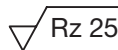
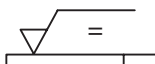
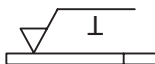
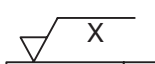
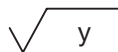


Time (h)	Goals – Contents – Schedule – Notes	Media
0.50	Learning objectives exercise 5, fitting On completion of the exercise, the trainee will be able to: <ul style="list-style-type: none"> ▶ Explain the skill of chiselling ▶ Describe the components of the flat chisel and the cross-cut chisel ▶ Identify the angle at the chisel cutting edge ▶ Describe the process for chiselling surfaces ▶ Explain the safety provision and accident prevention regulations as well as measures for the protection of the environment ▶ Create grooves with the cross-cut chisel and surfaces with the flat chisel 	Flip chart Manufacturing process Slides I to III
1.50	Instructions/technical discussion (exercise 5) <ul style="list-style-type: none"> ▶ Skill: Cutting chiselling ▶ Components of the chisel ▶ Angle at the chisel cutting edge ▶ Types of chisel ▶ Work technique for chiselling ▶ Cutting chiselling ▶ General information about occupational safety and the protection of the environment 	Chiselling Text book and slides 1 to 16 Book of tables View model of tools
5.50	Exercise 5: Chiselling a fitting <ul style="list-style-type: none"> ▶ Preparation for the exercise Workflow and equipment Occupational safety and the protection of the environment ▶ Completion of the exercise 	Documentation for exercise 5
0.50	Evaluation with the trainee	
0.50	Summary/learning objectives check	
	Trainer manual	Metal working
	Manual material processing	

Time (h)	Goals – Contents – Schedule – Notes	Media
0.50	Instructions/technical discussion (exercise 11c) <ul style="list-style-type: none"> ▶ Workflow: Use the centre square to determine the centre point of circular workpieces ▶ Calculation of core drill depth ▶ Workflow: Thread cutting in blind holes ▶ General information about occupational safety and the protection of the environment 	View model Centre square
3.00	Exercise 11c: Cut internal thread in blind holes <ul style="list-style-type: none"> ▶ Preparation for the exercise Workflow and equipment Occupational safety and the protection of the environment ▶ Completion of the exercise 	Documentation for exercise 11c
0.50	Evaluation with the trainee	
0.50	Summary/learning objectives check	
0.50	Learning objectives exercise 12, tea warmer On completion of the exercise, the trainee will be able to: <ul style="list-style-type: none"> ▶ Differentiate between and describe types of connection ▶ Differentiate between and identify types of screw ▶ Decode standard designations of screws ▶ Explain the safety provision and accident prevention regulations as well as measures for the protection of the environment ▶ Join assembly as shown on drawing 	Flip chart
0.50	Instructions/technical discussion (exercise 12) <ul style="list-style-type: none"> ▶ Types of connection ▶ Types of screw ▶ Standard designations of screws 	View model Various screws Types of connection
	Trainer manual	Metal working
	Manual material processing	

<p>1. What do the following short designations mean?</p> <p>a) Rt</p> <p>b) Rz</p> <p>c) Ra</p>	<p>a) Roughness depth</p> <p>b) Mean roughness depth</p> <p>c) Mean roughness value</p>	
<p>2. What does the following symbol mean?</p> <p></p>	<p>Any manufacturing process can be used to produce the surface properties (smoothing).</p>	
<p>3. What information do the following symbols provide in the workshop drawing?</p> <p>a) </p> <p>b) </p> <p>c) </p>	<p>a) Groove direction parallel to longest workpiece edge (lengthways)</p> <p>b) Groove direction at right angles to longest workpiece edge (crossways)</p> <p>c) Groove direction crossing (diagonally)</p>	
<p>4. What does the following symbol mean in the drawing?</p> <p></p>	<p>A comment in the drawing indicates the meaning of the symbol.</p>	
<p>5. Which of the following three scales has a reducing effect?</p> <p>a) M 1:1</p> <p>b) M 1:2</p> <p>c) M 2:1</p>	<p>The scale M 1:2 reduces the size in which the components are shown. It is a reduction scale.</p>	
		Metal working
	Manual material processing	Exercise 8
	Learning objectives check: fitting	Sheet 1 (2)

V The review phase

The trainer explains the procedure and the points-based assessment criteria to the trainee.

The trainee checks his or her finished workpiece and records his or her results on the inspection and evaluation sheet.

The trainee inspects his work independently without the help of the trainer.

