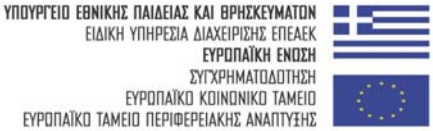

ΥΠΟΥΡΓΕΙΟ ΕΘΝΙΚΗΣ ΠΑΙΔΕΙΑΣ & ΘΡΗΣΚΕΥΜΑΤΩΝ
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ΕΚΠΑΙΔΕΥΣΗ & ΑΡΧΙΚΗ ΕΠΑΓΓΕΛΜΑΤΙΚΗ ΚΑΤΑΡΤΙΣΗ
(Ε.Π.Ε.Α.Ε.Κ. ΙΙ)

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ΦΟΡΕΑΣ ΥΛΟΠΟΙΗΣΗΣ: Τ.Ε.Ι. Λάρισας

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ΤΕΧΝΙΚΗ ΟΡΟΛΟΓΙΑ-ΔΙΑΦΑΝΕΙΕΣ

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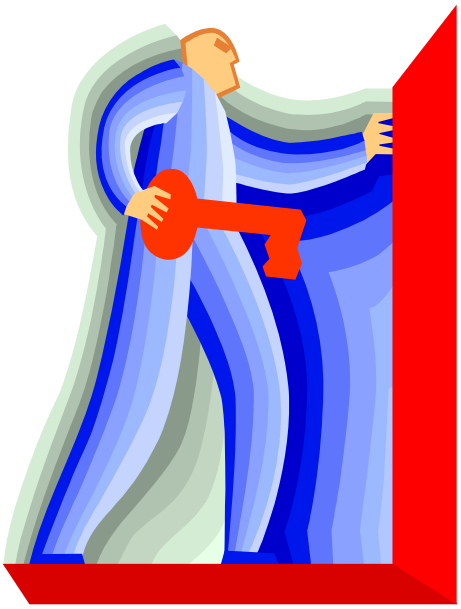
ΚΑΡΔΙΤΣΑ 2004

Τ.Ε.Ι. ΛΑΡΙΣΑΣ

ΠΑΡΑΡΤΗΜΑ ΚΑΡΔΙΤΣΑΣ

ΤΜΗΜΑ ΣΧΕΔΙΑΣΜΟΥ ΚΑΙ ΤΕΧΝΟΛΟΓΙΑΣ ΞΥΛΟΥ ΚΑΙ ΕΠΙΠΛΟΥ



ΑΓΓΛΙΚΑ- ΤΕΧΝΙΚΗ ΟΡΟΛΟΓΙΑ

ΚΑΘΗΓΗΤΡΙΑ: ΤΑΝΤΟΥ ΣΟΦΙΑ

ΚΑΡΔΙΤΣΑ 2003

THE WORLD OF WOOD

A world without wood would be unthinkable. From early shelter wood has been essential to humankind. It provides the habitat for countless species of flora and fauna.

An equally important function of wood is its role with the oceans as the lungs of our planet and, through its own rhythms of take-up and release of moisture, the vital part it plays in regulating our climate.

Conifers, which we call softwoods, emerged 275 million years ago, eventually covering two-thirds of the earth's surface. The broad-leaved, flowering, and fruit-bearing hardwood trees first emerged about 140 million years after the conifers. The conifers provide the bulk of the world's lumber.

GRAIN-FIGURE-ODOR

We are all familiar with the tree's growth rings. As the sap rises in the spring and stops in the fall in temperate climates, this interrupted growth cycle causes a distinctive wood layer to form, and this is called a growth ring. These are not really "annual rings" by which to count the age of a tree, because cold winters or periodical droughts can interrupt the growth cycle. In the tropics the growth may be continuous, and the wood may appear to have no growth rings at all.

Each growth ring has two distinct zones. Fast-growing earlywood cells formed in the spring have thin walls and large cavities, while slower-growing latewood cells formed in the summer have small cavities with thick walls. It is the contrast between those two layers that enables us to identify the tree with naked eye, when viewing an end section.

Grain, strictly speaking, refers to the lines visible on a cut board that show the intersection of the growth rings and the plane of the board itself.

The natural arrangement of the wood fibers in relation to the main axis of the tree produces several types of grain. Crossgrain, appears when the fibers are not parallel to the main axis of the tree, and wavy grain where the fibers form short waves in a regular pattern. You can also find curly grain and spiral grain, diagonal grain and interlocked grain.

Texture is governed by the variation in size of the early- and latewood cells. There is also the quality of luster – which is the ability of the wood cells to reflect light, and this is related to texture. Smooth, fine-textured woods are more lustrous than course-textured ones.

Then there is odor. Resinous pines and many other woods have a strong natural odor. One such is camphorwood, which is used to line the interior of closets; another is cigar-box cedar, which is used to make humidifiers.

CONVERSION

Before wood can be used, it has to be transformed from its raw lumber form into “dimensioned” form. This process is known as conversion. It is a process that usually comprises cutting, grading, seasoning, and preserving.

Lumber is usually cut to maximize the yield of planks. The way it is cut will not only determine how much usable wood you can get from a log, but also how the resultant wood will release and absorb moisture, and therefore how it shrinks and expands as it does so.

Flat-sawn wood is less economical. It produces the widest but least stable boards. Radial sawing will be less economical but produce greater dimensional stability.

Lumber is graded according to the use it will be put to. In the case of furniture, appearance will take precedence, while strength will be more highly prized in, say, constructional use.

Wood is hygroscopic. That is to say it picks up moisture, and will experience internal “movement” as it dries. Seasoning, therefore, is important if that phenomenon is to be minimized.

Air drying is the traditional method of reducing moisture content. This is done by maximizing the drying effect of the wind while minimizing the effects of the windblown rain and fog. This system is used with varying degrees of success depending on the climate. In some wetter climates it is often used only as a pre-drying process prior to treating with preservatives and kilning.

Kiln drying, especially in bulk, is usually the preserve of professional dryers. Lumber is stacked, often with smaller pieces of softwood placed between the planks, to give support and allow air to flow evenly. Kilns are sealed and the temperature and humidity are monitored, as well as the duration of kilning. Too fast a drying process can be as disastrous as one that’s too slow.

Preservation extends the life of wood, providing a protective “shell”. Some woods have a natural resistance to insect attack and decay. These naturally durable woods can last for a few years to several centuries, depending on the degree of exposure. There are three main types of preservative. Tar oils are mainly applied on outbuildings. Water-borne preservatives are applied by vacuum/pressure impregnation. Then there are organic solvent-borne preservatives again applied by vacuum/pressure or by dip. Brushing provides only minimal protection.

ΑΓΓΛΙΚΑ – ΤΕΧΝΙΚΗ ΟΡΟΛΟΓΙΑ / ΔΙΑΦΑΝΕΙΑ - 5

GRAMMAR IN USE

Simple Present

Χρησιμοποιείται για να περιγράψουμε:

-επαναλαμβανόμενες πράξεις e.g. I ride my bike to school every day.

-συνήθειες e.g. I get up early every Sunday.

-μόνιμες καταστάσεις e.g. I live in Athens.

- γενικές αλήθειες e.g. The sun rises in the east.

Για να σχηματίσουμε άρνηση χρησιμοποιούμε το do not/don't + κύριο ρήμα (I, we, you, they) και το does not/doesn't + κύριο ρήμα (χωρίς –s για το he, she ,it).

e.g. We don't drive to school every week.

She doesn't go to the cinema on Mondays.

Για να σχηματίσουμε ερώτηση χρησιμοποιούμε το do+ υποκείμενο + κύριο ρήμα (I, we you, they) και το does+ υποκείμενο+ κύριο ρήμα (χωρίς –s για το he, she, it).

e.g. Do you send e-mails?

Does he write letters?

Κανόνες ορθογραφίας για γ' ενικό πρόσωπο.

- Προσθέτουμε –s στο κύριο ρήμα. e.g. He swims as a fish.

- Προσθέτουμε – es όταν το ρήμα τελειώνει σε –ss, -ch, -sh, -x, -o. e.g. She goes to school at eight o'clock.

- όταν το ρήμα τελειώνει σε σύμφωνο+ y αφαιρούμε το –y και βάζουμε –ies. e.g.She studies English.

Χρονικές εκφράσεις στο Simple Present.

-Μπαίνουν στην αρχή η στο τέλος της πρότασης. Μερικές είναι οι εξής: every day/ every week/ every month , in the morning/ in the afternoon/ in winter / in summer , on Mondays/ on Sunday morning, once a month e.t.c. e.g. I go to work by bus every morning.

-Τα επιρρήματα συχνότητας (always, usually, often, sometimes, seldom, rarely, never) μπαίνουν πριν το κύριο ρήμα και μετά το βοηθητικό. e.g. I never go to school on time.

She is always late for school.

EXERCISES

Ex.1. Fill in the gaps using the verbs given in Simple Present.

1. We never…….(drive) on the left side of the road here.
2. ……(he/play) any musical instrument?
3. She……(not/often/come) to work late.
4. They……(not/work) here at night.
5. ……..(they/allow) you to go out alone at night?
6. Jim…….(go) to the office every day at ten o'clock.
7. …….(you/mind) coming with us tonight?
8. She……(own) ten houses these days.
9. My parents…….(prefer) holidays by the sea to holidays in the mountains.
10. Jane…….(study) English because she likes foreign languages.

Ex.2. Fill in the gaps by using the verbs that make correct sentences (does not sleep, drive, cut, let, avoid, makes, brush, likes, do not look, puts on, comes back).

1. He…….a lot in the summer because of the heat.
2. First he……his clothes and then he goes out when he feels like it.
3. He does not…….her go out on Saturdays.
4. They ……. their teeth before they go to bed.
5. We……. for trouble when things seem to be fine.
6. We ……..the logs before we put them in the kiln.

