

# LESSON 3

## Renewable Energy

**Get Ready**

**A. Write the resources of renewable and non-renewable energy in the provided spaces.**



**coal (non-renewable)**

.....



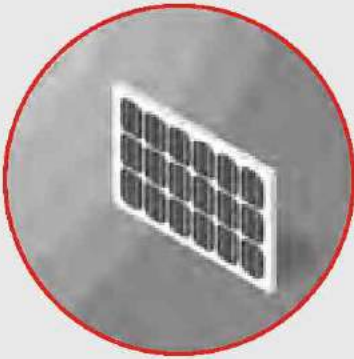
**oil (non-renewable)**

.....



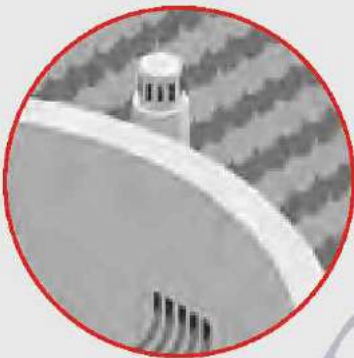
**nuclear (non-renewable)**

.....



**solar energy (renewable)**

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**water (renewable)**

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**wind (renewable)**

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به نظر می رسد که بچه ها این تصویر (اسباب بادی) رو تو علوم 4 ابتدایی دیدند. من ترجیح میدم اجزاش رو بهشون بگم و بعد ازشون بخوام روش کارش رو بگن.



Did you know that this machine was built in old Persia about two thousand years ago? Can you write how this machine works?



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**This is a windmill. The wind blows to the blades that are around a shaft and makes them move. It moves the shaft which finally ends with turning the grindstone.**

## Part I

### Reading Comprehension

Many countries now think that cars that burn fossil fuels should be replaced by electric cars. Electric cars don't burn gasoline in the engine, so they don't pollute the air. They use electricity stored on the car in batteries.

Sometimes, 12 or 24 batteries, or more, are needed to power the car. Just like a remote-controlled car, an electric car has an electric motor that turns the wheels and a battery to run the motor.

Electricity, the same energy that lights your lamps and runs your TV, is stored in batteries on an electric car. The batteries can be like the batteries you find in flashlights or in regular gasoline cars.

To get the battery ready to roll, you have to charge it. This process isn't much different from the way you charge the portable devices you carry around every day: your cell phone, MP3 player, or digital camera. The difference is that you deal with a much bigger gadget that carries you around instead.



The electric car is usually plugged in at night. The car can be plugged into a special charging unit even at houses. Some electric cars can be plugged right into a regular electrical wall outlet. Others need a larger outlet, like the kind that a stove or a vacuum cleaner plugs into.

The engineers are trying to make better batteries that hold more energy and last longer. To overcome the problem of charging electric cars, hybrid cars are also available. Hybrid cars combine the benefits of gasoline engines and electric motors. They can be designed to meet different goals, such as better fuel economy or more power.



#### A. True or False

1. Electric cars use both fossil fuel and electricity. T  F
2. All electric cars have batteries. T  F
3. People can charge electric cars at home. T  F

**B. Answer the following questions.**

1) What is an electric car?

**They use electricity stored on the car in batteries instead of burning gasoline in the engine**

2) Why do people use hybrid cars?

**To overcome the problem of charging electric cars.**

3) Have you ever seen an electric car?

.....



**C. Skim the text and write a title for it.**

**Batteries against Fossil Fuels/ Electric Cars**

.....

برای برخی از آیتم ها بیش از یک پاسخ  
امکان پذیر است. برای بعضی واژگان تصویر  
هم ارائه کردم.

