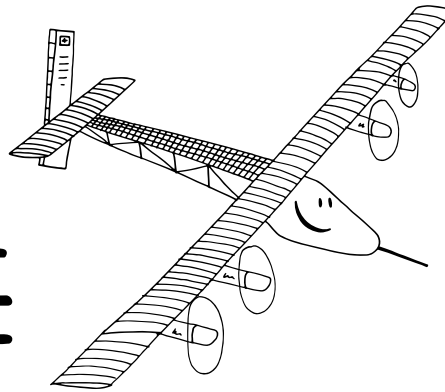


SOLARIMPULSE

AROUND THE WORLD IN A SOLAR AIRPLANE

EXPLORATION TO CHANGE THE WORLD!

SOLAR IMPULSE QUIZ



01.

WHAT ARE THE PROBLEMS CAUSED BY USING FOSSIL ENERGY?*

- a. When fossil fuels burn, they release pollutants into the atmosphere.
- b. Fossil fuels were made millions of years ago and are non-renewable.
- c. Fossil fuels are a limited resource.
- d. Fossil fuels release greenhouse gases that alter the climate.
- e. All of the above

02.

COMPLETE THIS SENTENCE WITH THE RIGHT GROUP OF WORDS:

“_____ is/are a solution to fight climate change”:

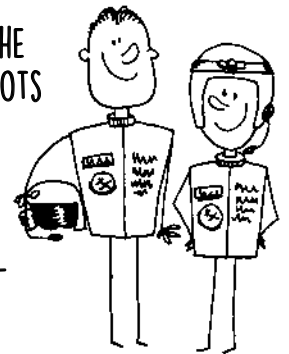
- a. Fossil fuels
- b. Clean technologies
- c. Not using any energy

*Multiple answers possible

03.

Today's pioneering aviators stand on the shoulders of giants. Between 1891-96 Otto Lillienthal made the first successful non-powered gliding flights. In 1903, Orville and Wilber Wright made the first controlled powered flights. In 1927, Charles Lindbergh was the first to fly solo from New York to Paris. Six years later, Wiley Post flew a Lockheed Vega around the world.

IN 2016, WHAT ARE THE NAMES OF THE TWO PIONEERING SOLAR IMPULSE PILOTS THAT ARE CONTINUING TO PUSH THE BOUNDARIES OF FLIGHT?



04.

LIST THREE CHALLENGES THE SOLAR IMPULSE ENGINEERS TACKLED DURING THE AIRPLANE'S CONSTRUCTION. HINT: THINK ABOUT ENERGY USAGE AND WEIGHT RESTRICTIONS

Collecting _____

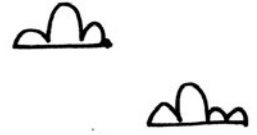
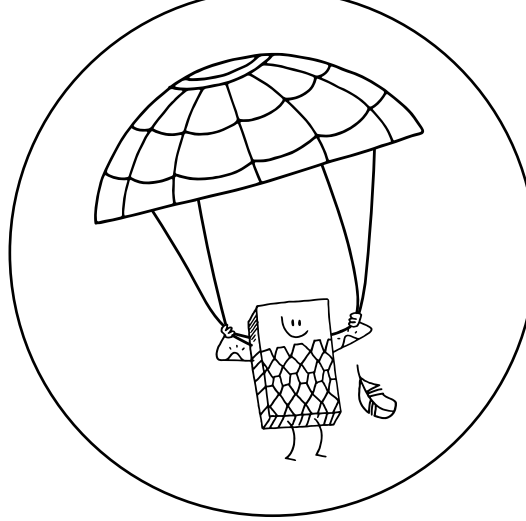
Optimizing _____

Saving _____

05.

WHAT ULTRALIGHT INNOVATIVE COMPOSITE MATERIAL IS USED IN THE AIRPLANE'S STRUCTURE?

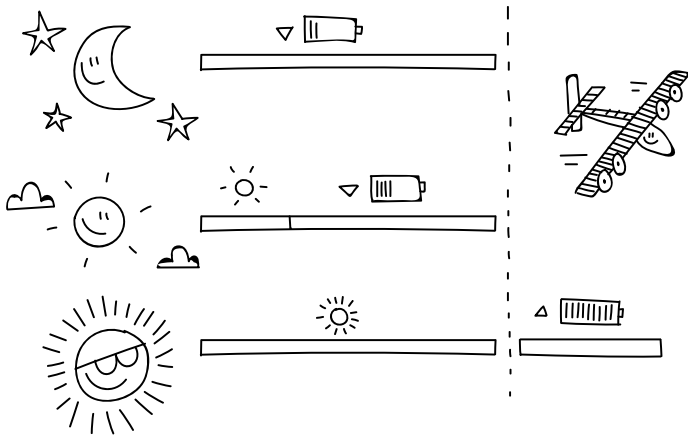
- a. Carbon-fiber reinforced plastic
- b. Carbon fiber and honeycomb sandwich paper structure
- c. "Papier-mâché"



06.

