

Adapting Science for Students with Visual Impairments

Advance Preparation Checklist

Catalog Number: 7-00001-00

Name _____

Course Title _____

Instructor _____

Date _____



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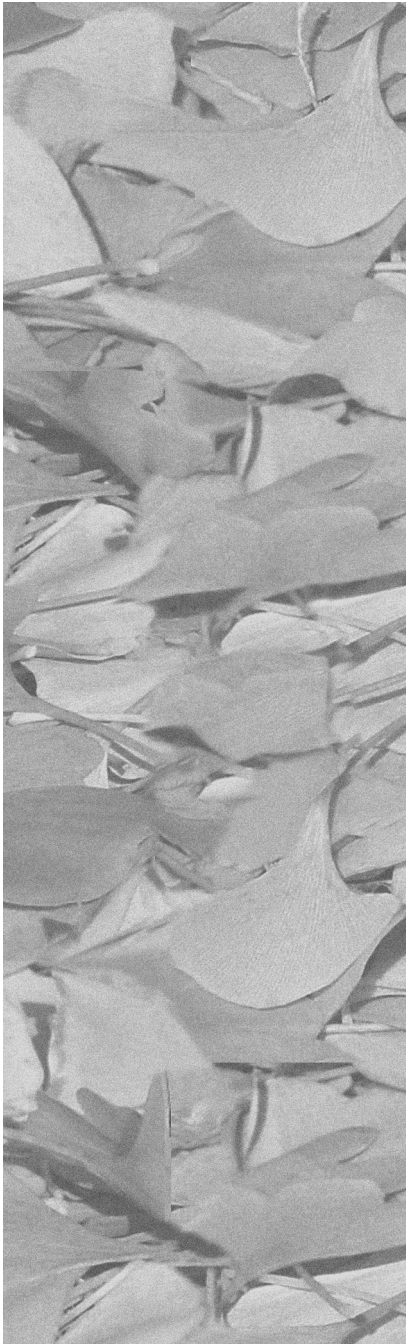
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| Advance Preparation | Behavior Present? Yes/No | Date Student Informed | Date Behavior Addressed |
|--|--|------------------------------|--------------------------------|
| Behaviors particular to students who are blind or visually impaired: | | | |
| a. Bringing objects close to eyes | | | |
| b. Eye rubbing and poking | | | |
| c. Finger sniffing | | | |
| d. Rocking body back and forth | | | |
| e. Tasting substances | | | |
| f. Using touch to determine levels of solids and liquids | | | |
| g. Other | | | |
| | Needed before course begins? Yes/No | Date in progress | Date completed |
| Familiarization with experimental procedure(s): | | | |
| a. Read through all steps and protocol | | | |
| b. Practice operations; see Skills Checklist | | | |
| c. Identify needed adaptations; see Skills Checklist | | | |
| d. Other | | | |
| Organizational tray for devices & lab ware: | | | |
| a. Ordinary cafeteria style tray | | | |
| b. Metal tray from CB | | | |
| c. Sorting tray from LHS and APH | | | |
| d. Other | | | |

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| Lab ware and equipment stabilization | | | |
| a. Clamps | | | |
| b. Larger containers | | | |
| c. Support stands | | | |
| d. Other | | | |
| Lighting Considerations | | | |
| a. Change overhead lighting to warm incandescent bulbs | | | |
| b. Natural light from window | | | |
| c. Task lamp | | | |
| d. Other | | | |
| Location of Safety equipment and supplies | | | |
| a. Apron | | | |
| b. Eyewash | | | |
| c. Fire alarm | | | |
| d. Fume hood | | | |
| e. Gloves (latex, pvc, Kevlar®) | | | |
| f. Goggles | | | |
| g. MSDSs | | | |
| h. Other | | | |

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| Magnification devices; see Skills Checklist | | | |
| a. Compound microscope | | | |
| b. CCTV | | | |
| c. Dissecting microscope | | | |
| d. Hand-held magnifier | | | |
| e. Stand magnifier | | | |
| f. Other | | | |
| Orientation in room/laboratory | | | |
| a. Chemicals and supplies | | | |
| b. Desk/lab station | | | |
| c. Exits | | | |
| d. Safety equipment | | | |
| e. Waste receptacles | | | |
| f. Other | | | |
| Clean-up considerations: | | | |
| a. Latex/pvc gloves Note: Gloves may decrease tactile sensitivity | | | |
| b. Waste disposal | | | |
| • Glass | | | |
| • Preserved organisms | | | |
| • Acids & bases | | | |



