



Pre-Reading Activities

A: Discussion

Work in groups and discuss the questions below.

1. What does the first picture show?
2. Where do they grow?
3. What drink do we make from them?
4. Look at the second picture. Where is Finland?
5. What is the weather like in Finland?



B: Dictionary Work

Use your dictionaries and put the words under the correct heading. (Two words are done for you as examples).

nuclear reactor, to ripen, cooling system, field, nuclear plant, soil, byproduct harvest, nuclear - warmed water, vineyard vines

Growing Grapes	Power
to ripen	nuclear reactor

Reading Activities

A: Reading for the Main Idea

Read today's article quickly and choose the best summary.

Today's article is about:

- a. nuclear plants.
- b. growing grapes in a cold country.
- c. using warm water from a nuclear reactor to grow grapes.

Waste Water from Nuclear Plant Warms Finnish Vineyard

HELSINKI Monday December 17 (Reuters) - Grapes will soon ripen for wine production in frosty Finland because of warm water from a nuclear reactor cooling system, an official said on Monday.

The power group Teollisuuden Voima (TVO) buried plastic cooling-water **pipes** under a field near the Olkiluoto nuclear plant to keep the soil **thawed** all year-round. They then

planted 140 vines earlier this year. TVO expects the first real harvest in 2003 of around 6,600 pounds (2,994 kg) of grapes.

"I suppose about half of that will become juice," he said. He said that the power group had not yet decided who would turn the blue Latvian Zilga grapes into wine.

He said this summer's harvest would probably be very small.

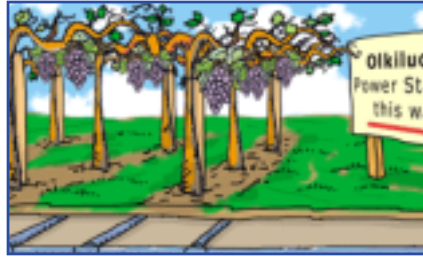
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Glossary: **pipes** - long, round objects which water flows through **thawed** - when something that is frozen melts



B: True / False

Look at the pictures below and use the article to decide if they are right or wrong.



C: Reading for Detail

Read the paragraph below and choose the best answers.

"I suppose about half of **that** will become juice," **he** said. He said that the **power group** had not yet decided who would turn the blue Latvian Zilga grapes into wine.

1. **that** in this paragraph means:
 - a. Finland
 - b. water warmed by the nuclear reactor
 - c. the grapes
2. **he** in this paragraph means:
 - a. a grape grower
 - b. the official from TVO
 - c. TVO
3. the **power group** in this paragraph means:
 - a. Finland
 - b. the official from TVO
 - c. TVO

Now answer these questions.

4. Does TVO know who will make the wine from the grapes?
5. What sort of grapes are being grown?

D: Gapfill

Here are the first two paragraphs from today's article but they have gaps. Fill in the gaps with the phrases given here. (Do **not** look at today's article while you do this.)

the nuclear plant

warm water from a nuclear reactor cooling system

6,600 pounds (2,994 kg) of grapes

plastic cooling-water pipes

the first real harvest

Water from Nuclear Plant Warms Finnish Vineyard

HELSINKI (Reuters) - Grapes will soon ripen for wine production in frosty Finland because of (1)____, an official said on Monday.

The power group Teollisuuden Voima (TVO) buried (2)____ under a field near (3)____ to keep the soil thawed

all year-round.

They then planted 140 vines earlier this year. TVO expects (4)____ in 2003 of close to (5)_____.

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Post-Reading Activities

You may do one or more of these.

A: Language

In today's article there were these words:

"Grapes **will** soon ripen for wine production. ...half of that **will** become juice..."

We use **will** when we are talking about the future and we say something that is a fact. We are sure that this thing will happen in the future. The form is **will + infinitive** (without to). The negative of **will** is **won't**.