Ex.3. Fill the gaps by using one of the given words (cells, lumber, luster, conversion, weathering, growth-rings, conifers, fruit-bearing, fauna).

1. The…….of a place is rich when there is a variety of animals living there.
2. …….trees are rare here, so fruit is quite expensive.
3. ……. is a necessary process before wood goes through manufacturing.
4. Blood…….. multiply in great speed.
5. Fine-textured wood is distinctive because of its……
6. …….. is the process which turns wood into something else.
7. We estimate the approximate age of a tree by looking at its……..
8. …….. are some of the oldest trees on Earth.
9. First we take the…… and we turn it into planks.

WOOD AND TECHNOLOGY

PLYWOOD

Plywood is made from very thin sheets of timber peeled from the logs in a continuous roll (much like shavings in a pencil sharpener) or sliced very thinly from the log in a vertical chopping manner. It is then cut into sheets and glued in layers, with the grain laid in alternate directions. Having the grain layered in this manner gives uniform strength across the board. This method of construction makes plywood stronger and less likely to warp and split than natural timbers. However, that is not to say plywood does not warp. It is known as a stable material, but as the tensions in each veneer are not the same it can warp, as it also will do when affected by heat and water damage. Plywood is usually made with an odd number of sheets, the minimum being three; the greater the number of plies, the stronger the board. This method of construction gives plywood better mechanical properties, more so than other manufactured boards. Plywood has advantages over natural timbers in that it is relatively cheap by comparison, and comes in broad sheets and a range of thickness. By using a waterproof glue, some plywood is made suitable for exterior use and boat building. A range of decorative veneers can be glued to the surface to save on rare or expensive timbers or plastic coatings can be applied to give a water-resistant surface. Plywood also has a greater flexibility than natural timber and thus can be formed into curves. Individual pieces of veneer can be glued and allowed to dry while tightly clamped in formers. Items and shapes made in this manner are known as laminated forms.

PARTICLEBOARD

Particleboard, also called chipboard, has been manufactured since 1948. Most people will come into with this material, as it is widely used in many areas such as in kitchen cabinet construction. Particleboard is available in sizes from 3600 x 1800 mm to 1800 x 900 mm, and a variety of thickness from 3.2 to 43 mm.

THE RAW MATERIAL

The availability of a raw material is a vital factor in the selection of a material for a particular product. The raw material used in particleboard is usually radiata pine plantation thinnings; offcuts and faulty wood considered too poor in quality to mill. Hardwood is sometimes included.

MANUFACTURE

Particleboard is made by bonding together small flakes of wood with a synthetic adhesive, under heat and hydraulic pressure. The structure of this material is changed so that there is no general grain direction, unlike a natural timber. The tension and stresses that occur in solid timber due to changes in temperature and moisture content are eliminated. Solid timber tends to warp, twist, shrink and expand, whereas particleboard is relatively stable. Like other wood products, it is affected by excess moisture which causes it to swell in thickness. Moisture-resistant particleboards have been developed and are suitable for flooring in wet areas such as bathrooms and kitchens. The manufacture of particleboard is a continuous and largely automated process carried out under closely controlled conditions. The manufacturing processes can be altered to suit the type of board required for a particular situation, by changing the size of the particles and the type of resin. There are a number of different types of particleboard available. The intended use of the particleboard will help determine which type is best. Having some knowledge of the different types may help in your selection.

THREE-LAYERED PARTICLEBOARD

Three-layered particleboard is made up of layers of different sizes. Fine particles are placed on the outside while the central core is made up of larger flakes. The two outside layers contain more glue and moisture than the inside layer. This creates a board that is denser with a smooth surface.

The manner in which this type of particleboard is constructed increases its bending strength and stiffness properties. After this material has been processed it can be finished with adhesive veneer, melamine, plastic laminate, and most other finishes, including paint products.

DECORATIVE CHIPBOARDS

Decorative chipboards have a layer of wood veneer, plastic laminate or thin melamine foil. The wood - veneered boards are finished by lightly sanding, whereas the plastic laminate and melamine need no further surface finishing as such. However, when used in most construction jobs an edge trim will usually need to be fixed.

GRAMMAR IN USE

Adjectives-Adverbs

Τα επίθετα(adjectives) μπαίνουν πριν από ουσιαστικά και τα χαρακτηρίζουν. Είναι τα ίδια σε όλα τα γένη και στους δύο αριθμούς. e.g. He is a good person.

Τα τροπικά επιρρήματα (adjectives of manner) απαντούν στην ερώτηση how? και σχηματίζονται αν προσθέσουμε τη κατάληξη -ly στο επίθετο. e.g. strange, strangely.

e.g. He behaves strangely.

Εξαιρούνται τα επίθετα good =καλός good=καλά (επίρρημα)

fast =γρήγορος fast =γρήγορα (επίρρημα)

hard=σκληρός hard=σκληρά (επίρρημα)

Note: όταν πριν από τη κατάληξη –y του επιθέτου υπάρχει σύμφωνο τότε τρέπεται σε –i και μετά προσθέτω –ly. e.g. happy, happily

Ενώ όταν το επίθετο λήγει σε -e, τότε μερικές φορές το -e αποβάλλεται και προσθέτουμε -ly . e.g. simple, simply

Αλλά: brave, bravely

Note: Μετά από τα ρήματα: look, smell, taste, feel, sound χρησιμοποιούμε επίθετο και όχι επίρρημα. e.g. She feels great.

Όταν υπάρχουν τροπικά επιρρήματα, χρονικές και τοπικές εκφράσεις τότε η σειρά τους στη πρόταση είναι τροπικά επιρρήματα, τοπικές εκφράσεις και τέλος χρονικές. e.g. She plays quietly in the park every afternoon.

Όταν υπάρχουν ρήματα κίνησης στη πρόταση τότε η σειρά είναι τοπικές εκφράσεις, τροπικά επιρρήματα και χρονικές εκφράσεις.e.g. She went home very quickly yesterday.

Όταν υπάρχουν πολλές χρονικές εκφράσεις τότε προηγείται το μικρότερο από το μεγαλύτερο. e.g. They came back to Athens at ten o'clock yesterday.

EXERCISES

Ex.1. Fill in the gaps with adverbs coming from the following adjectives (repeated, steady, alternative, polite, free, surprising, late, recent, decisive, high).

1. You have to talk ……., if you want them to be nice with you, too.
2. I haven't …….seen them in town.
3. He has to act……., if he wants to move forward.
4. Jim is …….. paid at his latest job.
5. You can't always come home…….., if you want them to trust you.
6. She is a ……. nice person, I think.
7. You can …… come round for a cup of tea.
8. He said her name……., until he wasn't heard anymore.
9. You may move…….. in the room. There is enough space.
10. They moved……. towards the shore, until it got dark.

Ex.2. Fill in the gaps with the derivatives of the words in brackets.

1. You can see a great …….(various) of rare species on the island.
2. There is still enough …….(moist) on the piece of wood. It hasn't dried yet.
3. You can see there is …….(excess) wealth in the palace.
4. You can ask for good…….(qualitative), as long as you pay money.
5. The insult against them was definitely not……..(intension).
6. The ……..(strong) of the bed is guaranteed.
7. If you find wood with great ……(stiff), then you have to find the right tools, too.
8. The wood is…….(manufacture) in a big factory and sold abroad.
9. If the wood goes through the mill, there will be some……..(thin) left aside.
10. The ……(construct) of furniture demands great labour.
11. If you……(requirement) better results, work harder.
12. ……(know) is not gained easily.
13. The……(continuity) renewal of the components of the machine, keeps it in good condition.
14. The three-……..(layer) particleboard is broadly used nowadays.
15. When wood flakes go under hydraulic ……(press), they turn into particleboard..

The new …….. (produce) of the company have already been promoted.

WOOD AND TECHNOLOGY

FIBREBOARDS

Fibreboards are wood-based panels or sheets manufactured from wood fibres and bonded together with a synthetic resin adhesive. Boards of different densities are produced for different purposes.

HARDBOARDS

Hardboard is a high-density fibreboard produced from wet fibres. Hardboards produced in Australia are made from eucalypts. The raw material comes from sawmill offcuts, forest thinnings or wood considered too faulty to mill. The raw materials used in hardboard are converted into chips, which are then heated with steam and ground up. The resulting fibres are suspended in water and fed onto a wire mesh belt. The water is removed by suction, and the material is cut into lengths and placed into a hot press. The natural resins in the fibres complete the bonding process. Hardboards made from eucalypts do not have glues added, making this material cheaper than other manufactured boards. Hardboards are commonly used for a range of purposes. Their high density and surface finish are important factors to be considered, along with their hardness.

MEDIUM BOARDS

This board is made in a similar manner to hardboard. Medium boards are produced in two grades: low density (LM) and high density (HM). Low-density board is available in 6 to 12 mm thicknesses and is commonly used for pinboards or wall panelling. High-density board is stronger than low - density board and is used mainly for interior panelling.

MEDIUM -DENSITY FIBREBOARD

Customwood is an example of a medium - density fibreboard (MDF). It is made from raw materials selected from a range of pine species. Like hardboard, custom board uses timber from low-grade logs. The boards are made from dried wood fibres, which are bonded under heat and high pressure using urea formaldehyde resin (a type of glue). This glue gives the material its high strength. MDF has mechanical and physical properties approaching levels found in solid wood. Because of this it is widely used as a substitute for solid wood. The sheets are light brown and come in a range of standard sizes and thickness. Customwood is used extensively in the furniture, joinery and construction industries. It has advantages over natural timber in that it is uniform in structure, dense, and free of knots and grain pattern. It lends itself to intricate and precise machining and finishing

techniques. Although this material is not solid timber, many of the same finishing processes can be used. If, for example, you have used the electric router in making a trench or to profile an edge you will notice that the edge is quite smooth and did not chip away.