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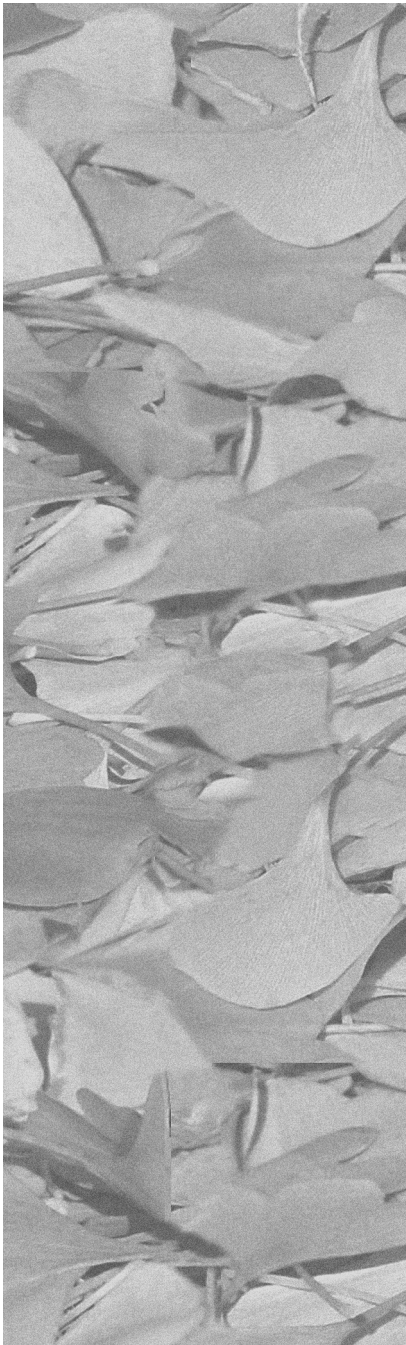
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| d. Other | | | |