**Part II**  
**Vocabulary**

**A. Make new words by combining the items in line 1 with those in line 2.**

من کلمه ای با **ful** پیدا نکردم مگر اینکه **full** باشه

hydro sun non ful wind

shine tower renewable harm power



hydro tower



hudropower



sunshine



sunpower



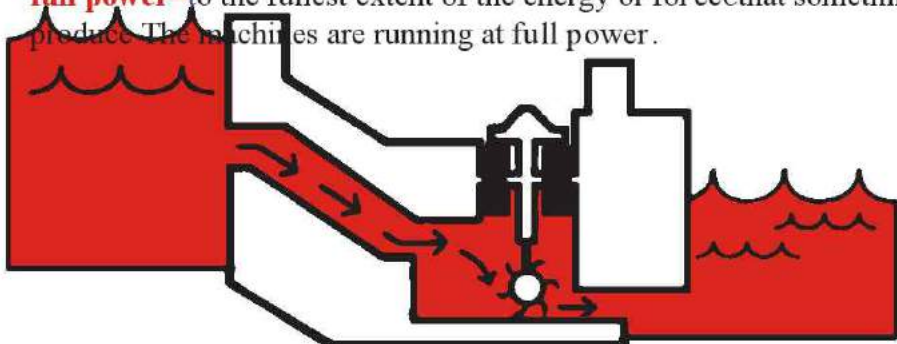
full tower



*Wind power is power produced from windmills and winf turbines.*

wind tower

**full power** = to the fullest extent of the energy or for ce that something can produce. The machines are running at full power.





**B. Odd one out.**

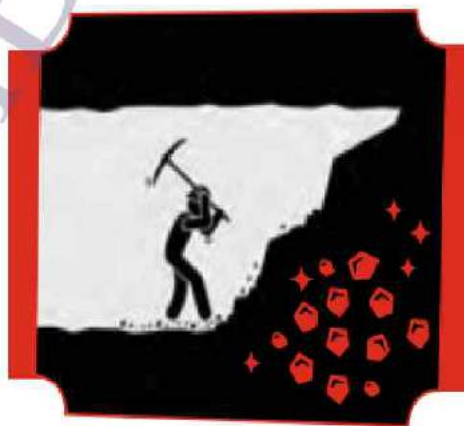
- |                 |            |                 |             |
|-----------------|------------|-----------------|-------------|
| 1. a. water     | b. tree    | c. coal         | d. sun      |
|                 |            | non-renewable   |             |
| 2. a. pollution | b. waste   | c. garbage      | d. resource |
| 3. a. yard      | b. balcony | c. roof         | d. motor    |
| 4. a. absorb    | b. use up  | c. generate     | d. digest   |
|                 |            | produce; create |             |

به نظرم چون بقیه به جورایی مصرف کننده یا گیرنده هستند

**C. Write the Persian equivalent of the following English proverbs.**

1. Money does not grow  
on trees.

پول علف خرس نیست



2. Easy come, easy go.

باد آورده را باد می برد



3. There's no place like home.

هیچ جا خونه آدم نمیشه

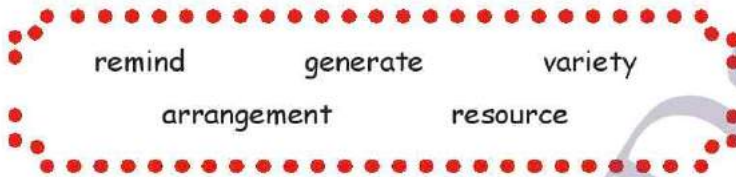


4. Absence makes the heart grow fonder.

دوری و دوستی



D. Fill in the blanks with the given words. Make the necessary changes.



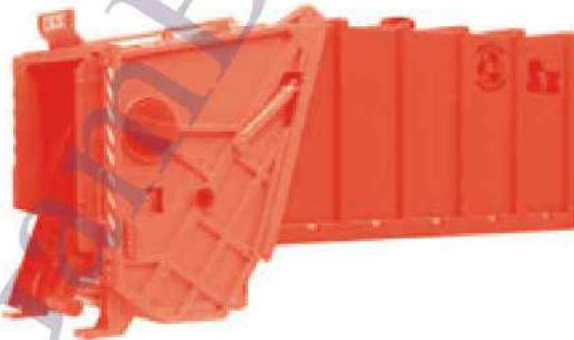
1. Special **arrangements** ..... can be made for guests with disabilities.
2. The students constantly had to be **reminded** ..... about their homework.
3. Asia is a continent rich in natural **resources** .....
4. The people of this city come from a **variety** ..... of different backgrounds.
5. Wind turbines **generate** ..... electricity for the local community.