(Scheduled time approx. 20 minutes)

VI The assessment phase

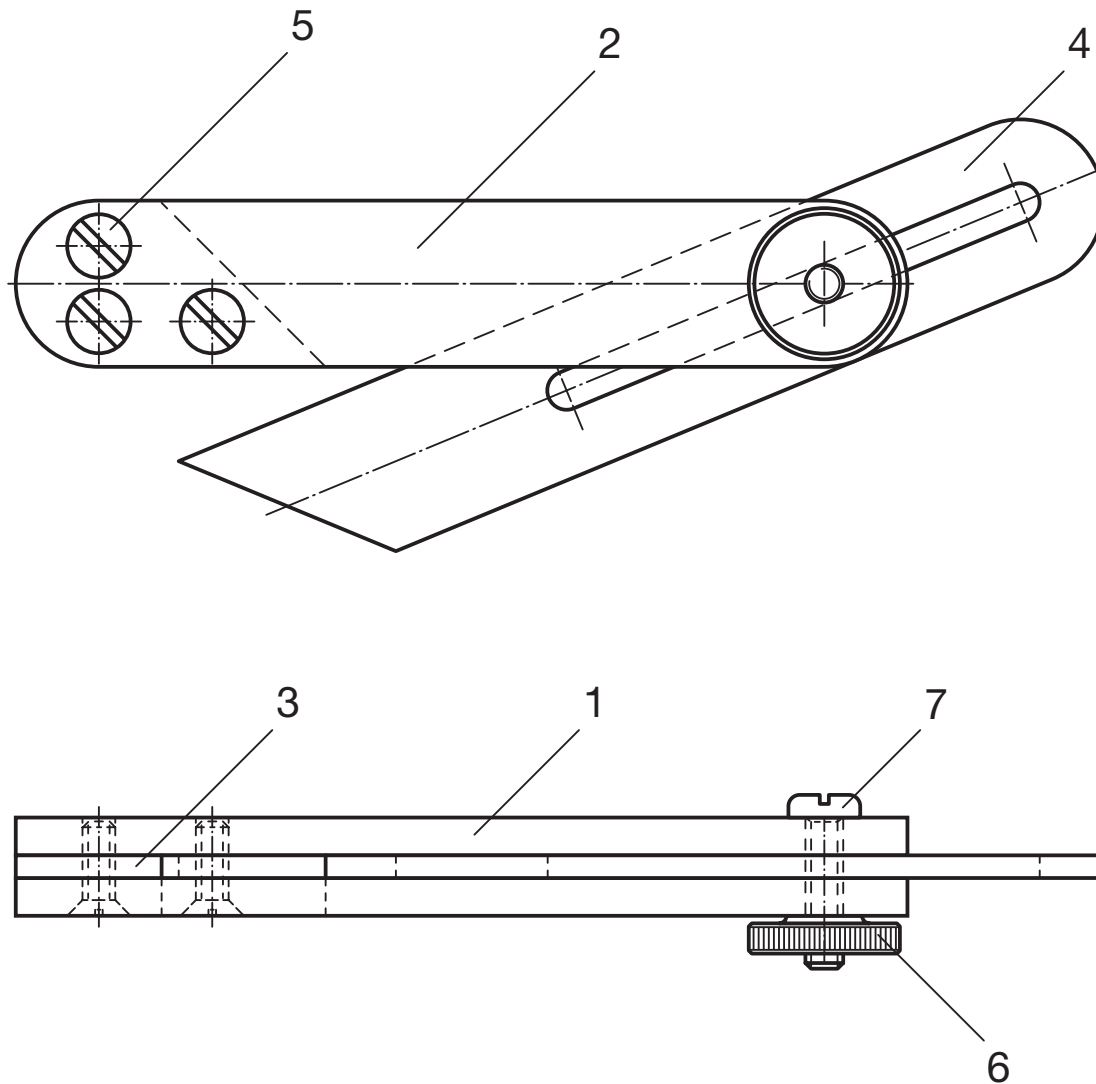
The evaluation phase proceeds as follows:

1. The trainee hands over the finished centre square and completed inspection and evaluation sheet to the trainer.
2. The trainee checks and assesses the workpiece and records his or her results on the inspection and evaluation sheet.
3. After this, the trainer assesses the extent to which the trainee's assessment tallies with the trainer's assessment. Ideally, the two assessments should match up. In this regard, the quality of the workpiece is not significant.
4. Any differences between the two assessments are highlighted and discussed by the trainer and the trainee.
5. Trainer and trainee may agree measures that will assist in rectifying the shortcomings identified. They will then use the questions designed to test the trainee's understanding to talk about how to avoid such errors in the future.

(Scheduled time approx. 10 - 20 minutes/trainee)

		Metal working
	Manual material processing	Exercise 17
	Description of workflow for guided text exercises	Sheet 3 (4)

Exercise 26



7	1	pce	Flat head screw	DIN EN ISO 1580	A2-50	M5 x 20	
6	1	pce	Knurled nut	DIN 467	CuZn39Pb3	M5	
5	3	pce	Countersunk screw	DIN EN ISO 2009	CuZn37	M4 x 12	
4	1	pce	Panel	EN 1652	CuZn37	3 x 25 x 130	
3	1	pce	Panel	EN 1652	CuZn37	3 x 25 x 45	
2	1	pce	Panel	EN 1652	CuZn37	5 x 25 x 120	
1	1	pce	Panel	EN 1652	CuZn37	5 x 25 x 120	
Item	Quantity	Unit	Description	Standard sheet	Material	Semi-finished product	Remarks
							Metal working
Manual material processing							Exercise 26
Scale 1 : 1							Sheet 1 (1)