SAFETY PROCEDURES

Always follow basic safety precautions, such as not working towards yourself, keeping your hands behind your work, keeping your work area tidy, and working on a flat surface. Always read the instructions for a power tool before use. Do not wear loose clothing. Secure - your work firmly before commencing work, ensure cords are clear of the working area, and wear protective equipment for eyes, ears and face. When working in a dusty environment, make sure you wear a dust mask and operate dust extractors. Safety even extends to how you behave and move about in the workshop. There are recommended ways in which to carry and lift your timber, so always follow these procedures to avoid injuries.

Practice is the key to success in using most tools. It helps you to discover the potential of the tool, learn the various functions it performs, and improve your expertise. You will gain greater success if, when learning how to use a tool, you compliment this with learning about the structure of timber. This will allow you to learn how to work the grain and overcome problems such as knots, reverse grain and fiddleback.

TOOLS

Tools can be divided into categories according to their function, so that each category includes a range of tools that perform a particular task.

Measuring and Marking out

Compass, level, marking gauge, sliding bevel, steel rule, straight edge, tape measure, try square.

Hitting implements

Claw hammer, wooden mallet

Related tools

Nail punch, round-nosed pliers

Shaving tools

Chisel, gouge, plane, router plane, spokeshave

Saws

Panel saw, tenon saw, coping saw

Drills

Brace, drill bit, hand drill, screwdriver

Power tools

Biscuit jointer, circular saw, power drill, jig saw, power sander, router

Woodworking machines

Bandsaw, circular saw, drill press, finishing sander, drill press, lathe, planer, radial arm saw

Joining materials

Glues

Polyvinyl acetate (PVA), urea formaldehyde glue, hot-melt glues

Nails

Flat-head nail, bullet head nail

Screws

Slotted screw, Phillips-head screw

Dowel

GRAMMAR IN USE

Passive voice (παθητική φωνή)-Simple present

Χρησιμοποιούμε παθητική φωνή όταν το πρόσωπο που εκτελεί τη πράξη είναι άγνωστο, ασήμαντο η ευνόητο. e.g. English is spoken all over the world

The car is made in Japan.

Σχηματίζουμε τη παθητική φωνή χρησιμοποιώντας το ρήμα του be+ τη παθητική μετοχή του ρήματος . e.g. Olives are grown in Greece.

-Simple Present: am/is/are+ παθητική μετοχή του ρήματος

Για να τρέψουμε την ενεργητική πρόταση σε παθητική κάνουμε τα εξής:

-Το αντικείμενο της ενεργητικής γίνεται υποκείμενο της παθητικής.

-Βάζουμε το ρήμα to be στο χρόνο που είχε το κύριο ρήμα στην ενεργητική πρόταση, και το κύριο ρήμα στην παθητική μετοχή.

-Το υποκείμενο της ενεργητικής μπαίνει μετά την πρόθεση by και είναι το ποιητικό αίτιο της παθητικής φωνής.

e.g. Jim writes a letter every week.

A letter is written by Jim every week.

Το ποιητικό αίτιο παραλείπεται όταν δε ξέρουμε ποιος κάνει τη πράξη.(they, someone).

EXERCISES

Ex.1. Fill in the gaps using one of the following words (radial arm saw, mallet, level, fibrefoard, finishing sander, screwdriver, marking gauge, nail,try square,hardboard).

1. …….. is one of the hitting implements we use when making furniture.
2. We normally use a …….. when we want to pull something heavy.
3. ……. is made if we bond fibres together with resin.
4. You can use a …….. before applying the stain on the furniture.
5……. is normally used for interior paneling.
6.You can put a …….. ……..on the wall if you want to hang a picture.
7.Give me a …….to put the missing screw back in.
8. Use the…….. to let them know what is the exact size of the pieces the planks will be cut into.
9.You can make sure the two pieces are parallel by using a…….
10. You cut the planks into smaller pieces by using a ……

Ex.2. Turn the sentences from active into passive voice.

1.They often buy new furniture and throw away their old one.
……
2. My brother often renovates his house.
……
3. The company employs new people every month.
……
4. The computer company makes new offers once a month.
……
5.The man you met annoys most of his neighbors.
……
6. She drives her dad's car because she is allowed to do so.
……
7. First of all you screw the lid on.
……
8.They write books and they are already famous.
……
9.They carry the wood into the workshop before starting working.
……

MAKING PROCEDURE – PREPARATION OF TIMBER

MAKING PROCEDURE

It greatly simplifies the complexity of woodworking if an overall plan or strategy can be developed. Most woodworking articles follow a 'skeleton' procedure for making. There are some exceptions, overlaps and interchangeability, but it is generally possible to break the procedure down into seven basic stages.

1 Preparation of timber. Accurately prepare all components to the required size prior to making. (Also known as 'squaring'.)

2 Marking out. Using a pencil or biro, steel rule, try square, etc., map out the intended form or shape of the object and any joint-cutting details or features.

3 Cutting/shaping. Using chisels, saws, planes, etc., carefully cut the joints and shape the other features of the work.

4 Assembly. Put together the components, whether they be a frame or carcase, to check that they fit (sometimes in part after gluing).

5 Gluing up. Apply glue, assemble the components, and clamp them under pressure.

6 Cleaning up. Plane or scrape a few fine shavings off the external surfaces of the work and then use grades of abrasive paper on a handblock or a finishing sander (internal surfaces are cleaned up prior to gluing).

7 Finishing. Apply oil, lacquer, stain etc., to protect the completed object and enhance the texture and colour of the surfaces. Sometimes internal members are cleaned and finished before gluing.

PREPARATION OF TIMBER

Sometimes referred to as 'squaring timber', the preparation of timber is an essential prerequisite to all making operations.

When you purchase timber, it is either rough sawn, and therefore irregular, or it is planed (in case of softwoods) and the chances are it will have cupped or twisted slightly and needs redressing accurately. You cannot expect to make accurate work involving precise marking out and cutting operations unless the material is accurate to start with.

Making timber accurate in dimension can be achieved by hand or machine methods and it is advantageous to understand, and indeed practise, the traditional hand method, even if the machine method is achieved in a fraction of the time and with greater ease. Of course, there are occasions when the hand method is best, such as when the wood is very small, or when the grain is particularly

difficult to work - although some instances of interlocking grain can be more successfully dressed by very fine and razor-sharp machine planing. Certainly, the control and accuracy offered by the modern planer-thicknesser can be as great, if not better than hand methods and will be the preferred method in most cases.

For timber to be prepared accurately (that is, ready for marking out and cutting operations) it has to fulfil certain requirements. A piece of timber has six surfaces: two sides, two edges and two ends. All surfaces should be flat, all adjacent surfaces should be 900 and all opposite surfaces should be parallel.

SQUARING BY MACHINE METHODS

The plane-thicknesser is an extremely useful modern machine and is essential for quick repetitive 'squaring' operations. Not only will it accurately dimension large work, but very small sections as well. When using this machine, there are two operations: 'surfacing" and 'thicknessing to width'. A bandsaw, or a circular saw or a radial arm saw can be used to cut the wood slightly oversize before machine planing and the radial arm saw is an ideal tool for squaring off the ends.

The knack of accurate preparation of timber relies on supporting the timber in the most appropriate way, mounting the wood low and firmly in the vice. The plane has to be kept razor sharp (re-sharpened before and during the process if needed) and set exactly right. That usually means taking a finer cut, even if it is slower. Checking for flatness with a steel rule is done up against the light. So too is checking for squareness with the try square at random intervals along the length. Repeated checking is essential. Gauging has to be done slowly, and you can either hold the wood freehand or prop it against a slightly open vice.

Shading waste is imperative, as the diagonal lines actually show up the marked line better than the line itself. When removing large amounts of wood it may be better to saw off the bulk and then finish with a plane. The guide to knowing when you have finally arrived at the line is to flick the fibres where the line has been gauged. When sawing, it pays to choose a sharp, medium-toothed tenon saw. The wood has to be held firmly in the bench hook or in the vice. When squaring off the ends it is not usually necessary to smooth them flat, as subsequent jointing of ends is common.

When several identical pieces need to be prepared to size, such as table legs, it actually makes more sense to copy the marked lengths from one member, rather than to re-measure each time.

GRAMMAR IN USE

Gerund

Το γερούνδιο είναι ρηματικός τύπος που σχηματίζεται προσθέτοντας στο ρήμα τη κατάληξη –ing. (όταν προσθέτουμε –ing ακολουθούμε τους κανόνες ορθογραφίας του Present Continuous). e.g. run, running

-Μπορούμε να χρησιμοποιούμε γερούνδιο ως:

-υποκείμενο πρότασης e.g. Swimming is good for you.

-μετά από προθέσεις e.g. I am good at speaking English.

-μετά από τα εξής ρήματα η εκφράσεις:

begin, enjoy, find, finish, start, hate, like, love, remember, stop

can't help, can't stand, feel like, spend time e.g. She hates being alone at home.

Το γερούνδιο μετά το ρήμα go εκφράζει δραστηριότητες η χόμπι. e.g. We often go sailing at the weekends.

The infinitive (το απαρέμφατο)

Full infinitive (to go) μπαίνει μετά από τα εξής ρήματα: want, would like, agree, ask, help, hope, tell, would prefer, manage, offer, allow, invite, threaten. e.g. He would like to stay at home tonight.

Επίσης μπαίνει μετά από ερωτηματικές λέξεις. e.g. He didn't know what to say.

Και έπειτα από το too και enough. e.g. She is too young to go to the party alone.

He was not old enough to understand.

Bare infinitive (go) μπαίνει μετά από modal verbs(can, could, may, might, should, will, must) e.g. She should be more quite in class.