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| Lab ware and equipment stabilization | | | |
| a. Clamps | | | |
| b. Larger containers | | | |
| c. Support stands | | | |
| d. Other | | | |
| Lighting Considerations | | | |
| a. Change overhead lighting to warm incandescent bulbs | | | |
| b. Natural light from window | | | |
| c. Task lamp | | | |
| d. Other | | | |
| Location of Safety equipment and supplies | | | |
| a. Apron | | | |
| b. Eyewash | | | |
| c. Fire alarm | | | |
| d. Fume hood | | | |
| e. Gloves (latex, pvc, Kevlar®) | | | |
| f. Goggles | | | |
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| d. Hand-held magnifier | | | |
| e. Stand magnifier | | | |
| f. Other | | | |
| Orientation in room/laboratory | | | |
| a. Chemicals and supplies | | | |
| b. Desk/lab station | | | |
| c. Exits | | | |
| d. Safety equipment | | | |
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| Clean-up considerations: | | | |
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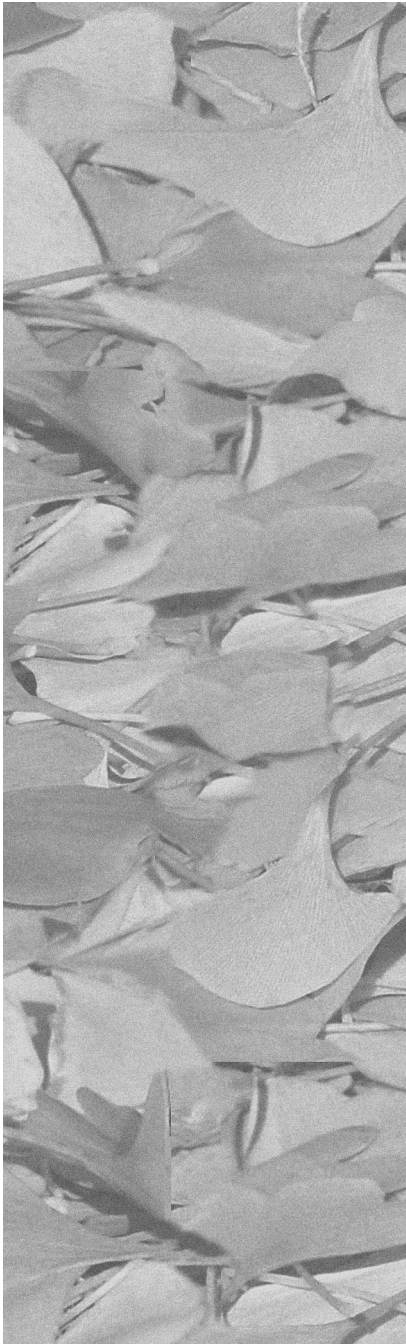
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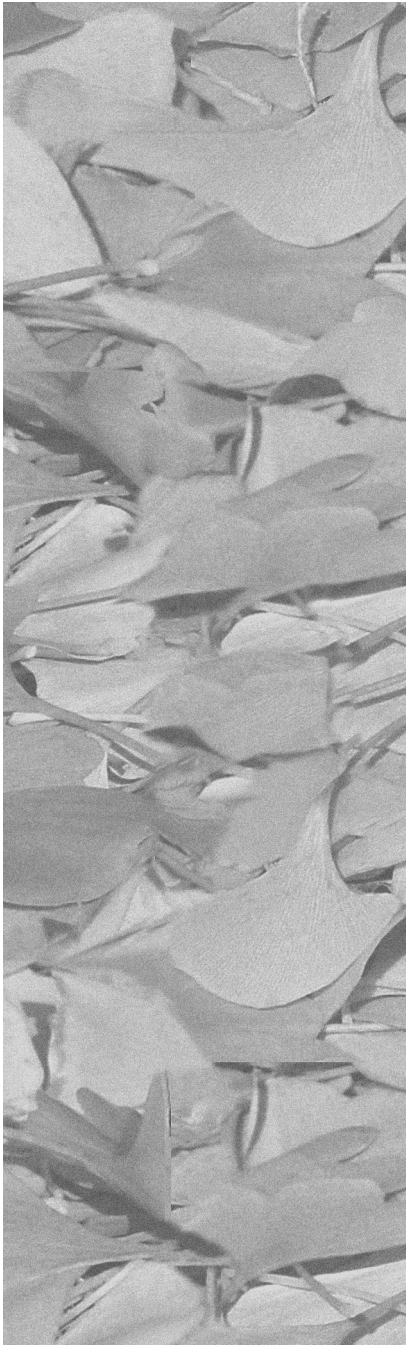
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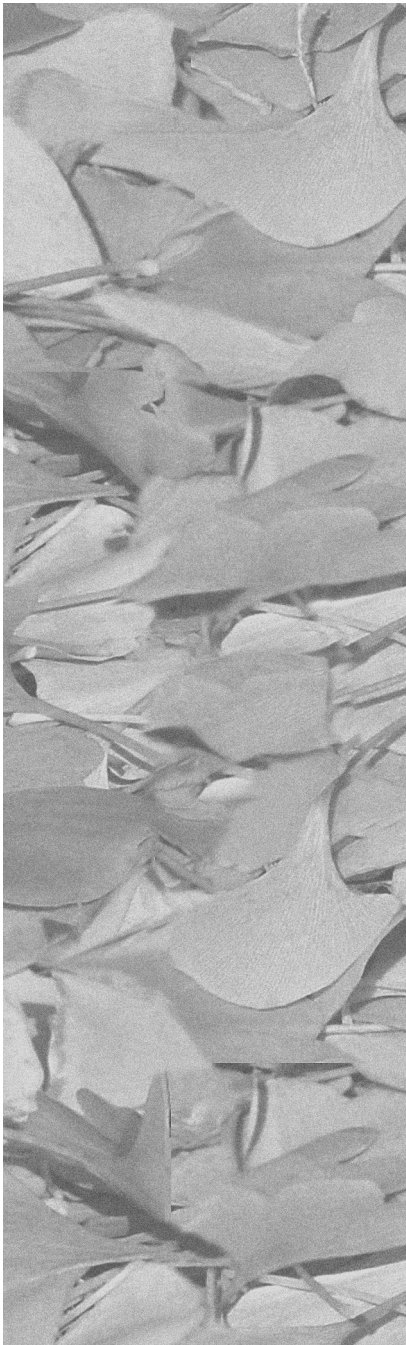
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|------------------------------|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Dissection | 40 | | | | |
| a. Instrument identification | 40 | | | | |
| b. Magnification | 40 | | | | |
| • CCTV | 40 | | | | |
| • Dissecting microscope | 36 | | | | |
| • Stand magnifier | 40 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Force | 46 | | | | |
| a. Knows definition | | | | | |
| b. Performs measurement | 46 | | | | |
| c. Other | | | | | |
| Length | 42 | | | | |
| a. Knows definition | 42 | | | | |
| b. Length measurements | | | | | |
| • Meter tapes and rulers | 42 | | | | |
| • String | 43 | | | | |
| • Trundle Wheel | 43 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Liquid Measurement | 49 | | | | |
| a. Consider before dispensing liquids: | 50 | | | | |
| • Fullness of source bottle | 50 | | | | |
| • Does the measuring device: | | | | | |
| o Fit the mouth of the source bottle? | | | | | |
| o Reach the liquid level of the source bottle? | | | | | |
| • Pour a small amount from source bottle into another container | 50 | | | | |
| • Detects meniscus | 50 | | | | |
| • Other | | | | | |
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| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
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| • Other | | | | | |
| c. Other | | | | | |

