

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Grade: \_\_\_\_\_ /500

## Machine Safety

Use the internet and [nickcornwell.weebly.com](http://nickcornwell.weebly.com) to research the parts and proper steps to safely use each machine. Each question is worth 10 points.

### Band Saw

1. The blade guard should be \_\_\_\_\_ inches above the wood you are cutting.
2. How do you adjust the band saw blade guard?
  
3. What is resawing? (5 pts each) Draw a picture as example and label how it is done.
  
4. Band saws are sized by how big the \_\_\_\_\_ is. Draw a picture explaining this.
  
5. Your hands should never be in line with the \_\_\_\_\_.
6. If the band saw starts to squeal, it means the blade is \_\_\_\_\_ and you should use \_\_\_\_\_ cuts.
7. What is a relief cut? Explain why it is important to use relief cuts.
  
8. Explain how to properly use a band saw fence and why it is done.

## **Drill Press and drilling**

9. Draw the outline of a forstner bit
10. Draw the outline of a paddlewheel or spade bit
11. Draw the outline a brad point bit
12. Explain when and how you should clamp something down on the drill press.
13. What should be under your work when drilling?
14. Draw a chuck key and explain what it does.
15. How do you change a bit in a cordless drill?

## **Wood Lathe**

16. Where should long hair and long sleeves be when using the lathe? (5 pts each)
17. Draw the shape of a skew and what it is used to shape.
18. Draw a gouge and state its purpose
19. Draw a parting tool and state its purpose

20. Draw a spur center and state its purpose

21. Always hold lathe tools in \_\_\_\_\_ hands. Never \_\_\_\_\_ turning wood stock.

22. Draw and caliper and explain how to measure with it.

23. When using the lathe, large chips of wood/sawdust means you are \_\_\_\_\_ or \_\_\_\_\_. Small chips/sawdust means you are \_\_\_\_\_ and your tools are \_\_\_\_\_.

24. Label the steps in order to mount wood on a lathe.

	Use a rubber mallet (not a hammer!) to hit spur center into end of one side of wood		Insert spur center into head stock
	Adjust tool rest so that it is $\frac{1}{4}$ " away from turning wood.		Draw perpendicular lines on the ends of each side of wood (corner to corner)
	Saw perpendicular lines $\frac{1}{8}$ " deep so spur center will fit in cuts.		Rotate wood one time to see that it will not hit tool rest, then turn on.
	Lock tail stock and tighten tail stock point so that the end of wood is dented (roughly $\frac{1}{8}$ " deep)		Adjust tail stock so point is in the center of the X on the end of wood.

## Disc and Belt Sander and Orbital Sanders

25. What side of the disc sander should you use to sand on?

26. What should be turned on before turning on the sander?

27. What is the maximum thickness of wood that should be sanded off? Draw a  $\frac{1}{4}$ " line below and label it.

28. Explain how to use the sander cleaner.

29. The sander is only to sand \_\_\_\_\_. No metal, plastic, etc.

30. Draw the direction that a random orbital sander takes when sanding.

## Scroll Saw and Jig Saw

31. The maximum thickness of wood that a scroll saw or hand-held jig saw can cut is \_\_\_\_\_.

32. Explain how you cut out the middle of a piece of stock using the scroll saw.

33. What is the pressure foot and what does it do?

## General Wood Shop Safety Questions

34. Explain the difference between a push stick and push pad. Draw and label an example of each below.

35. What machines are you not allowed to use in the shop as middle school students?

36. List the general safety rules needed for every machine in the lab.

## Portable Power and Hand Tools

37. Explain the difference between 80, 120, 220 and 400-grit sandpaper.

38. Draw and label a bar clamp and a wood clamp.

39. Explain the difference between hook and loop orbital sanders and peel and stick sanders.
40. What tools are needed to properly open a paint can? What tools are needed to properly close a paint can?

**Important woodworking terms**

41. What is the difference between ripping and crosscutting a piece of lumber?
42. Explain what wood grain is. Draw a picture below to help illustrate your definition.
43. Softwoods come from \_\_\_\_\_ trees; Hardwoods come from \_\_\_\_\_ trees.
44. Define kerf-
45. What is a vise? What are bench dogs and how are they used with a vise?
46. Steel wool is classified in 0, 00,000, and 0000. Which size is the finest? \_\_\_\_\_
47. What should you do if you find a broken tool or machine?
48. Where are the emergency stop buttons in the shop? Why should you use them?
49. What is the only thing that should be swept in the dust collector? \_\_\_\_\_ What happens if you put nails or scrap wood in it?
50. Wood glue is completely cured/dried after \_\_\_\_\_ hours.