Μετά από τα ρήματα: feel, hear, see, watch. e.g. I can see him drive his car.

Μετά από τα ρήματα:make, let. e.g. You cannot make me eat it all!

EXERCISES

Ex.1. Try to fill in the gaps by using derivatives from the following words (instant, accurate, flat, sharp, preparation, necessary, interchange, repeat, use, exact).

1. The …… of a knife depends on the frequency of its use.
2. We can only hope that food is already……
3. The usefulness of the components depends on their……
4. …….. noise makes me stressed.
5. This is …… what I always wanted to have.
6. For ……., you can help me cut the wood.
7. She may buy it only if it is something ……..
8. …… is important when measuring and before cutting wood.
9. The …….. of the table can be easily reassured.
10. You…… to sand the wood down before polishing it.

Ex. 2. Fill in the gaps using full or bare infinitive or even gerund.

1. I like ……..(drive) my brother's car a lot.
2. She decided……..(accept) my invitation for the party.
3. We hate……(be) the first ones to arrive here.
4. She began……(cry) after she had seen me.
5. We hate……..(leave) without ……(say) goodbye.
6. He agreed……(come) as long as he could ……(come) alone.
7. She threatened me……(talk) to my parents, if I didn't accept the invitation.
8. I cannot ……. (lift) the box on my own.
9. She allowed me…….(use) her computer.
10. I can't make them……..(work) any harder.
11. We didn't manage……(talk) to them again.
12. She told me…….. (save) some money for the holidays.
13. We would prefer……(come) back early tonight.
14. He is too young ……..(go) out on his own.
15. What is the best way……(get) there on time?
16. We may……(arrive) there at half past ten.
17. He offered……(help) us finish the project.
18. Jane tried……(avoid) crashing on the tree.
19. She kept on…….. (talk) to herself for hours.

CONSTRUCTION STRATEGIES

Before the advent of "manufactured" board, virtually all woodworking was in the solid, but nowadays 'solid' work tends to refer to chair making, frame and small carcase work (using mostly traditional joints and allowing for versatile shaping and featuring). Veneered work is primarily 'flat panel' work using a manufactured board (chipboard or MDF) as the base material. Indeed, it might be more apt to call it manufactured board construction, as veneer is just one surface treatment. There are other treatments, such as melamine or paint, and stain or lacquer, which can be used on bare plywood, and an epoxy resin coating for raw chipboard. Manufactured board construction lends itself generally to carcases - storage cabinets and table tops. A table design might combine solid wood and manufactured board construction whereby the legs and rails are solid and the top veneered chipboard for maximum strength and stability.

SOLID WOOD CONSTRUCTION

By its fibrous nature, wood shrinks and expands across the grain predominantly as it takes up or loses moisture. This may be unequal on each side of a board, causing bowing or twisting. There are also internal stresses caused during the growth of the tree and during subsequent seasoning. Solid wood construction has to provide for timber movement. Well-designed solid wood construction should either minimize the problem of movement, or allow for it, whilst maximizing the strength of the material; whereas wood moves predominantly across the grain, it is strongest along the grain. Different species of timber vary enormously in strength and timber movement. Oak is rigid and fairly stable, and so too is ash, which combines rigidity with flexibility. Seasoned beech is tough and stable, whereas elm is brittle and moves a lot. Sometimes the most exotic timbers are the wildest to work, which can contain tiny cracks or shakes in the living tree.

Forming by wastage

In a sense, most woodworking involves forming by wastage or reduction - cutting away from the solid piece, as in rebates, grooves, slots, tapers and so on. Joints and entire structures are the result of reduced pieces being connected and interlocked. Indeed, the craft of woodcarving relies on timber reduction.

Here, we can briefly apply the term to specific applications, such as cutting mortises by hand, or powered methods for joints, cutting away a single piece of wood to form a box by using a router or milling machine, or forming shapes such as bowls on the woodturning lathe. In each case, the problem of short grain has to be observed.

Frameworks

Solid wood frames can be made in a variety of ways, ranging from simple mitre or halving joints, to haunch mortise and tenons, depending on the usage. By changing the timber sections, the dimensional strength and visual character also change. Picture frames can be cut on a mitre saw and reinforced with veneer keys, whereas a table frame might be dowelled, and a sturdy framed door will be mortise and tenoned for maximum strength. Of course, the strongest framework configuration is triangulated and generally frameworks gain strength from adjacent members (e.g. box frameworks) and/or panel inserts that offer triangulation.

Panel construction

The traditional frame and panel construction, with its haunched mortise and tenons and grooved loose solid panel has resolved the problems of strength and timber movement for centuries. The early medieval oak panelled chest is still a source of inspiration today and many interiors, notably churches, still use this method of construction, which cannot be faulted technically. Inevitably the solid panel has evolved, and is now largely superseded by flush and more open structures, whereby narrow boards are stack laminated to make up wide panels.

Solid Carcases

Any solid carcase is best made by edge jointing narrow board to stabilize the timber when in wide panels. Careful preparation of the material should minimize wastage and the surface can be sanded with a belt or orbital sander. If intermediary fixed panels, such as shelves, are used it is best to align the grain direction with the carcase so it all moves together.

Adjustable 'floating' shelves (for bookcases, etc.) can employ a variety of wood, metal or plastic means of support and adjustment which can be a strong design feature of the piece. The back panel can be thin plywood or MDF grooved or rebated in, using the router; indeed, this tool can cut most of the joints needed in cabinet or carcase construction. The simplicity of contemporary carcase design aims to maximize the figure of the wood, highlighting the end grain, and employing perhaps an interesting joint, such as finger or dovetail joints, on the top corners, where they are seen. Bottom corner joints can be machine rebated, dowelled or biscuited and the shelves can be housed or carcase pinned for maximum strength and visual impact.

Drawers

The traditional drawer, with lap dovetails at the front, common dovetails at the rear and a loose, grooved, solid drawer bottom is still used by many contemporary woodworkers. However, tight drawers in the winter often rattle loose in the summer, which arguably falls short of meeting the

requirements of good, functional, contemporary design. There is certainly great appeal in the neatly jointed construction and precision of a traditional drawer especially if the woodworker uses fragrant-smelling timber, such as cedar or Lebanon for the drawer bottom on a chest of drawers. There are various ways of supporting, sliding and locating the drawer, not to mention gripping it, and numerous construction options in solid wood, as it is, in effect, a small carcase. In most antiques the drawers rattle loose. Precision drawer sliding can be achieved by using proprietary metal glides.

Chair frames

There is no other human artefact that has been so over-designed as the chair. How the chair looks is a subjective matter, as designers express personal styles, and nowadays it is true that anything goes. However, the demands of serious chair design are stringent as not only must the chair be comfortable, it must be strong enough to withstand tilting and racking when placed on an uneven floor. Above all, it must look good from all angles, and that is something few chair designers achieve, mainly because the conventional way of designing is at a drawing board in three elevations.

MANUFACTURED BOARD CONSTRUCTION

Woodworkers nowadays are divided over their preference for chipboard or MDF. The latter tends to be heavier and more expensive, and its dark colour can show through some light-coloured veneers such as sycamore, but it is generally considered more stable than chipboard.

Panels and frameworks

The simplest manufactured board construction is a flat panel, which can be painted, lacquered or veneered (with lipped or veneered edges). It is possible to create a 'frame' by simply cutting away the inner material to a marked line using a pilot hole and jigsaw. Alternatively, a router with a straight cutter can be jigged up to cut through and edge trim the inner profile, in which case the radiused corners can be squared with a chisel or abrading stick.

Such a simple method can, naturally, apply to curves or other shapes for a variety of applications, from mirrors to freestanding pieces of furniture. There is no reason why manufactured board cannot be used for certain 'framed' structural applications, provided its tendency to sag is catered for.

Manufactured Board Carcases

Carcases are boxes, held together by a range of quick and accurate machine joints, from biscuit jointed butt and mitre joints to machined double lap joints. If you consider all carcases as wide frames with back panels grooved or rebated into the rear, the front opening can be faced with a solid wood, frame assembly afterwards or lipped (if veneered) to accommodate recessed or overlapping doors.

The doors, can be solid wood or manufactured board construction. Grain direction is relatively unimportant structurally, but not visually, on veneered or plywood carcases.

The component panels of veneered constructions are generally veneered prior to construction and assembly, although in some small carcases, or where there is a curved component, the veneering is done afterwards.

Veneering is a complex art, and relies on experimentation and experience. However, the contemporary woodworker is more likely to be interested in enhancing or complementing the general line of a piece in some subtle detail. A simple, straight-lined, essentially rectangular tabletop can look a million dollars if veneered in matching veneers, and the radiused edges of the tabletop reflected in a contrasting wood inlay with curved corners, cut by the router. This illustrates the marriage of a traditional technique with modern tool technology and is therefore appropriate to the work of today.

Veneering allows the woodworker freedom to play with grain figure, pattern and grain direction, which solid wood construction tends to inhibit, but it is tempting to go overboard with the decorative use of veneer. A basic problem to deal with is the 'untruth' that veneer represents. It looks like solid wood until the end grain direction gives it away. This problem can be either disguised or featured, and points to the importance of design and intention when making a new piece. The use of a burr veneer, for instance, can get over this problem.

Veneer cutting is best done with a marking knife, straight edge, and backing board such as MDF. Cutting across the veneer before it is cut along the grain allows for the risk of splitting at the ends. Modern veneers are bonded with PVA or synthetic resin glues and clamped in presses or vacuum bags, then left to cure for upwards of two hours. Trimming of veneers after they have been glued is done with the marking knife, tilting the board or structure so that pressure is maintained at the cut. As veneer joints are, in effect, butt joints, the final edge can be softened with an abrading block so that the join is not seen.

