

PMI

Positive Minus Interesting

Bright Ideas Time

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Slide	Theme	Ages	Ideas / misconceptions
3	Animals including humans	4-11	Children may think about folding themselves into a drawer, never being able to break a bone, etc. The discussion can then lead to the special properties of bone and how it protects our inner organs, as well as providing the rigidity we need to stand and walk.
4	Plants Animals including humans	7-11	It is interesting that animals have to move to find food but plants do not need to walk because they make their own food by photosynthesis. Children may think that plants do not move. Plants are able to detect and respond to light, gravity, changes in temperature, chemicals, and even touch. A plant usually responds to change by gradually altering its growth rate or its direction of growth.
5	Animals including humans Plants Living things and their habitats	7-11	Children may not have thought about how much they depend on other animal and plant life to exist. P: no more mosquito bites M: no plants because no pollination, no food I: industries will develop alternative methods of pollination





You have a skeleton made of a flexible material.





Plants can walk.



Only humans are left in the world.





Slide	Theme	Ages	Ideas / misconceptions
7	Properties of materials	4-11	Each of these scenarios link to the suitability of materials for purpose and will require the pupils to draw on their understanding of the properties of the materials in question.
8	Properties of materials	4-11	
9	Properties of materials	4-11	
10	Changes in materials	7-11	If water froze at a higher temperature than 0°C, icy weather would be more frequent. P: better for ice skating M: too much ice makes travelling difficult, animals may suffer I: permanent ice sculptures in winter
11	Changes in materials & Living things and their habitats	7-11	Topical & possible. P: warmer weather in some countries? M: some land would be flooded, crops ruined, animals and people may die I: how can we reduce carbon release?



Your umbrella is made of glass.





Your house is made of steel.





Your windows are made of wood.



The freezing point of water becomes 10°C .



The ice caps melt.

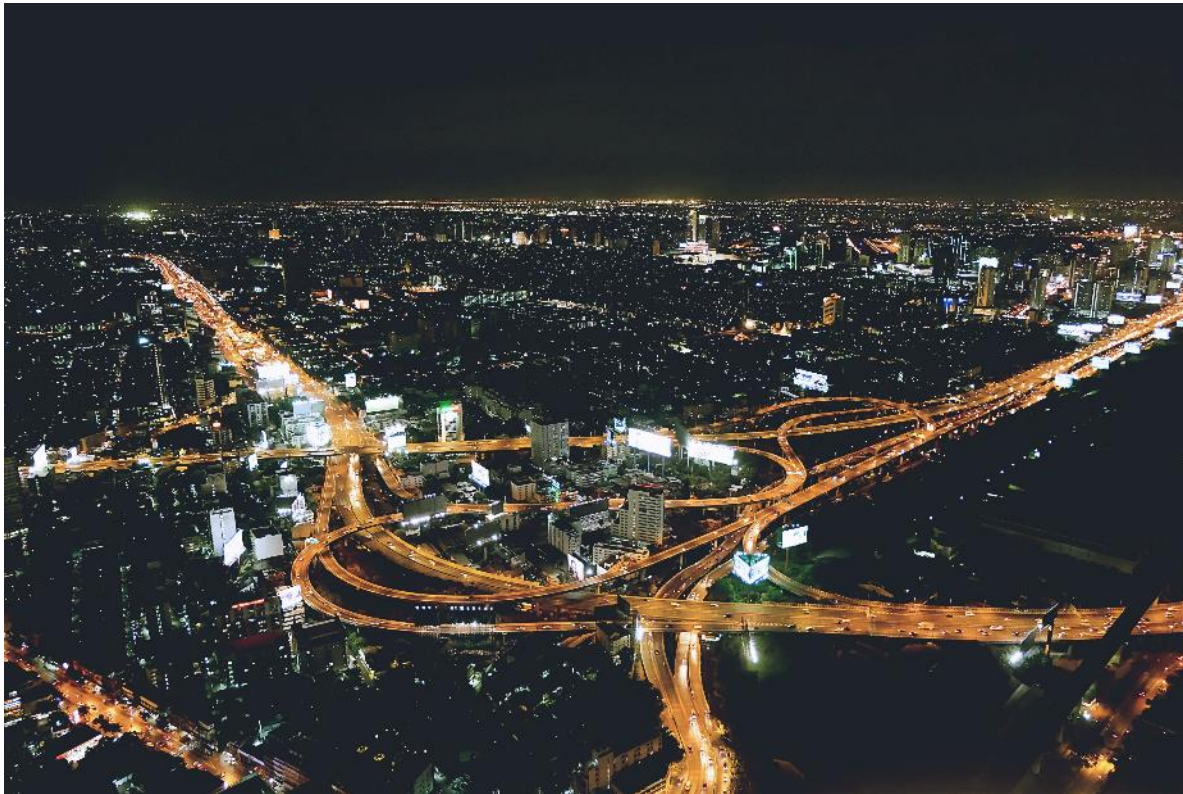




Slide	Theme	Ages	Ideas / misconceptions
13	Electricity	4-11	This could be the focus of a cross-curricular link with history – how did humans survive before electricity was used in homes? P: less time on computers and more time playing outside! M: no TV, no fridges, etc. I: how could you build a turbine?
14	Friction	7-11	This helps the pupils to realise that friction is useful, as well as hindering motion. P: We would all become expert skaters M: Cars would not be able to start or stop I: We would need to design something that would stop our tea sliding off the plate every time we tried to eat it.
15	Space	7-11	P: We could jump much higher M: Our muscles would lose their tone – rather like the astronauts experience when they return to Earth I: We would have to redesign our sports pitches – the players could bound down the field far more easily
16	Space	4-11	One side of the Earth would have permanent daylight, the other permanent darkness. Gravity would not change though – many people think it is caused by the spin of the Earth but not so!



A world without electricity.



A world with no friction.



Gravity is reduced by half.





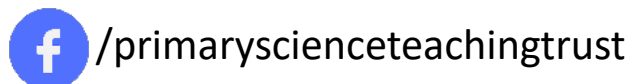
The Earth stops spinning.



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