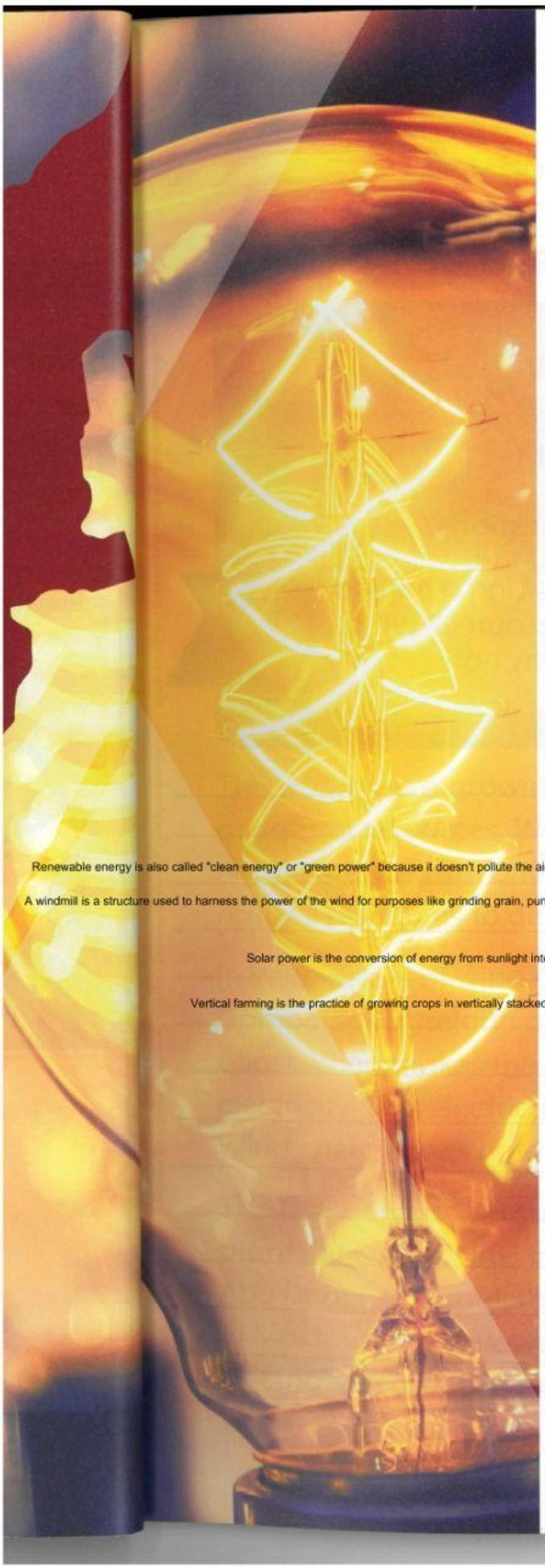
LESSON 6: NEW IDEAS FOR RESOURCES

LIVEWORKSHEETS



Lesson Objective:

By the end of the lesson, students will:

- identify new ways to produce clean energy
- identify new ways to improve farming methods

DICT

Key Vocabulary:

- clean energy
- windmill
- solar plant
- vertical farming

Renewable energy is also called "clean energy" or "green power" because it doesn't pollute the air or the water.

A windmill is a structure used to harness the power of the wind for purposes like grinding grain, pumping water, and generating electricity

Solar power is the conversion of energy from sunlight into electricity

Vertical farming is the practice of growing crops in vertically stacked layers

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WARM UP: BRAINSTORM

Instructions: In groups, answer the questions.

Is sunlight a natural resource? Why or why not?

Yes.

It is a renewable resource meaning it can be replaced once used again and again.

Is wind a natural resource? Why or why not?

Yes.

It is a renewable resource meaning it can be replaced once used again and again.

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USING RESOURCES BETTER

The world has a growing population but a limited amount of natural resources. We need to use them without harming the earth. Different countries are using their natural resources to get **clean energy**.

In Ireland, lots of wind comes over the Atlantic Ocean. Companies in Ireland are building **windmills** near the coast. Wind makes the windmills turn, which creates electricity. This electricity is used for businesses and homes. Wind energy does not pollute.

The UAE gets a lot of sunlight. Two world leading **solar plants** are in the UAE. In Abu Dhabi, there is the Noor Abu Dhabi. In Dubai, there is the Mohammed bin Rashid Al Maktoum Solar Power Park. These two plants make electricity in a clean way for the UAE.

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A resource that we must use better is farmland. When cities grow, people often put new buildings on farmland. This destroys the land and we cannot grow food on it.

There have been many improvements in farming in the UAE. In 1971, there were about 4,000 farms. In 2011, there were about 36,000 farms. Modern irrigation systems put water right next to the plants so that no water is wasted.

In 1999, 32% of farms in the UAE used a modern irrigation system. In 2011, 91% of farms used a modern irrigation system.

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A recent idea is indoor farming using **vertical farming**. Vertical means going up rather than across. The plants are on shelves inside the greenhouse. The farmer can control the temperature and the water used. Little or no soil is needed. The farm produces 1,000 to 1,500 kilograms of food every day. This saves farmland, soil, and water.

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Activity 1: Outline

Instructions: Fill in the blanks in the outline with 1-3 words from the reading.

1. Paragraph 1 Main Topic: _____*Population and Resources*_____

- Population is _____
- Natural Resources are _____
- We need to create _____ energy

2. Paragraph 2 Main Topic: _____

- Ireland gets energy from _____
- Windmills in the _____

3. Paragraph 3 Main Topic: _____

- Name of the solar plant in Abu Dhabi:
- Name of the solar plant in Dubai:

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4. Paragraph 4 Main Topic: _____

- When cities grow, it often destroys _____
- Number of farms in the UAE: 1971 - _____; 2011 - _____
- The UAE uses more modern _____
- Modern Irrigation saves _____
- Water is placed _____

5. Paragraph 5 Main Topic: _____

- Put farms in a _____
- Plants are on _____
- Saves _____, _____, and _____

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Activity 2: Concept Check

Instructions: Answer the questions below with information from the reading.

1. Why do we need to use natural resources in a clean way?

_____

2. What country uses windmills?

_____

3. How does a windmill make electricity?

_____

4. What natural resource is the UAE using to create electricity?

_____

5. Why do modern irrigation systems save water?

_____

6. What kind of new farm did the reading talk about?

_____

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