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|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
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| a. Magnetic stirrer/magnetic stirring bar | 56 | | | | |
| b. Stirring rod | 56 | | | | |
| c. Knows when solid is dissolved | | | | | |
| d. Other | | | | | |
| Mass | 43 | | | | |
| a. Knows definition | 43 | | | | |
| b. Consider before measuring dry chemicals: | 47 | | | | |
| • Fullness of source jar | | | | | |
| • Size of spatula versus size of jar mouth | | | | | |
| • How far the jar must be tilted to scoop out chemical | | | | | |
| • Ability of student to maintain spatula contents | | | | | |
| • Ability of student to completely empty spatula and weighing container | | | | | |
| c. Performs mass measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scale | 46 | | | | |
| • Talking scale | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| d. Other | | | | | |

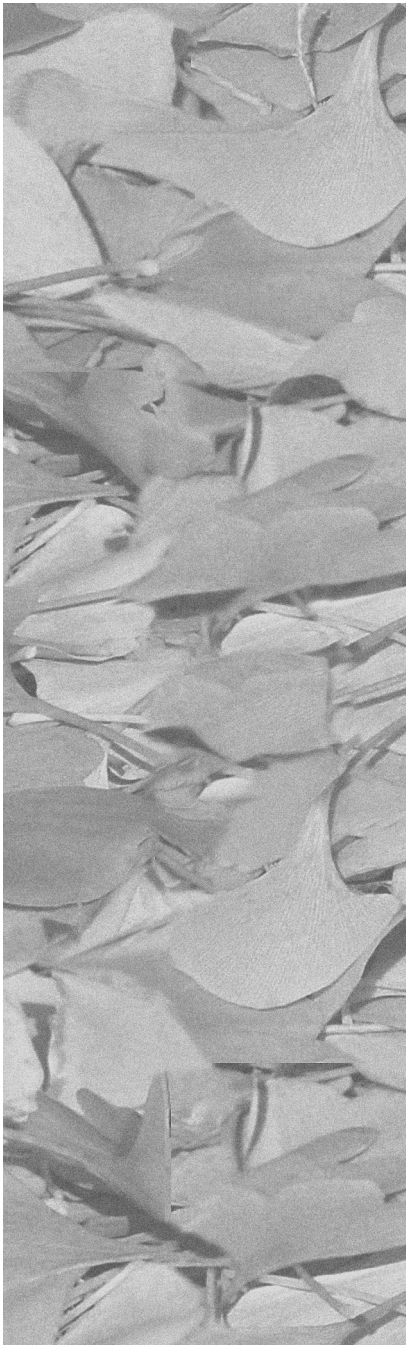
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| Microscopy | | | | | |
| a. Care of the microscope | 34, 35 | | | | |
| b. Compound Microscope | | | | | |
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| • Views permanent slides or wet mounts | 38, 39 | | | | |
| • Other | | | | | |
| c. Dissecting Microscope | 36 | | | | |
| • Understands parts | 36 | | | | |
| • Views objects on stage | 38 | | | | |
| • Other | | | | | |
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| • Understands parts | 37 | | | | |
| • Computer image capture | 37 | | | | |
| • Views slides on compound microscope | 37 | | | | |
| • Views objects on dissecting microscope | 37 | | | | |
| • Other | | | | | |
| e. Other | | | | | |

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| pH | 62 | | | | |
| a. Knows definition | 62 | | | | |
| b. Performs pH measurements | | | | | |
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| • pH test strips | 64 | | | | |
| • pH meter | 63 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Temperature | 57 | | | | |
| a. Knows definition | | | | | |
| b. Performs temperature measurements | 58 | | | | |
| • Glass thermometer | 58 | | | | |
| • Glass-free thermometer | 58, 59 | | | | |
| • Talking thermometer | 58 | | | | |
| • Other | | | | | |
| c. Performs cooling operations | 58 | | | | |
| • Dry ice | 58 | | | | |
| • Freezer | 58 | | | | |
| • Ice bath | 58 | | | | |
| • Refrigerator/Freezer | 58 | | | | |
| • Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Temperature, continued | | | | | |
| d. Performs heating operations | 58 | | | | |
| • Bunsen Burner | 60 | | | | |
| • Hot plate | 62 | | | | |
| • Other | | | | | |
| e. Other | | | | | |
| Time | 57 | | | | |
| a. Performs time measurements | 57 | | | | |
| • Analog clock/timer | 57 | | | | |
| • Atomic clock | 57 | | | | |
| • Digital clock/timer | 57 | | | | |
| • Other | | | | | |
| b. Other | | | | | |
| Units of Measurement | | | | | |
| a. Metric vs. Imperial | 40 | | | | |
| b. Table of Metric & Imperial equivalents | 67 | | | | |
| c. Table of Metric Units | 41 | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Volume | 47 | | | | |
| a. Knows definition | 47 | | | | |
| b. Performs liquid volume measurements | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Other | | | | | |
| c. Determines volume of an object | | | | | |
| • Geometrically shaped | 47 | | | | |
| • Large objects | 48 | | | | |
| • Small objects | 48 | | | | |
| • Other | | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
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| Weight | 43 | | | | |
| a. Knows definition | 44 | | | | |
| b. Performs weight measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scales | 46 | | | | |
| • Talking scales | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| • Other | | | | | |
| c. Other | | | | | |