GRAMMAR IN USE

Modal and semi-modal verbs (can, could, should, may, must, be able to, have to)

Ακολουθούνται από το κύριο ρήμα χωρίς το to και παραμένουν τα ίδια σε όλα τα πρόσωπα ενικού και πληθυντικού αριθμού.

Για να σχηματίσουμε άρνηση βάζουμε not μετά από αυτά.

Για να σχηματίσουμε ερώτηση βάζουμε το modal πριν το υποκείμενο.

Σύντομη απάντηση: Yes/no, υποκείμενο +modal verb.

Χρησιμοποιούμε **can** για να εκφράσουμε ικανότητα και για να ζητήσουμε άδεια. e.g. He can speak ten languages

Can I drive your car for a while?

Χρησιμοποιούμε **could** για να εκφράσουμε ικανότητα στο παρελθόν και για να ζητήσουμε κάτι ευγενικά.e.g. He could ride a bike when he was young.

Could I come along with you to the cinema?

Το **be able to** χρησιμοποιείται αντί του can γιατί σχηματίζει ομαλά όλους τους χρόνους. e.g. I am able to swim very well.

Χρησιμοποιούμε το **should** για να δώσουμε η να ζητήσουμε συμβουλές. e.g. You should eat less if you want to lose weight.

Χρησιμοποιούμε το **may** για να εκφράσουμε μελλοντική πιθανότητα η για να ζητήσουμε άδεια. e.g. It may rain tomorrow.

May I go out for a while?

Χρησιμοποιούμε το **must** για να εκφράσουμε υποχρέωση.e.g. You must pay the bill before you go.

Χρησιμοποιούμε το **have to** που εκφράζει κι αυτό υποχρέωση γιατί σχηματίζει ομαλά όλους τους χρόνους. e.g. He had to go earlier that night.

EXERCISES

Ex.1. Fill in the gaps by using the words given (manufactured, stabilize, adjust, contemporary, movement, flexibility, wastage, reduction, taper, entire structure).

1. Chipboard is a ……. kind of board preferable to solid wood.
2. The legs of the table ……, means that they get thinner towards the edges.
3. You have to show ……. to him, if you want to make him feel better.
4. The…… of the prices will bring more people to the shops.
5. The…….. will collapse, if you take this piece away.
6. I don't like ……. design very much.
7. You like ……, means you like dancing as well.
8. Lots of wood is thrown away through……..
9. You have to …….. the lever before you turn the machine on.
10. If you don't …… the chair, I cannot repair it.

Ex.2. Use the following modal and semi-modal verbs in positive or negative form to fill in the gaps (can, may, must, should, have to, be able to).

1. The children…….. study hard for the exams.
2. You…… avoid talking to him. He is angry with you.
3. …….. I ride your bicycle?
4. He……. count to ten since he was one years old.
5. She……. come to the party alone yesterday.
6. He……. be his brother. They don't look very similar to each other.
7. …….. I go and leave you alone?
8. You …… pay the bill, otherwise you will be arrested.
9. He …….. write in Arabic when he was ten but now he cannot.
10. Tomas……. come back home so late. They don't let him do so.
11. We…… take our jacket with us. It is not cold.
12. He ……. listen to what his parents say.
13. They …… avoid doing their homework.
14. She ……. use my car, if she wants to.
15. ……..you give me a hand?
16. She……. work so hard. She has enough money already.
17. ……. he wear something formal at the opening of the exhibition?

REPAIRS TO CHAIRS

REPAIRING BACKFOOT JOINTS

The joints that cause most trouble are the ones where the side and back seat rails meet the backfoot. If the tenons, dowels, and the mortises are all intact, the work involved is straightforward. Everything will need cleaning up and all old glue will have to be removed. It will then be a matter of re-gluing the joints and cramping them up.

It is this last job - cramping up - that may be difficult if the backfoot is curved just where you want to place the cramp. To get over this, you may, have to make a cramping block with a slightly, curved face.

The situation may be further complicated by the side seat rails being fixed at an angle to form a seat that tapers from back to front. Unless you arrange a cramping block , any cramping force may distort the seat frame and weaken the joints all round. The cramping block can be attached to the front seat rail with either a G- cramp or a thumbscrew.

There is still another direction in which to cramp, namely the joint between the back seat rail and the backfoot, but as this is a square joint, a sash cramp can be positioned to span the backfeet and then tightened up.

Before work can begin, you will have to ensure that the remainder of the chair frame is held firmly in place, because removing the rails and the backfoot will only lead to more weakening of the same kind at the other joints. Usually the best way to hold the frame together firmly is by pinning thin strips of wood temporarily on to the underside of the seat frame, arranging them crosswise.

You can begin re-jointing by chopping the old tenon out of the mortise on the backfoot to make a new one, and working a matching mortise on the end of the seat rail. First, the end of the seat rail may have been cut at a slight angle to match the curve on the backfoot, and this angle must be retained. Second, before the joints are finally glued and cramped up, you may need to glue in some tiny pieces of veneer to compensate for the wood that was lost when sawing through them. The new tenon on the side seat rail needs to be a loose tenon that is equal in length to the combined depths of the two mortises, minus a total of about 5mm to allow for glue spaces at each end. Once the glue has set on this joint you can turn your attention to the one between the backfoot and the back seat rail.

In the case of antique chairs, however, you may come across another variation of the joint, where both the side and the back seat rails are tenoned into the backfoot; the ends of the tenons are usually mitred so that they meet inside the joint. Its main disadvantage is that a lot of wood is taken away at

the very point where the backfoot is most vulnerable. Modem synthetic adhesives, however, are frequently stronger than the wood they are applied to, and using one of them on this type of joint should give plenty of strength.

REPAIRING SHAPED PARTS

Such repairs can only be dealt with generally because there are so many different shapes on so many different chairs. The one factor that is common to all such repairs is that cramps must be used very carefully because all too frequently they have to be applied to shapes. If this is done carelessly, the whole frame may be distorted.

Balloon-back chairs were particular favourites with the Victorians and were made in great numbers. If this design is damaged at the corner of the back, a new replacement piece will be glued and dowelled in; and it will be roughly worked to shape. Final shaping and glasspapering will be done once the piece is glued firmly in place and the glue has set.

The corner of the shield-back chair is a more delicate proposition, and probably the best way to hold the repaired parts together while the glue sets is first to cover them with a thin plastic film and then bind them tightly with adhesive tape followed by strong twine.

SPRUNG TENON JOINT

This is rather an unorthodox joint that can be useful where a new rail has to be inserted without dismantling the frame, but it should only be used for rails that are not subjected to undue stress. A typical example is the stay rail or slat in a chair back. As you can see, the end of the tenon is cut off at a slight angle. There has to be enough 'give' in the wood to enable you to spring the tenon into the mortise. For safety's sake, fix a sash cramp over the top of the back to avoid breaking the joints there.

SPLICING

This is the kind of repair that is often needed, either when a piece has been completely broken off, or where the end of a part (usually a leg) has been badly worn away. The best plan is to glue and cramp on a slightly oversize repair piece. When the glue has set, it can be trimmed to fit and screws driven in. Their heads should be well countersunk and plugged.

On antique pieces, the toes of the legs can be badly rubbed away where they have been dragged backwards and forwards across a rough floor. In such cases, they may need tipping with new toes and, it may be better to splice them on with V-joints.

Hold the template firmly against the leg and mark round it. If necessary, you can cramp a strip of scrapwood to the leg so that it lines up with one side of the notch and guides the saw. The strip can then be moved to the other side and the sawcut repeated. Then use the template to mark out the

repair piece, making sure the grain matches that on the leg as much as possible, and saw it out. If the two parts do not match exactly, always make any corrections to the repair piece and never to the notch on the leg. Once they do fit sweetly, fit a thumb or G-cramp temporarily to the leg to prevent any chance of its splitting when the repair piece is glued in and cramped up.

SHAPED LEGS

A common repair job is to make good a chipped toe. The remedy is to cut back the chipped part so that you have a flat surface in sound wood to which you can glue a block. The block is made deliberately oversize so that you can saw, chisel and rasp it to the correct shape. This design is called a 'club foot' and was turned on the lathe so that rounding off the block to be circular should not present a problem.

When the shaft of the leg has snapped, it is almost always because of some fault in the grain. Here, an oversize strip of matching hardwood is let in at the back of the leg and round.

The tricky part is working the slot for the strip. You will have to drill a series of holes that almost touch each other and make them into a slot with a mortise chisel.

TRIPOD TABLE CLAW LEGS

The design of these elegantly shaped legs is unstable, and any damage usually occurs at one of two points - where the leg is jointed to the base of the pillar, or at the 'ankle', which is the thinnest and weakest part of the leg.

On many tables you will find that metal strengthening plates have been screwed to the lower ends of the pillars and the undersides of the legs. In any case, if any tripod table you are working on does not have such a plate, it would be well worthwhile making one up and fitting it.

The slot dovetail and its housing in the bottom of the pillar are, or should be, tapered so that each leg is introduced at the bottom of the housing and tapped upwards until it is home. This does make dismantling relatively easy because, after having been steamed, the joint should be loose enough for the leg to be knocked out downwards.

Mending a burst joint at the base of the pillar is a matter of introducing glue into any cracks and splits, with possibly a few dowels judiciously located to strengthen the whole thing. Unless you are repairing the table from the point of view of conservation, the job is one that calls for a really strong adhesive such as epoxy resin.

The next problem is how to apply cramps to close the splits effectively. If you have removed only one leg, the other two are bound to get in the way and prevent any kind of tourniquet being applied. In these circumstances the best plan would be to dismantle the two remaining legs. This leaves the base of the pillar around which you can apply a tourniquet type of cramp or, better still, a couple of hose

clips. Once the glue has set, the next step is to glue the legs back in and cramp the joints up.

