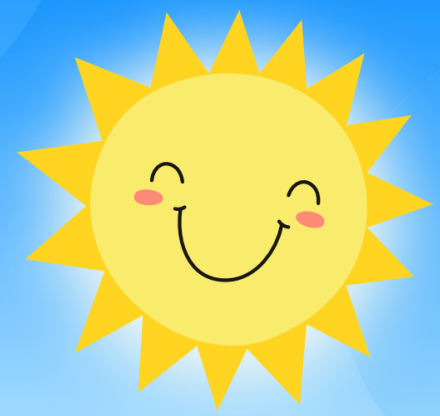
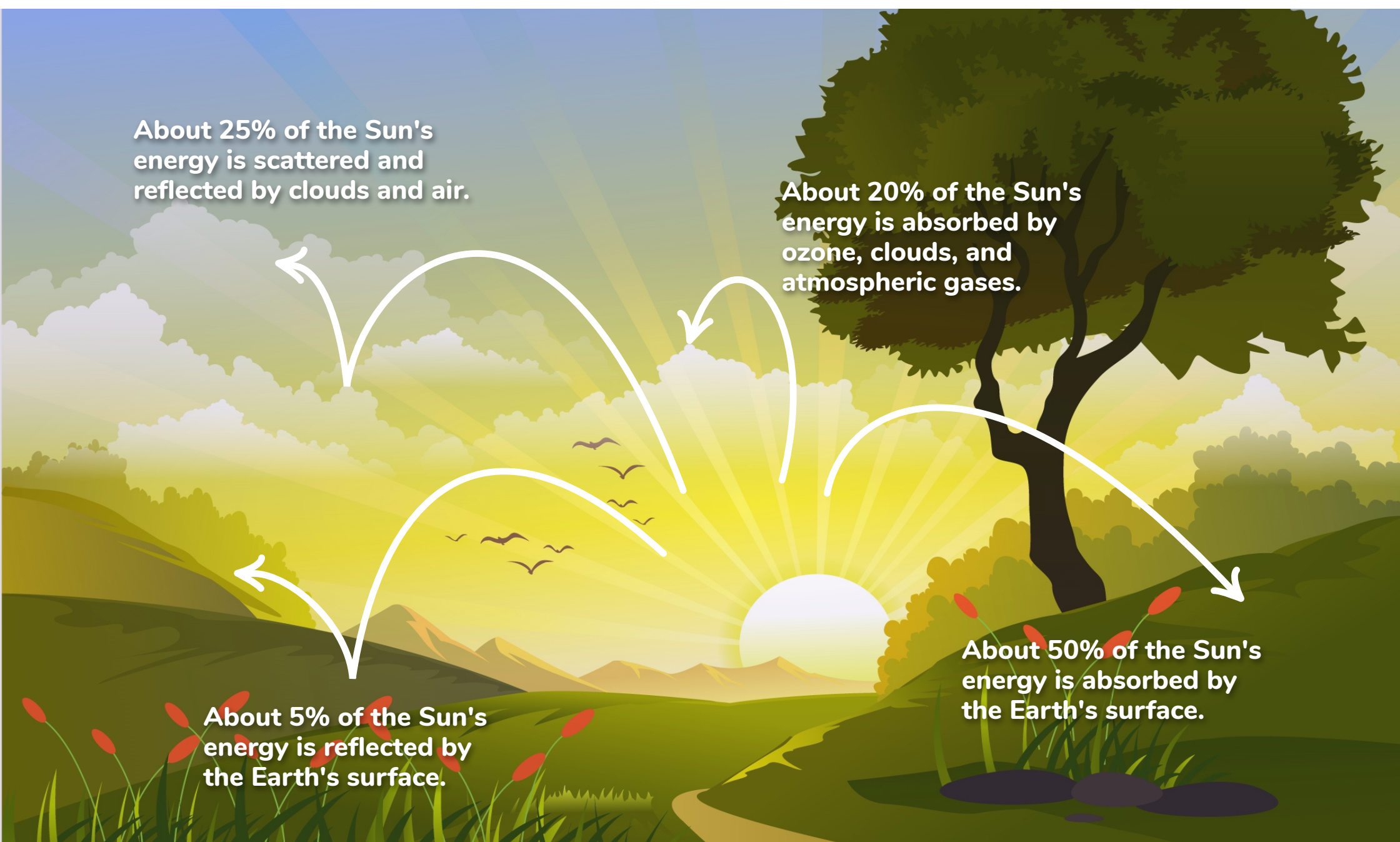


Solar Power



Our main sources of energy today are fossil fuels. They formed millions of years ago from dead plants and animals. There are three main types of fossil fuels: coal, oil, and natural gas. All fossil fuels are non-renewable resources. It took millions of years to form fossil fuels and we are currently using it up faster than it is being made. To remove fossil fuel energy from Earth, companies have to drill, mine or frack (break) the Earth. Next, they have to refine (make ready) the energy so that we can use it in our cars, homes and more. A challenge to using non-renewable energy sources is that they can cause pollution of our land, air, and water. Burning fossil fuels throughout the world releases millions of tons of carbon dioxide (CO_2) into the air and this causes global warming.

Renewable energy comes from natural resources that can be more easily replenished. Sunlight, which we will never run out of, is a renewable source of energy. We get most of our energy from the sun. We call it solar energy. It travels from the sun to earth in rays. Solar cells use light from the sun to generate electricity.





Context

Solar energy is clean and free. There is enough for everyone. Some toys, lights and calculators use solar cells instead of batteries.



Have you ever thought...

How do we use solar energy day to day?

What is solar power?

What happens when there is no Sun at night?



Take a look



Have you got any solar collectors/panels in your area? Often positioned on roofs.

Do you have any gadgets at home that run off solar power?

The rising energy costs are a major concern for everyone right now. Have a think about how you use electricity each day.

Are there some cost-saving activities you could do at school or at home? For example, turning the light off when you leave a room.



Investigate...

About [solar energy](#) and solar power. How do they work?

Are you familiar with the following vocabulary:

Thermal energy, heat, reflection, absorption, radiation, convection, insulation?

Explore

[Design a solar oven](#) to melt chocolate, marshmallows or cheese.



Challenge

Make your own solar oven out of an empty pizza box.

Mcauliffe Shepard Discovery Centre - BLOG Science at home: [Make a solar oven](#).

(Hint: Be patient!)

How long did your oven take to melt the food?

How much money will this save you compared to a standard oven?





Did you know?

You are solar powered too! Our bodies also need solar energy to perform certain important chemical reactions like creating vitamin D.



The mathematics

The students through investigation and exploration will be problem solving, conjecturing and applying mathematical thinking. Knowledge and application of measures concepts will be deepened.