Adapting Science for Students with Visual Impairments

Skills Checklist

Catalog Number: 7-00001-00

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Course Title _____

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| Dissection | 40 | | | | |
| a. Instrument identification | 40 | | | | |
| b. Magnification | 40 | | | | |
| • CCTV | 40 | | | | |
| • Dissecting microscope | 36 | | | | |
| • Stand magnifier | 40 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Force | 46 | | | | |
| a. Knows definition | | | | | |
| b. Performs measurement | 46 | | | | |
| c. Other | | | | | |
| Length | 42 | | | | |
| a. Knows definition | 42 | | | | |
| b. Length measurements | | | | | |
| • Meter tapes and rulers | 42 | | | | |
| • String | 43 | | | | |
| • Trundle Wheel | 43 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

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| Liquid Measurement | 49 | | | | |
| a. Consider before dispensing liquids: | 50 | | | | |
| • Fullness of source bottle | 50 | | | | |
| • Does the measuring device: | | | | | |
| o Fit the mouth of the source bottle? | | | | | |
| o Reach the liquid level of the source bottle? | | | | | |
| • Pour a small amount from source bottle into another container | 50 | | | | |
| • Detects meniscus | 50 | | | | |
| • Other | | | | | |
| b. Performs volume measurements: | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

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| Making Solutions | 18 | | | | |
| a. Magnetic stirrer/magnetic stirring bar | 56 | | | | |
| b. Stirring rod | 56 | | | | |
| c. Knows when solid is dissolved | | | | | |
| d. Other | | | | | |
| Mass | 43 | | | | |
| a. Knows definition | 43 | | | | |
| b. Consider before measuring dry chemicals: | 47 | | | | |
| • Fullness of source jar | | | | | |
| • Size of spatula versus size of jar mouth | | | | | |
| • How far the jar must be tilted to scoop out chemical | | | | | |
| • Ability of student to maintain spatula contents | | | | | |
| • Ability of student to completely empty spatula and weighing container | | | | | |
| c. Performs mass measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scale | 46 | | | | |
| • Talking scale | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| d. Other | | | | | |

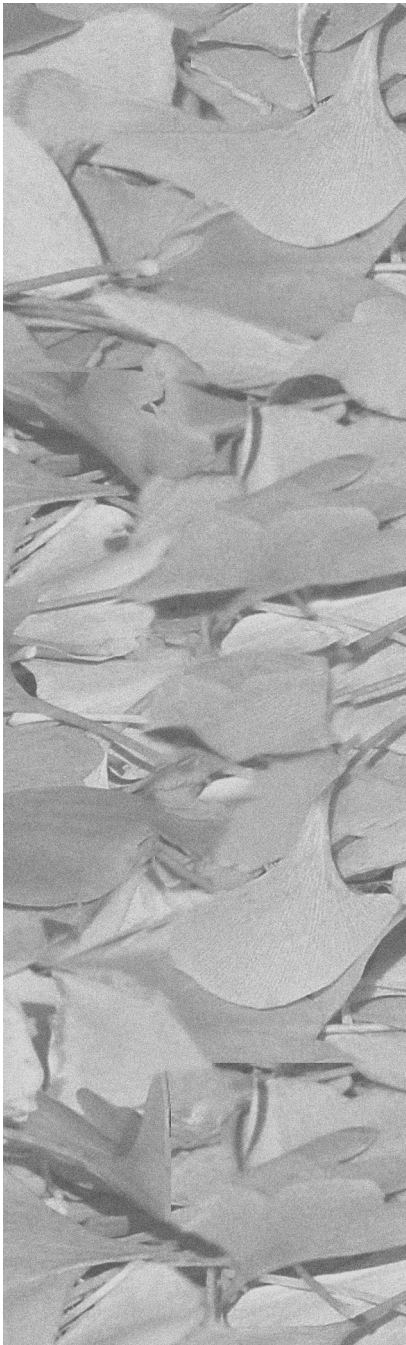
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| Microscopy | | | | | |
| a. Care of the microscope | 34, 35 | | | | |
| b. Compound Microscope | | | | | |
| • Understands parts | 33 | | | | |
| • Prepares wet mounts | 38, 39 | | | | |
| • Views permanent slides or wet mounts | 38, 39 | | | | |
| • Other | | | | | |
| c. Dissecting Microscope | 36 | | | | |
| • Understands parts | 36 | | | | |
| • Views objects on stage | 38 | | | | |
| • Other | | | | | |
| d. Microvideo Camera | 37 | | | | |
| • Understands parts | 37 | | | | |
| • Computer image capture | 37 | | | | |
| • Views slides on compound microscope | 37 | | | | |
| • Views objects on dissecting microscope | 37 | | | | |
| • Other | | | | | |
| e. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--------------------------------------|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| pH | 62 | | | | |
| a. Knows definition | 62 | | | | |
| b. Performs pH measurements | | | | | |
| • Litmus paper | 64 | | | | |
| • pH test strips | 64 | | | | |
| • pH meter | 63 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Temperature | 57 | | | | |
| a. Knows definition | | | | | |
| b. Performs temperature measurements | 58 | | | | |
| • Glass thermometer | 58 | | | | |
| • Glass-free thermometer | 58, 59 | | | | |
| • Talking thermometer | 58 | | | | |
| • Other | | | | | |
| c. Performs cooling operations | 58 | | | | |
| • Dry ice | 58 | | | | |
| • Freezer | 58 | | | | |
| • Ice bath | 58 | | | | |
| • Refrigerator/Freezer | 58 | | | | |
| • Other | | | | | |

