**Unit Two lesson 4 and 5**

**Specifying and describing properties**

**(pages 18+19)**

**In these two pages, you will learn how to talk about the different properties of a certain material, and explain why these properties make the material suitable for certain applications.**

**Exc. 8.A.: What are the different properties of Kevlar?**

(they are found in the second paragraph in exercise b and in exercise c.)

The following sentences are different ways to say the same thing using nouns and adjectives.

1. Kevlar is a tough material

Kevlar is known for being tough.

Kevlar is known for its toughness.

2. Kevlar is abrasion resistant.

Kevlar has abrasion resistance.

3. Kevlar has thermal stability.

Kevlar is thermally stable

4. Kevlar is strong.

Kevlar is known for its strength.

5. Kevlar is durable.

Kevlar is known for its durability.

6. Kevlar is a chemically stable material.

Kevlar is known for its chemical stability.

**Vocabulary items:**

Organic: containing carbon

Aromatic: having a smell, usually a good one.

Properties: characteristics, features, qualities.

Distinct: clearly different

Commercial: related to selling and buying

Composition: things combined together to form something. Structure

Abrasion: damage caused by friction

Demanding: wanting something

Currently: recently

Broad: wide

**Exc. 8.C.: match the properties of Kevlar with their definitions**

1. toughness

2. abrasion resistance

3. thermal stability

4. durable

5. lightweight

**Exc. 9.A.: In this exercise you will learn five of the applications of Kevlar.**

1. Drive belts: (c)

2. brake pads: (e)

3. tyres: (b)

4. sealing gaskets: (a)

5. bullet resistant armour: (d)

**Vocabulary items in 9.A.:**

Leakage: a situation in which gas or liquid escapes from a pipe or a container.

Pneumatic: operated by air pressure or has air inside

Transmission: passing something from one place to another

Barrier: what is used to stop people or something from going somewhere like a wall.

Induce: motivate, persuade, encourage

Seal: close totally

**Let's move the text we have on page 19. In this text, you have an explanation of the different applications of Kevlar. You need to be able to explain why Kevlar is used in a certain application.**

**Following are different sentence structures:**

1. Kevlar is used in car and truck tyres because it has puncture and abrasion resistance.

2. Drive belts have incorporated (used) Kevlar because it is abrasion resistant and thermally stable.

3. Kevlar is abrasion resistant and thermally durable, so it is found in brake pads.

4. Because it is light, and abrasion resistant. Kevlar is used in bullet resistant armour and vehicles.

5. Chemical and thermal stability make Kevlar suitable for sealing gaskets.

**Vocabulary items:**

Incorporated: included

Superb: the best

Puncture: a hole made in a tyre

Retain: keep

Tension: being tight and stiff

Endure: bear, tolerate. Withstand

Reinforced: made stronger

Corrosion (n)

Corrode (verb): to be damaged by something. Water corrodes metal

**Exc. 10. A.: (audio script 2.4)**

**Vocabulary items:**

Menacing: scary

Obviously: clearly

Impressive: with great achievement or results

In existence: living or present

Snap: break suddenly and quickly with a sound

Brittle: breaks easily

Build up: increase

**Exc. 10.b.:**

1. lightweight (not heavy)

2. abrasion resistance (resist friction)

3. durable (to last)

4. thermal stability (heat builds up)

**Exc. 10.c.: Match words with their synonyms**

1. ideally: for the best result

2. obviously: something that is clear

3. the last thing you want: the worst situation

4. the key requirement: the most important factor

5. a good degree of: a lot of