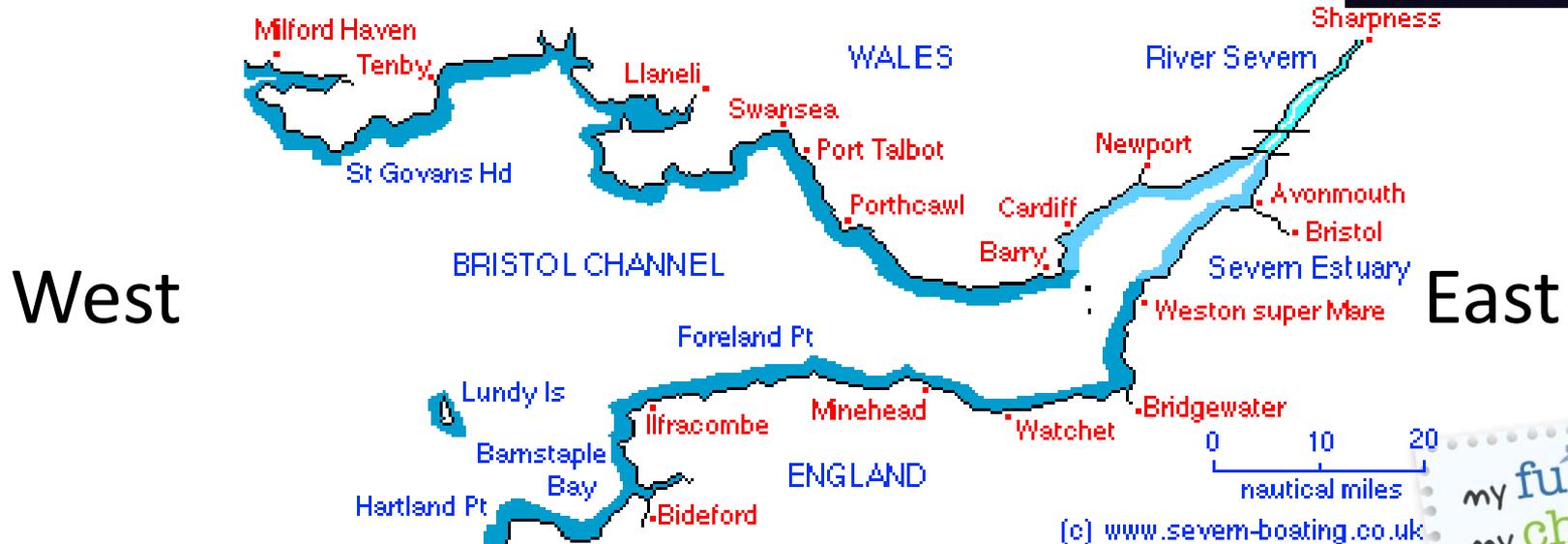


East



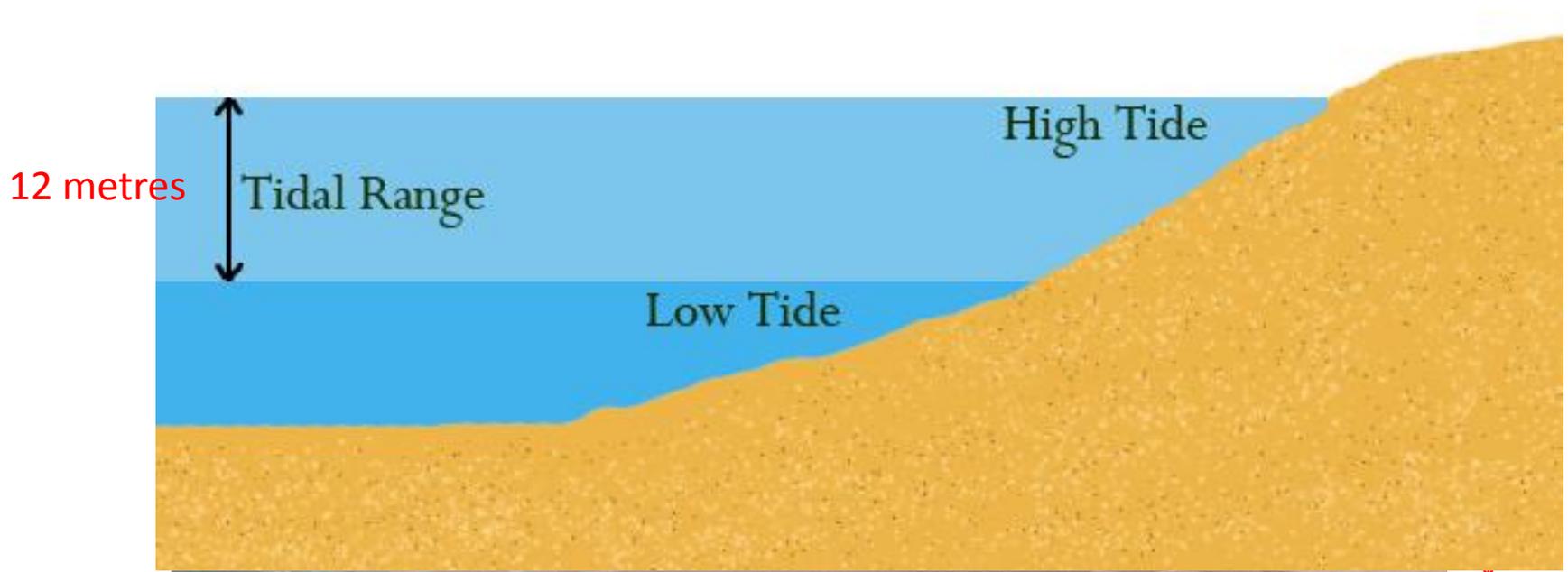
Energy- Tidal Energy

The water is squeezed up into The Bristol Channel and Severn Estuary and the Avon – it has got nowhere to go so it rises upwards.



Tidal Energy

A normal tide in Bristol would be about 10m
The biggest tides are nearly 15m



Tidal Energy – Dams and Barrages

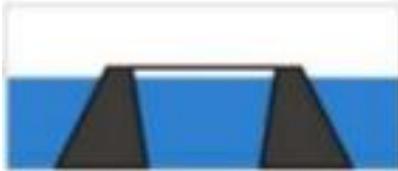
Atlantic Ocean



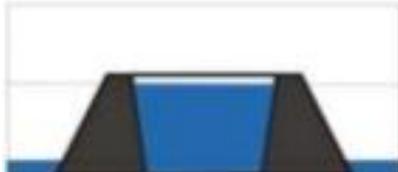
Bristol



Tidal Energy – Lagoons



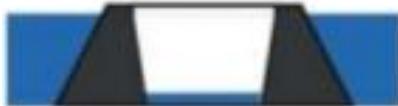
High Tide
Lagoon full



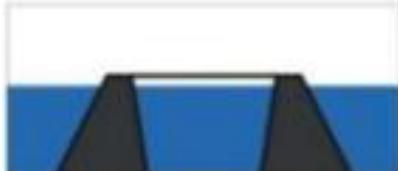
Tide goes down.
Leaving water up
high = Potential
energy



Energy generated
Low tide – no energy
to harvest



High Tide



Energy Harvested



High Tide and
Lagoon full



Cycle repeats twice a day



Tidal Energy – Tidal Stream Turbines



Free standing stream Turbines allow water, fish, ships to pass.



Tidal Energy – How to Raise the Score

To raise the Bristol Loves Tides score from 9 to 10 is going to be difficult.

Proxi and Peri want to see if the young people of Bristol know about the energy of the tides and have ideas about how to use it well.

Can you research how tidal energy could be harvested?

What are the advantages and disadvantages of different methods of harvesting tidal energy and will they have a positive or negative impact on biodiversity?

Do you have ideas about what is best for Bristol?

Will the tides be used, misused or abused?

Does Bristol Love its Tides?



Research

- Look at the different ways of harnessing power from tidal currents
- Look at maps of the area
- What method would you use?
- Where would you put what?

Dam, barrage or a lagoon?



What is good and bad about different methods of making tidal energy

Advantages	Disadvantages



Tidal Energy – Feed Back

Our group thinks ...

The best method of harvesting raw energy from the tides is

Because

The best place (use a map) to do this near Bristol is

Because

Or ...

We think Bristol should leave the rivers and tides alone and not harvest the energy

Because



Activity and challenges to take home

- questionnaire – friends/family to gather opinion in the region
- Visit a place with friends/family where tidal energy could be harvested

Send us your opinions including if you think it right to do so, where and how energy should be harvested.

Twitter - **@MF_MC**

Email - info@myfuturemychoice.co.uk

Instagram – **mfmc_bristol**