SPLITS IN THE BACK BOW

Let us consider the split that has developed in the back bow, probably as a result of some fault in the wood which was put under pressure while being bent. The obvious remedy is to splice a new piece in and this should make an effective repair provided its grain direction matches as closely as possible that of the bow itself. Make the new piece slightly oversize and glue it in. The best way to hold it in position is to bind it tightly with masking tape, followed by another binding with strong twine. Once the glue has set, it can be spokeshaved to shape, and two screws driven in, with their heads well countersunk and pelleted.

MAKING A NEW BOW FOR A WINDSOR CHAIR BACK

This is a major operation, and not one to be undertaken lightly because, in addition to the actual work involved, some special equipment will have to be built.

PREPARING AND FITTING THE NEW BOW

Assuming that the bow for the back has been bent satisfactorily, you now have to assemble it into the seat of the chair. If it is a straightforward replacement, it will simply be a matter of preparing the new bow to match the old one. This means dealing with its ends, and also drilling new holes for the sticks in the back. You can obtain the drilling angles by referring to the template, or by cramping the new bow on top of the old one so that they coincide all round. Drill one hole at a time by inserting one of the back sticks into one of the holes in the old bow and using it as a guide to drill the new one.

It is a more complicated job to prepare a new bow. First, you will have to fashion its ends to fit the mortises which are already on the seat. If, however, the seat is also new then there are several ways to fit the bow securely.

GRAMMAR IN USE

First Conditional

Χρησιμοποιείται για μια πράξη που είναι πιθανό η δυνατό να συμβεί στο παρόν η στο μέλλον.

Αποτελείται από δύο μέρη, την υπόθεση(If + Simple Present) και την απόδοση (Future Simple).e.g. If it rains tomorrow, we will stay in.

Το will μπορεί να αντικατασταθεί από άλλα modals (can, may…).e.g. If he is invited, he may come.

Επίσης αντί για if not μπορούμε να χρησιμοποιήσουμε unless. e.g. Unless it rains, we will go on a picnic.

Temporals

Χρησιμοποιούμε τις παρακάτω λέξεις όταν μιλάμε για το μέλλον, και μετά από αυτές βάζουμε Simple Present.

-when (όταν), before (πριν), after (αφού), until/till (μέχρι), as soon as (μόλις).

e.g. I will talk about it with him when he comes in.

EXERCISES

Ex.1. Fill in the gaps using one of the following words (worn, dismantled, countersunk, chipped, mend, cracks, slice, oversize).

1. The furniture is…….We need new one.
2. You have to ……. the leg of the table. It is broken.
3. The door is full of ……. We need to put some filler in them.
4. If the seat is …….., you need to trim it at the edges.
5. When the surface of the table is ……., you need to sand it.
6. First you put the two edges together, that is, you…… them.
7. When the screws are …… , you may sit on the chair.
8. After you have…… the components, you put them back together.

Ex.2. Put the words: when, after, till, as soon as, before in the following gaps.

1. ……the time comes, we will help them with the project.
2. …….the project is ready, you will get your mark.
3. He will be back…….. I arrive home.
4. She won't have the table repaired …… she finds the money for it.
5. We will get at the station …….. the train arrives.
6. …….. I see them, I will talk to them.

Ex.3. Fill in the gaps using the correct tense of the verbs in brackets.

1. If someone finds your wallet, what……..(you/do)?
2. We won't go out unless it……..(get) dark.
3. If you apply the first coat on the chair, ……(let) it dry for a while.
4. She may not turn up if you…….(not/invite) her.
5. Don't accompany her if she……..(not/ask) you to do so.
6. They may not buy a new flat unless they ……..(find) the money for it.
7. If you like it, I…….(buy) it for you.
8. When he ……..(finish) work, he will come by.
9. We will pay him back as soon as we…….(find) the money.
10. The project will be finished after we ……..(work) for some time.
11. We won't leave until the kitchen ……..(be) tidy.
12. If he talks too much in class, they…….(punish) him.

REPAIRS TO TABLES

REPAIRS TO WARPED TOPS

When a top made from one solid piece has become hollow it is removed from the frame, it can be sawn lengthwise into strips about 76mm or 102mm wide, which should effectively remove any tension in the wood. You can then rub-joint the strips back together, pinning and gluing on thin strips of matching wood to the longer edges to compensate for the wood, and consequently the width, lost in the sawcuts. The method does have the disadvantage that the repairs are all too obvious both on the top and on the ends, but the top could be covered with a sheet of plastic laminate, and the edges lipped.

Although you can use hardwood strips, they are better cut from plywood, which is inherently more stable. Each strip must be in one full length piece and slightly wider than the depth of the groove so that you can plane them flush later.

There is yet another way of pulling the top flat, and that is by laying a sheet of veneer on the underside. Any polish must be cleaned off first, followed by planing the surface. The veneer must be laid with a veneering hammer.

SPLIT TOPS

There is one awkward kind of split which follows the angle of the annual rings. The best way to deal with this is first to clean out any dust, wax, etc, and then cut the split to a regular tapered shape, using a saw tilted at the appropriate angle. You can then glue and tap in the filling piece, which should be oversize so that it can be planed back flush when the glue has set. The natural tendency of one of the lips of the split will be to slide upwards.

PATCHES AND HOLLOWS

Patches can be used to replace unsightly knots, scars, or blemishes in general, and although they are usually diamond-shaped, there are occasions when the grain configuration calls for a curved patch. Usually a patch need not be much thicker than 6mm or so, but its grain has to be chosen very carefully, not only from the point of view of colour but also so that the light will be reflected from it as it is from the remainder of the table top. Try brushing a coat of shellac on to each of the prospective samples because this will give them a simulated 'polished' appearance. The patch should be slightly lighter in colour because you can always darken it. Make a template out of thin card and lay it over the blemish, and mark the grain direction on it. You can then transfer it to the wood you are using for the patch, adjusting it and marking round it to give the best effect. Then tape the template to the wood

with double-sided adhesive tape and saw it out. Use a file or glasspaper to undercut the edges slightly. It is also a good plan to scratch a few small grooves on the underside. Don't forget to make the patch thicker than the depth of the recess. Marking the recess from the template and cutting it out is straightforward enough. If the top is polished, lay strips of masking tape round the marks. Not only will they protect the polish but will also act as guides when you drill and chisel out the waste.

RAISING HOLLOWS OR DENTS

The adoption of this remedy depends upon whether the surface is polished or not, and whether it is veneered or solid. In either case, you would be well advised to leave well alone and accept the fault, because either the polish or the veneer, or possibly both, would be seriously affected. The polish would almost certainly be marked, and the glue beneath the veneer could be liquefied, allowing the veneer to lift.

If the timber is in the white cut a few slits along the grain with a craft knife and fill the hollow or dent with a puddle of water. Then soak a small piece of rag in water and lay it in the hollow. Press down the rag with the point of an electric iron until the water steams and raises the grain to fill the hollow.

DROP - LEAF TABLES

It sometimes happens with this type of table that the top shrinks across the grain and thus becomes narrower. As a result, the flaps can no longer hang vertically but are pushed outwards slightly by the underframe.

Unscrewing the rule-joint hinges and removing the leaves is the first step, followed by taking off the top. You have to examine the top to ascertain whether it is solid or veneered. If it is solid the grain will run parallel to the shorter side, across the top. This must be so because it would be difficult to work the rule joints on end grain. If the grain and figure are not too flamboyant and distinctive, the easiest solution is to saw across the top at the centre so that you separate it into two halves. You can then glue in a filling strip. It would be a good plan to strengthen the joint with dowels, which could penetrate right through the strip. If possible, it would also help to screw and glue a batten on the underside of the top as a further reinforcement.

If the top is veneered, inserting a filling strip would obviously spoil its appearance.

It may be possible to scrape or plane away some wood from the end frames so that the leaves can hang vertically, but this can only be effective in mild cases. The alternative is to cut away the rule joint at each end of the top and fit replacement strips that will bring the top to the required size. The strips will need rule joints worked on them first so that you can check that they fit those on the leaves. The strips, can then be dowelled and glued in place.

REPAIRS TO JOINTS

The three joints most frequently used on flap or drop-leaf tables are the rule joint, the knuckle joint, and the finger joint - the last named being found mainly on antique pieces.

The rule joint is the one most generally employed to hinge the leaf of a drop-leaf table, and the faults that usually develop are that the joint opens and closes with difficulty; and damage occurs to the hinge because of misuse. Binding that occurs even when the hinge is in good order and correctly positioned is usually due to dampness that has swollen the wood on the meeting edges. The best and usually the most effective remedy is to unscrew the leaf and leave it and the table in a warm, dry atmosphere for as long as possible. It sometimes helps if you glasspaper the convex edge lightly, holding the glasspaper oη a wooden rubber shaped exactly to the reverse of the profile. If the old hinges need replacing, you must position the new ones precisely to make the joint work properly.

Both knuckle and finger joints swing laterally to provide support for their flaps, and the trouble is that they become sloppy and do not hold the flaps at a truly horizontal level. Over the years, the holes wear away and become too large. The simplest solution is to remove the pin, enlarge the holes, and insert a new pin.

There is another possible cause of the sloppiness, which is that the bearing surfaces of the knuckles or fingers have worn, and slackness is the result. Some kind of bushing is required, and small slips of veneer can be glued on to the bearing surfaces. These can be trimmed and glasspapered to shape after the glue has set, until the required sliding fit is obtained. By holding it in the vice and chiselling away a shaving or two from each face, sufficient space will be created to insert the slips.

GRAMMAR IN USE

Comparison of Adjectives

Comparative (συγκριτικός βαθμός)

Χρησιμοποιείται για να συγκρίνουμε δύο διαφορετικά πράγματα μεταξύ τους.e.g. Tom is taller than James.