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| Temperature, continued | | | | | |
| d. Performs heating operations | 58 | | | | |
| • Bunsen Burner | 60 | | | | |
| • Hot plate | 62 | | | | |
| • Other | | | | | |
| e. Other | | | | | |
| Time | 57 | | | | |
| a. Performs time measurements | 57 | | | | |
| • Analog clock/timer | 57 | | | | |
| • Atomic clock | 57 | | | | |
| • Digital clock/timer | 57 | | | | |
| • Other | | | | | |
| b. Other | | | | | |
| Units of Measurement | | | | | |
| a. Metric vs. Imperial | 40 | | | | |
| b. Table of Metric & Imperial equivalents | 67 | | | | |
| c. Table of Metric Units | 41 | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Volume | 47 | | | | |
| a. Knows definition | 47 | | | | |
| b. Performs liquid volume measurements | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Other | | | | | |
| c. Determines volume of an object | | | | | |
| • Geometrically shaped | 47 | | | | |
| • Large objects | 48 | | | | |
| • Small objects | 48 | | | | |
| • Other | | | | | |
| d. Other | | | | | |

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| Weight | 43 | | | | |
| a. Knows definition | 44 | | | | |
| b. Performs weight measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scales | 46 | | | | |
| • Talking scales | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| • Other | | | | | |
| c. Other | | | | | |



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Skills Checklist

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| Dissection | 40 | | | | |
| a. Instrument identification | 40 | | | | |
| b. Magnification | 40 | | | | |
| • CCTV | 40 | | | | |
| • Dissecting microscope | 36 | | | | |
| • Stand magnifier | 40 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Force | 46 | | | | |
| a. Knows definition | | | | | |
| b. Performs measurement | 46 | | | | |
| c. Other | | | | | |
| Length | 42 | | | | |
| a. Knows definition | 42 | | | | |
| b. Length measurements | | | | | |
| • Meter tapes and rulers | 42 | | | | |
| • String | 43 | | | | |
| • Trundle Wheel | 43 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Liquid Measurement | 49 | | | | |
| a. Consider before dispensing liquids: | 50 | | | | |
| • Fullness of source bottle | 50 | | | | |
| • Does the measuring device: | | | | | |
| o Fit the mouth of the source bottle? | | | | | |
| o Reach the liquid level of the source bottle? | | | | | |
| • Pour a small amount from source bottle into another container | 50 | | | | |
| • Detects meniscus | 50 | | | | |
| • Other | | | | | |
| b. Performs volume measurements: | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

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| Making Solutions | 18 | | | | |
| a. Magnetic stirrer/magnetic stirring bar | 56 | | | | |
| b. Stirring rod | 56 | | | | |
| c. Knows when solid is dissolved | | | | | |
| d. Other | | | | | |
| Mass | 43 | | | | |
| a. Knows definition | 43 | | | | |
| b. Consider before measuring dry chemicals: | 47 | | | | |
| • Fullness of source jar | | | | | |
| • Size of spatula versus size of jar mouth | | | | | |
| • How far the jar must be tilted to scoop out chemical | | | | | |
| • Ability of student to maintain spatula contents | | | | | |
| • Ability of student to completely empty spatula and weighing container | | | | | |
| c. Performs mass measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scale | 46 | | | | |
| • Talking scale | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| d. Other | | | | | |