**Part III**  
**Grammar**

**A. Fill in the blanks with the correct form of the verbs.**

1. The river may **be polluted** ..... (pollute) with aluminum.
2. The list can **be arranged** ..... (arrange) alphabetically.
3. Nowadays power can **be generated** ..... (generate) by resources other than fossil fuels.
4. The waste should **be collected** ..... (collect) every night to be sent to the landfill.



**B. Look at the pictures and write passive sentences.**



**Many tourists are attracted by wind towers in Yazd.**



**Electricity can be generated from hydropower.**



Heat from solar energy can be used to cool our house.



The air we breathe can be polluted by factories that use fossil fuels.

**C. Answer the following questions.**

1. Should fossil fuels be saved for our children?

**Yes, they should.**

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2. Can electricity be generated from plants?

**Yes, it can.**

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3. Have you ever seen a solar panel?

**Yes, I have./ No, I haven't.**

---

4. How does a solar panel work?

**A solar panel collects heat by absorbing sunlight and producing solar power.**

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D. Look at the pictures and fill in the blanks using simple past and past perfect tenses.



1. I **had eaten** ..... (eat) lunch before **I went out** .....  
(go out)



2. When I **got home** ..... (get) home, **she had** .....  
already **fallen asleep** ..... (fall asleep)



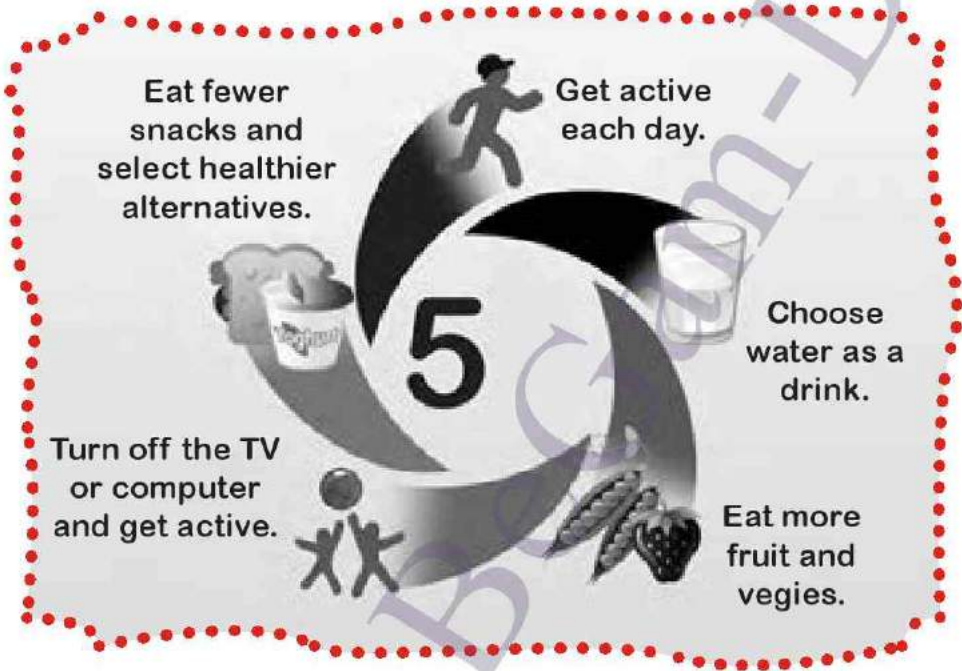
3. She **was upset** ..... (upset) because **she had gotten a bad score** .....  
(get a bad score)



## Part IV

### Writing

A. Look at the following figure and write a paragraph about it.



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**B. Choose one of the following topics and write a paragraph about it.**

▶ Technology

▶ Smoking

▶ Charity

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