Χρησιμοποιούμε επίθετο+ er και τη λέξη than:

-όταν το επίθετο είναι μονοσύλλαβο.e.g. short, shorter

-όταν το επίθετο είναι δισύλλαβο και τελειώνει σε -y . Τότε το -y τρέπεται σε-i και έπειτα προσθέτουμε τη κατάληξη-er.e.g. happy, happier.

-όταν το επίθετο είναι δισύλλαβο και λήγει σε –ow, -er, -le.e.g. slow, slower.

Χρησιμοποιείται more/less +επίθετο και η λέξη than:

-όταν το επίθετο έχει περισσότερες από τρεις συλλαβές.e.g. modern, more modern.

-στα υπόλοιπα δισύλλαβα επίθετα.e.g. boring, more boring.

Superlative(υπερθετικός βαθμός)

Χρησιμοποιείται για να συγκριθούν περισσότερα από δύο ουσιαστικά μεταξύ τους.e.g. This is the fastest car in the world.

Χρησιμοποιούμε the + επίθετο + -est:

-όταν το επίθετο είναι μονοσύλλαβο.e.g. fat, the fattest.

-όταν το επίθετο είναι δισύλλαβο και τελειώνει σε –y, -ow, -er, -le. e.g. funny, funnier.

Χρησιμοποιούμε the +most/least + επίθετο:

-όταν το επίθετο έχει περισσότερες συλλαβές.e.g. dangerous, the most dangerous.

-σε ορισμένα δισύλλαβα επίθετα.e.g. careful, the most careful.

Εξαιρούνται τα ακόλουθα επίθετα και τα παραθετικά τους.

Good-better-best

Bad-worse-worst

Much-more-most

Many-more-most

Little-less-least

EXERCISES

Ex.1. Fill in the gaps using one of the following words (dented, misuse, distinctive, enlarge, dampness, craft knife, darken, recess, wax).

1. If your table is ……, you have to take it to a specialist.
2. To …….. a drawing means to make it bigger.
3. You can use a …….to curve a nice pattern on a piece of wood.
4. You can first sand the cabinet and then polish it with ……
5. One should not ……machines if they want them to last longer.
6. If there is a …….. on the wood, use some filler to make it disappear.
7…….. makes wooden furniture warp.
8. If you want to …….. the color, add some black into it.
9. He has got a ……. accent because he is not Greek.

Ex.2. Use the comparative or the superlative of the adjectives to fill in the gaps.

1. My life is…… than it used to be. (hard)
2. She lives a …… life than her brother. (dangerous)
3. I will accept a…… offer than his. (nice)
4. Kate has found an…….. job. (easy)
5. They won't have any ……. regrets about it now. (little)
6. She will make a ……. hole on the ground. (deep)
7. We may have……. future here. (bright)
8. He wants to have a …… relationship to him. (close)
9. They drive a …….. car these days. (expensive)
10. She is …… carpenter in town. (good)
11. They came home holding …….flowers I have ever seen. (beautiful)
12. Mary always brings…….. news of all. (bad)
13. You have to look for a ……..flat in town. (good)
14. Let's buy a ……..house than this one. (big)
15. We arrived on …….island of all. (expensive)
16. Give me a …….dress. I don't like this one. (fashionable)
17. We can get to a …… place. (high)
18. Bring your…… friends with you. (good)
19. She was …….. person I have ever met. (strange)

REPAIRS TO THONET FURNITURE

Thonet furniture consists of pieces of bent wood which are screwed together. Even hard beech wood is hygroscopic and so changes its volume as a result of quite minor climatic changes. This will cause the screws to loosen over time and if, in addition, the chairs are used constantly and strenuously, they can become very unstable.

Thonet pieces require no more care than other furniture; they should not be subjected to the elements, especially not rain, and the surface of the wood should be freshened up from time to time with simple furniture polish.

Removing dirt and grease

After years of usage there can be a build up of dirt and grease which makes the wood look dull. If the surface of the wood is matt, very dirty or greasy, the surface should be scoured along the grain with medium steel wool. Steel wool soaked in white spirit will dissolve any grease residue. It is then usually sufficient to merely freshen the surface up with ordinary furniture polish. The cane does not need special care but should not be allowed to become damp during the cleaning process.

Replacing the cane

The cane seats and back rests that are a characteristic of Thonet furniture are made of rattan, a variety of climbing palm which is found in the tropical jungles of Eurasia. There are many different types of rattan, depending on the climate and the soil, but they all have long slender stems.

It is unwise to repair only part of the cane, as the new, stronger caning material can cause stress, resulting in parts of the old cane breaking soon afterwards. After removing the old cane completely, the seat frame is prepared by carefully rubbing away any rough lacquer or grease with medium fine steel wool. All other repair work required should also be done at this stage. The new cane should be as close as possible in size to the old cane.

Thonet usually used a cane pattern with octagonal holes, the fineness of which depends on the distance between the holes in the seat frame. The very early items have an especially fine weave, whereas the later factory produced series models which have a stronger, although less fine pattern. New cane should be treated with thinned wood stain on both sides to blend in with the patina of the old wood. If a slight silk sheen is desired, the top surface could be treated with a matt finish varnish after staining.

As the renewal of cane seats posed a considerable problem, Thonet's catalogue offered spare seat

frames- already caned and with pre-bored fixing holes - which could be screwed onto the original frame once the old cane seat had been removed.

Sample repair work

Dirty or rough surfaces and small splits or chips are easy to repair. If the surface of the wood is matt and the lacquer is porous and rough, again the wood should be scoured hard along the grain with medium fine steel wool. If this does not prove sufficient, fine sand paper can be used. This, however, must be done carefully to avoid damaging areas of the old surface that are still intact. The surface can then be freshened up with ordinary furniture polish - unless the old surface is very worn, in which case its matt silken sheen should be restored with matt varnish. Restoration with shellac should be left to a specialist, and again it is important to note that synthetic resin should never be used, not should the finish be applied with a brush.

Slight splits and chips are repaired by cutting out the damaged area and filling the hole with woodfiller. When the filler is hard it should be sanded down with fine sand paper and stained to blend in with the old surface.

Woodworm is the great enemy of wooden furniture and indicated by small holes the size of pinheads. Many different woodworm remedies are available. The best treatment for woodworm is to have the furniture disinfected in a special chamber which is heated to 60- 70°C. The high temperature kills every organism in the item but it does not affect the bent wood.

Restoration of severe damage

Repairing breaks, shortened legs, parts riddled with woodworm, broken screws and bends that have lost their curvature should only be tackled by an expert. Before starting restoration or repair work on severe damage, a decision must be made on whether the piece needs to be taken apart. When dismantling a Thonet chair, it is important to avoid mixing up the components. Every piece should be marked during disassembly so that it can be replaced just as it was.

Large breaks or cracks should not be filled with wood filler; instead the damaged area should be sawn off in the direction of the grain, to ensure that the remaining cross section is sufficiently stable. Then take a piece of furniture beyond restoration and cut a replacement piece from a corresponding area with a similar curvature. This replacement piece should be roughly adapted to the item to be restored, glued in position and held in place with clamps. Then the repair can be worked on with a rasp, file and sandpaper until it matches the original exactly.

Bent parts - such as the armrests of chairs - which have lost some of their curvature can be bent back up to a point. To do this the part must be removed from the chair. To prevent it becoming even more out of shape, a template corresponding to its existing shape should be made by cutting out a

negative from a suitably sturdy plank. The bent wood piece is then fitted into the template and both of them soaked in water overnight. Meanwhile, a new template should be made that corresponds exactly to the required curvature. Remove the part from the water, take it out of the old template and bend it into the new one - which can be quite strenuous work. The piece should then be left to dry for one or two days before removing it from the template. After the surface has been refinished, the part can be replaced. This procedure is, however, only effective on parts that have only slightly lost their curvature.

If a piece is badly out of shape it must be restored in the same way as it was originally made by Thonet. A mould must first be constructed and the bending is then effected with the help of a metal strip, which stops the wood splitting.

Reconstructing destroyed or missing parts

The reconstruction of major destroyed or missing parts of furniture should normally be done by a specialist - especially if they are bent parts. Ideally, the replacement part will be taken from a similar piece of furniture which is beyond restoration.

It is, however, much easier to reconstruct smaller pieces of bent wood using the Thonet method, provided that a sample is available to construct the template. This template should be made of hardwood; a flat metal strip with screw clamps at each end to stop the wood splitting. The rod to be bent should be cut to length and the correct cross section and soaked in water for two to three days. After the metal strip has been attached, it can then be bent over the template and secured there. When the rod has dried into shape, finer work such as diagonal cuts and surface treatment can be carried out.

Legs that are too short because they have splintered or broken off, - or are riddled with woodworm, are not too difficult to restore to their proper length. The damaged part of the leg should be sawn off at an angle. A replacement piece can then either be taken from a spare old chair leg, or cut from a length of beech wood of corresponding cross section. The end of the replacement piece should be cut to the same angle and to glue the leg effectively both parts must be perfectly adjusted; stability can be increased by connecting both sections with a hidden dowel. After the glue has dried the replacement piece should be adjusted by filing and sanding, and once the leg has been re-assembled it can be shortened to its final length.

Treating the wood surface: varnishing and polishing

Perhaps the greatest danger associated with work on Thonet furniture is over-restoring. The surface of even the early mass-produced Thonet furniture was treated very differently from the modern restorers' usual methods. The beech wood was usually stained in a colour that could be selected by

the customer from catalogues offering everything from natural wood to mahogany, walnut, oak and black. These surfaces were homogeneously one-tone. After staining and the application of an undercoat, the wood was varnished with a shellac solution. The finish of mass-produced items was applied after assembly by spraying.