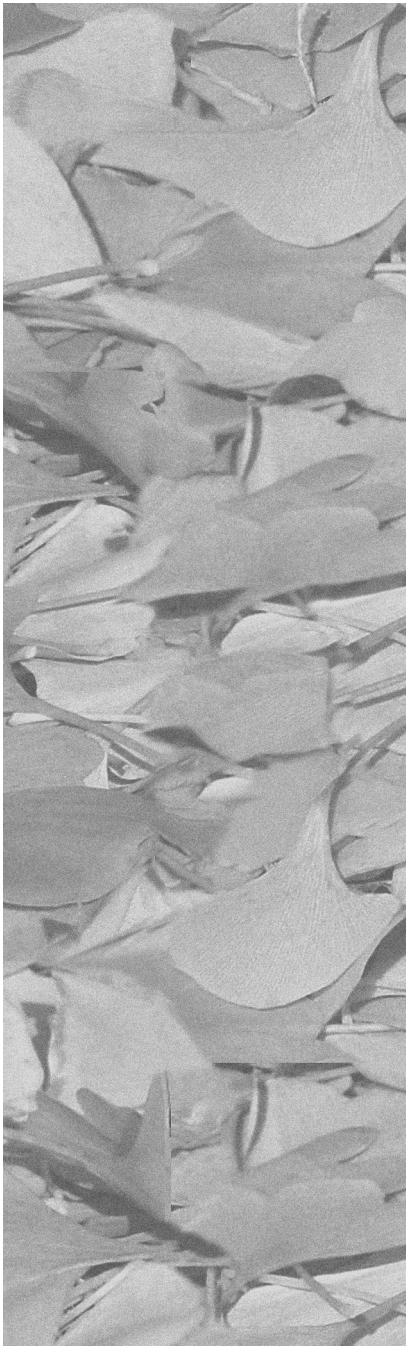
| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
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| Microscopy | | | | | |
| a. Care of the microscope | 34, 35 | | | | |
| b. Compound Microscope | | | | | |
| • Understands parts | 33 | | | | |
| • Prepares wet mounts | 38, 39 | | | | |
| • Views permanent slides or wet mounts | 38, 39 | | | | |
| • Other | | | | | |
| c. Dissecting Microscope | 36 | | | | |
| • Understands parts | 36 | | | | |
| • Views objects on stage | 38 | | | | |
| • Other | | | | | |
| d. Microvideo Camera | 37 | | | | |
| • Understands parts | 37 | | | | |
| • Computer image capture | 37 | | | | |
| • Views slides on compound microscope | 37 | | | | |
| • Views objects on dissecting microscope | 37 | | | | |
| • Other | | | | | |
| e. Other | | | | | |

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| pH | 62 | | | | |
| a. Knows definition | 62 | | | | |
| b. Performs pH measurements | | | | | |
| • Litmus paper | 64 | | | | |
| • pH test strips | 64 | | | | |
| • pH meter | 63 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Temperature | 57 | | | | |
| a. Knows definition | | | | | |
| b. Performs temperature measurements | 58 | | | | |
| • Glass thermometer | 58 | | | | |
| • Glass-free thermometer | 58, 59 | | | | |
| • Talking thermometer | 58 | | | | |
| • Other | | | | | |
| c. Performs cooling operations | 58 | | | | |
| • Dry ice | 58 | | | | |
| • Freezer | 58 | | | | |
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| • Other | | | | | |