HOW DOES SOLAR IMPULSE FLY THROUGH THE NIGHT?

- a. At sunset, the pilot switches to a spare gas tank.
- b. High-density batteries store solar power during the day and return it to the motors at night.
- c. The plane moves up to higher altitudes where it glides and gets pushed by the jet stream until the next sunrise.



07.

HOW LONG WAS THE GROUNDBREAKING RECORD FLIGHT OVER THE PACIFIC – THE LONGEST SOLO FLIGHT IN AN AIRPLANE?

- a. 3 days and 3 nights in a row
- b. 4 days and 4 nights in a row
- c. 5 days and 5 nights in a row

08.

WHAT ACTIVITY/IES IS/ARE PRACTICED BY THE PILOT TO REMAIN ALERT DURING FLIGHTS LASTING SEVERAL DAYS?*

- a. Listening to music
- b. Meditation
- c. Stretching
- d. Self-hypnosis
- e. All of the above

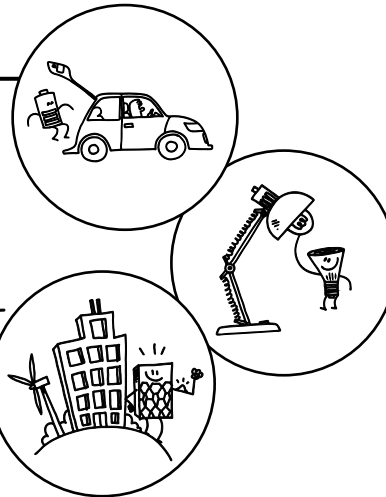


09.

WHERE COULD SOLAR IMPULSE'S TECHNOLOGIES BE APPLIED TODAY?

Give 3 examples of applications.

- a. _____
- b. _____
- c. _____



10.

WHAT IS THE INITIATIVE SOLAR IMPULSE STARTED TO SHOW "WE CAN RUN THE WORLD WITH CLEAN TECHNOLOGIES"

- a. #Future is clean
- b. Clean future
- c. Clean Generation

*Multiple answers possible

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QUESTION 01. (e.)

QUESTION 02. (b.)

QUESTION 03. Bertrand Piccard and
André Borschberg

QUESTION 04. Collecting a maximum
of sun rays during the day

Optimizing weight
wherever possible

Saving energy during the night

QUESTION 05. (b.)

QUESTION 06. (b.)

QUESTION 07. (c.)

QUESTION 08. (b. & d.)

QUESTION 09. Electric cars

Homes insulation

Solar dryers for fruits
and vegetables

QUESTION 10. (a.)

AROUND THE WORLD WITHOUT FUEL TO PROMOTE CLEAN TECHNOLOGIES

Aboard their silent airplane, able to fly day and night without fuel, Solar Impulse's founders and pilots are making history with clean energy. From inspiration to execution, they combined their skills and set off down the risky pathway of all explorers: to push back the boundaries of knowledge and attempt what many deemed impossible only a few years ago. They developed an aircraft that can fly day and night with its pilot, safety equipment, and its motors and batteries operating on energy collected only by solar cells.

Solar Impulse is an idea of Swiss explorer [Bertrand Piccard](#), a visionary pioneer who teamed up with engineer and entrepreneur [André Borschberg](#) in 2003 to make that idea a reality. The two pioneers have been working hand in hand, sharing the same vision of a world powered by clean energy. They take turns over multiple legs [flying the airplane around the globe](#).

This revolutionary airplane gets all of its energy from an unlimited source: the sun. A genuine [flying laboratory](#), engineered under a technical team lead by André and supported by a family of corporate partners brought in by Bertrand. Efficiency has been the guiding principle during the plane's [construction](#) with the aim of economizing our precious resources. To overcome the technical challenges, innovation was applied in all of the plane's systems to maximize [energy efficiency](#), minimize its [weight](#) and optimize its [propulsion system](#).

Living alone for several days while piloting the single-seater airplane in a tiny 134 cubic feet [unpressurized and unheated cockpit](#), with hardly any sleep, makes for an intense human challenge. Solo piloting for several days is a real test of [endurance and alertness](#) because although the plane can technically "last" a long time in the air, the pilot needs to have a similar "lasting" capability and ensure his [piloting skills](#) are up to the challenge. An intensive [training program](#) for emergency situations was followed by both pilots before taking on the round-the-world tour.

Solar Impulse was not built to carry passengers but to carry a message: "[What we can achieve in the air, anyone can do on the ground.](#)" The clean technologies in this solar plane offer hope and innovative solutions in the fields of materials and lightweight structures, as well as energy storage and efficiency for tackling the challenges of our century. The same energy-efficient solutions found in this airplane could already be used in our daily lives: in our electricity networks, houses, cars, as well as in our industrial processes. They could replace our old polluting devices, to improve the way we consume energy and help us stop wasting our natural resources.

MORE INFORMATION ON:

[Solar Impulse Logbook](#)
[Solar Impulse presentation for Kids](#)
[Institutional Leaflet](#)
[Solar Impulse Exhibition](#)