Look at the sentences and fill in the gaps with **will / won't** + one of the verbs below.

help, choose, make, be, grow, keep

1. The first grape harvest _____ very big.
2. They _____ probably _____ around 6,600 pounds of grapes in 2003.
3. They _____ some wine from the first real harvest of grapes in 2003.
4. TVO _____ another company to turn the grapes into wine.
5. The pipes _____ the soil thawed all through the year.
6. The nuclear warmed water _____ the grapes to ripen.

Now write down **four things** that you are sure **will happen** in the future.

Example: *Beijing will host the Olympic Games in 2008.*

- 7.
- 8.
- 9.
- 10.

B: Extra Reading

Read another paragraph from today's article. After you have read it, tell someone else about what you have read.

*The grapes planted near the Olkiluoto power station on Finland's west coast are a hardy **species** that can withstand temperatures of minus 40 degrees Fahrenheit. The vineyard is part of research into uses of warm water created as a byproduct of energy production.*

species - a group of plants (or animals) that are the same in some way.

C: Discussion

Work in pairs and discuss the questions below.

1. What do you think about using nuclear-warmed water to grow plants?
2. Would you be happy to drink the wine?
3. What do people think about using nuclear power in your country?

D: Vocabulary

Work in pairs and answer the questions below.

1. Do you like **wine**? Why or why not?
2. Have you ever been to a **vineyard**?
3. Do you have **nuclear plants** in your country?



TEACHERS' NOTES AND ANSWER KEY

Pre-Reading Activities

A: Discussion - Notes

Students probably won't know most of the information given here for answers 4 and 5, so you may like to tell them some of it, if you feel it is appropriate.

A: Discussion - Suggested Answers

1. Grapes.
2. Usually warm countries e.g. France, Italy, Australia
3. Wine, raisins.
4. Northern Europe. (Northern Norway is to the north of Finland, Sweden to the west and Russia to the east.)
5. Finland has a much milder climate than most other places in the world that lie so far north. Temperatures in July average around 55 to 63 degrees F (13 to 17 degrees C). The climate is mildest in southern Finland. In the coldest month of the year, February, temperatures are usually from -7 degrees F (-22 degrees C) to 26 degrees F (-3 degrees C). Snow covers the land in the south from December to April. The north usually has a lot of snow from October to April.

B: Dictionary Work - Answers

Growing Grapes: to ripen; field; soil; vines; harvest; vineyard; byproduct

Power: nuclear reactor; cooling system; nuclear plant; nuclear-warmed water; byproduct

Reading Activities

A: Reading for the Main Idea - Answers

The best answer is c.

B: True / False - Answers

Picture one: **True**

Picture two: **True**

Picture three: **False (2003 will probably have a 6,600 pound harvest.)**

C: Reading for Detail - Answers

1. c; 2. b; 3. c; 4. no; 5. (blue Latvian) Zilga grapes

D: Gap Fill - Answers

1. ...warm water from a nuclear reactor cooling system...
2. ...plastic cooling-water pipes...
3. ...the nuclear plant...
4. ...the first real harvest...
5. ...6,600 pounds (2,994 kg) of grapes.

Post-Reading Activities

A: Language - Notes

You may wish to point out that the article also uses the word **would**, as it **reports** what the official said about the harvest.

(TVO official: This summer's harvest **will** probably be very small. He **said** this summer's harvest **would** probably be very small.)

A: Language - Answers

1. The first grape harvest **won't be** very big.
2. They **will** probably **grow** around 6,600 pounds of grapes in 2003.
3. They **will make** some wine from the first real harvest of grapes in 2003.
4. TVO **will choose** another company to turn the grapes into wine.
5. The pipes **will keep** the soil thawed all through the year.
6. The nuclear warmed water **will help** the grapes to ripen.

Please Note: This lesson also has accompanying exercises for your students to do online. These can be found in the **Instant Workbook** section of www.english-to-go.com