When restoring a Thonet piece, it is crucial to achieve a surface and overall impression which is as much in keeping with the character of the original piece as possible. Parts of the old surface should be kept to match the new surface to, if at all possible, so that the whole piece can be stained; the new part will absorb the stain while the old will remain unchanged. After applying the undercoat - linseed oil on a solvent-based undercoat - a shellac or matt varnish should be applied. This can be done with a cotton wool ball using medium pressure along the grain to produce a lively patina. Never work on Thonet furniture with paint or a brush.

GRAMMAR IN USE

Relative clauses

Εισάγονται με τις αναφορικές αντωνυμίες(relative pronouns) **who, which, that, whose.** e.g. The man is a policeman. He has a big family.

The man, who has a big family, is a policeman.

-Χρησιμοποιούμε το who η that (ο οποίος, η οποία, το οποίο) όταν μιλάμε για ανθρώπους.e.g. She is the person who/that I like very much.

-Χρησιμοποιούμε το which η that (το οποίο, τα οποία) όταν μιλάμε για ζώα, πράγματα.e.g. I cannot find the pen which/that I bought yesterday.

-Χρησιμοποιούμε το whose (του οποίου, της οποίας, των οποίων) για να δείξουμε κτήση και για ανθρώπους και για πράγματα. e.g. She married a girl,whose name is Smith.

EXERCISES

Ex.1. Fill in the gaps using one of the following words(volume, freshened up, white spirit, porous, blend, woodworm, treatment, varnished, mahogany).

1. ……can damage wood; it opens holes in it.
2. You can …….. the dark paint with white one and make its colour much lighter.
3. She bought a chest of drawers made of …… , which is very expensive.
4. If wood absorbs moisture, then its ……. changes greatly.
5. You have to use a ……. against woodworm before applying the lacquer.
6. Furniture needs to be …….. with a bright lacquer.
7. Wood comes from trees which are living things and therefore it is ……..
8. We can use…….. to make the stain thinner.
9. You can sell the furniture after you have ……. it…

Ex.2. Use the relative pronouns and join the two sentences into one.

1. My brother is an engineer. He works for a big construction company.
……
2. The shop is enormous. It is two hundred square meters.
……
3. I got introduced to this man last year. He is my doctor.
……
4. I bought a new bed. Its wood is quite expensive.
……
5. The driver is English. He comes from Manchester.
……
6. The tabletop is brand new. It is made of mahogany.
……
7. This is the strangest toy of all. He bought it for his daughter.
……
8. I like furniture made of rattan. Its texture is very fine.
……
9. They have got a black dog. Its fur is thick.
……

UPHOLSTERY : MATERIALS, TECHNIQUES

It is important to realize that each technical procedure creates a different shape and each has its own individual properties of durability and comfort that must be related to the size of the frame and its use. For instance, to form a thin flat pin-stuffed pad on a frame that is clearly designed for a deeply sprung stitched pad would obviously not support the sitter in a comfortable position. Give thought to the depth of the pads: arms should be the correct height for resting elbows, inside backs should not be so deep that they shorten the seat and project the sitter forward. Remember that upholstery has to withstand aggressive treatment. It is therefore vital to build a firm foundation, and to work right through to calico stage.

Planning the work

If you are working on a new frame you will have to measure for the basic materials. Top cover and trimmings may be considered before you start work. If the frame is an old one that has been stripped of all existing materials you should first check the soundness of the frame.

If you are re-making or repairing existing upholstery you must not only examine the frame but also judge the state of the upholstery. For total re-upholstery you will need to remove or 'take down' all existing materials and start from scratch.

Taking down

This is also known as 'ripping out". Taking down requires brute force and at times perseverance to work free stubborn tacks and well-lashed knots.

A professional upholsterer will usually cut and haul away as much worn upholstery as possible and then 'clean' the frame of tacked materials. However, you will learn much more about upholstery techniques if you remove each layer individually and note the construction. You may also be able to re-use some of the materials (particularly the stuffing) if they are in good condition.

Use a ripping chisel and mallet to remove tacks from the frame. Work in the direction of the grain of the wood to prevent splitting and weakening the frame. Start underneath the seat with the bottoming cloth if there is one. If it is covered in calico, run your hands over the upholstery to ensure that it is firm and does not sag, particularly at the front edge of the seat and arms. If a stitched edge is flattened or otherwise distorted, it must be re-made. Now turn the chair upside down and peer through the webbing and stitched springs to check the condition of the base hessian. It should not be frayed at areas of extreme stress, for instance, at the points of contact with the springs and the edge of the front seat rail.

Beneath the calico you will come to the top stuffing and/or the stuffing pad where you will find a variety of materials. Horsehair, the most likely to survive, can be removed and put aside for re-use in its complete form if the pad is sound and smooth. If it is lumpy you can tease it back into springy mounds by pulling all the strands apart and discarding any knots.

A stuffing pad filled with wood shavings falls apart on removal and must be discarded. Ginger fibre and sea grasses can sometimes be reused, but if they are short and crumbling they must be discarded. If the stitched pads are fairly sound they can be removed intact and put aside for re-use. Continue to remove all the upholstery, discarding all worn materials. Make a note of the buttoning patterns and springing patterns if you wish to re-create them. Springs can be reused only if they are straight and firm.

Basic rules and tips

If you are tacking into an awkward spot that the hammer will not reach lodge the tack in the rail. Pushing the tack with your fingers, hold the tip of a straight chisel to the top of the tack and knock the handle of the chisel.

A regulator is used primarily to 'regulate' or adjust stuffing. Insert the pointed end at an angle and to the depth required. Sweep it around to fill dips and smooth lumps. A regulator can also be used as an extra 'finger' when tacking to difficult rails. This useful tool will also prove handy for working fabric between pads where your fingers cannot reach. Stitch a twine through the fabric with a needle, then thread both ends through the eye of the regulator, push it through the awkward space and pull the twines to draw the fabric through.

Order of working

When planning your work it is generally good advice to start with the inside back, then the arms, the seat and finally the outside back. In general it is sound advice to work the back and front rails before the sides, but you should always start by working on the rails that determine the shape of the chair. Always work on rails from the centre out towards the sides. When working on webs start by fixing the centre web.

When working with fabrics fold the materials to find the centre. Place at the centre of the rail and tack at this point first. Then fix one tack on either side. On straight rails work to one side and then the other. On curves and other shapes work alternately on either side of the centre to ensure that any patterns are symmetrical and that the cloth is 'set square" and that any 'cleaning' (the cutting away of waste material) occurs at the corners or end of rails.

Squaring the fabrics

It is vital that all materials are always fixed square to the frame in order to take advantage of their strength and durability. To ensure accuracy you can use the point of a regulator to pull the fabric

forward and pin it to the frame to hold it in place while you tack. If you tack the fabric too tightly it will strain across the pad and create a tension line.

Tension

The tension of materials must be sound and regular in order to distribute weight and wear evenly in general. If the upholstery is not taut enough it will sag in use, but if too taut the materials will split away from the tacks and thus from the frame.

Tacking

Think ahead when considering the position of tacks. This will depend on the number of layers of material and the size of the rail. Tacking off is the action of hammering the tacks home completely into the rail to anchor the fabric firmly.

Protecting the wood

When working on a chair with a show wood frame always take care to protect any vulnerable parts by wrapping them with wadding.

GRAMMAR IN USE

Some- any- no (and their derivatives)

-Χρησιμοποιούμε τις λέξεις **some** (μερικός-η-ο, μερικοί, ές, ά, λίγο-η –ο, -οι-ες), **someone/somebody** (κάποιος), **something** (κάτι) σε καταφατικές προτάσεις. e.g. I have bought some good new books.

There is someone in the room next door. There is still something I have to do.

-Χρησιμοποιούμε τις λέξεις **any** (καθόλου), **anybody/anyone** (κανένας), **anything**(τίποτα) σε ερωτηματικές και αρνητικές προτάσεις (όχι σε ερωτήσεις που κάνουμε για να προσφέρουμε κάτι και περιμένουμε θετική απάντηση).e.g. I don't have any good ideas. Is there anyone who wants to come with us? I don't have anything more to say.

-Χρησιμοποιούμε **no** +ουσιαστικό (καθόλου), **no one/nobody** (κανένας), και **nothing** (τίποτα) σε καταφατικές προτάσεις. e.g. There is no milk left to drink. There is no one I want to talk to. I have nothing to tell you.

EXERCISES

Ex.1. Fill in the gaps using the correct word (upholstery, durability, tension, sag, elbow, tacks, springs, taut).

1. If you don't want the fabric to …….. Pull it tightly.
2. You can re-upholster the ……. of the armchair after you are finished with its main body.
3. You can use …….. instead of pins because they look nicer.
4. The good care of the surface of the furniture prolongs its ……
5. When the fabric of the furniture is old it needs new ……..
6. Very old sprung stitched pads need to have new ……. put in them.
7. If the fabric of the upholstery is too ……then it might get torn.
8. Great …… on the fabric might cause some damage to it.

Ex.2. Fill in the gaps using some, any, no and their derivatives.

1. There is …… who can help me. That is Joan.
2. We may arrive …….. early. It is already too late.
3. She doesn't like…… She doesn't even like Jim.
4. We don't have …… in the bag. It is empty.
5. We may not go …….. this summer. We have no money.
6. They like ……these days. Everything seems to be futile.
7. We like……indeed. That is Jane.
8. Don't throw …… away. Everything is useful.
9. She avoids…….. She wants to be with people all the time.
10. We didn't meet……..Nobody was there.
11. …… is interesting. I think interesting things are rare to find.
12. …….laughs these days. They feel everything is going wrong.
13. I have ……. friends. They are kind to me.
14. Don't give …….. books away. They are mine.
15. She has …….. relatives. She is all alone.
16. We may give …… to them. We are not sure yet.
17. Don't stay with …… you don't know very well.
18. They have saved ……. money. They are penniless.
19. Have …… coffee. We have made enough.