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| Temperature, continued | | | | | |
| d. Performs heating operations | 58 | | | | |
| • Bunsen Burner | 60 | | | | |
| • Hot plate | 62 | | | | |
| • Other | | | | | |
| e. Other | | | | | |
| Time | 57 | | | | |
| a. Performs time measurements | 57 | | | | |
| • Analog clock/timer | 57 | | | | |
| • Atomic clock | 57 | | | | |
| • Digital clock/timer | 57 | | | | |
| • Other | | | | | |
| b. Other | | | | | |
| Units of Measurement | | | | | |
| a. Metric vs. Imperial | 40 | | | | |
| b. Table of Metric & Imperial equivalents | 67 | | | | |
| c. Table of Metric Units | 41 | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
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| Volume | 47 | | | | |
| a. Knows definition | 47 | | | | |
| b. Performs liquid volume measurements | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
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| c. Determines volume of an object | | | | | |
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| Weight | 43 | | | | |
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| • Double cup balance | 44 | | | | |
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| • Stand magnifier | 40 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Force | 46 | | | | |
| a. Knows definition | | | | | |
| b. Performs measurement | 46 | | | | |
| c. Other | | | | | |
| Length | 42 | | | | |
| a. Knows definition | 42 | | | | |
| b. Length measurements | | | | | |
| • Meter tapes and rulers | 42 | | | | |
| • String | 43 | | | | |
| • Trundle Wheel | 43 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Liquid Measurement | 49 | | | | |
| a. Consider before dispensing liquids: | 50 | | | | |
| • Fullness of source bottle | 50 | | | | |
| • Does the measuring device: | | | | | |
| o Fit the mouth of the source bottle? | | | | | |
| o Reach the liquid level of the source bottle? | | | | | |
| • Pour a small amount from source bottle into another container | 50 | | | | |
| • Detects meniscus | 50 | | | | |
| • Other | | | | | |
| b. Performs volume measurements: | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
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| Making Solutions | 18 | | | | |
| a. Magnetic stirrer/magnetic stirring bar | 56 | | | | |
| b. Stirring rod | 56 | | | | |
| c. Knows when solid is dissolved | | | | | |
| d. Other | | | | | |
| Mass | 43 | | | | |
| a. Knows definition | 43 | | | | |
| b. Consider before measuring dry chemicals: | 47 | | | | |
| • Fullness of source jar | | | | | |
| • Size of spatula versus size of jar mouth | | | | | |
| • How far the jar must be tilted to scoop out chemical | | | | | |
| • Ability of student to maintain spatula contents | | | | | |
| • Ability of student to completely empty spatula and weighing container | | | | | |
| c. Performs mass measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scale | 46 | | | | |
| • Talking scale | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| d. Other | | | | | |

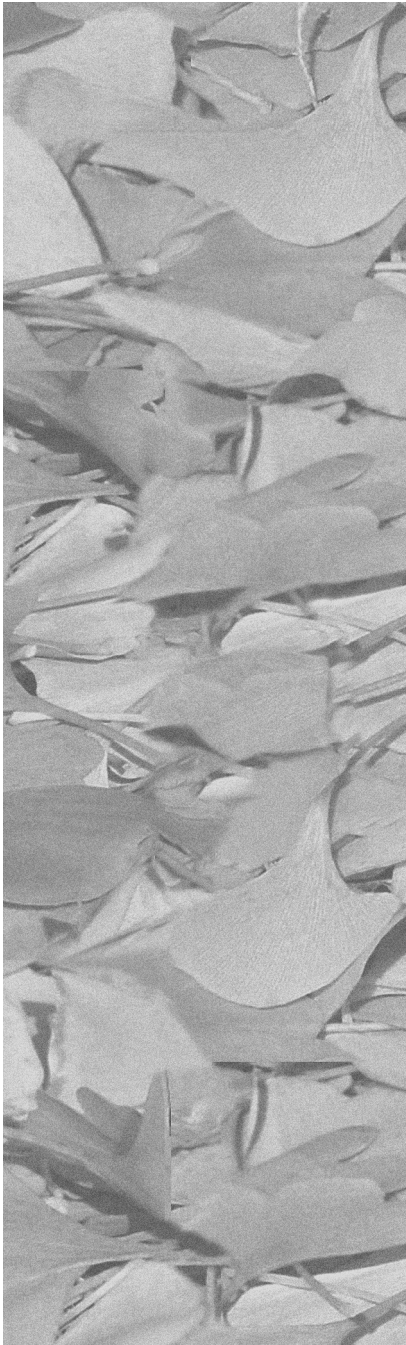
| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Microscopy | | | | | |
| a. Care of the microscope | 34, 35 | | | | |
| b. Compound Microscope | | | | | |
| • Understands parts | 33 | | | | |
| • Prepares wet mounts | 38, 39 | | | | |
| • Views permanent slides or wet mounts | 38, 39 | | | | |
| • Other | | | | | |
| c. Dissecting Microscope | 36 | | | | |
| • Understands parts | 36 | | | | |
| • Views objects on stage | 38 | | | | |
| • Other | | | | | |
| d. Microvideo Camera | 37 | | | | |
| • Understands parts | 37 | | | | |
| • Computer image capture | 37 | | | | |
| • Views slides on compound microscope | 37 | | | | |
| • Views objects on dissecting microscope | 37 | | | | |
| • Other | | | | | |
| e. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--------------------------------------|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| pH | 62 | | | | |
| a. Knows definition | 62 | | | | |
| b. Performs pH measurements | | | | | |
| • Litmus paper | 64 | | | | |
| • pH test strips | 64 | | | | |
| • pH meter | 63 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Temperature | 57 | | | | |
| a. Knows definition | | | | | |
| b. Performs temperature measurements | 58 | | | | |
| • Glass thermometer | 58 | | | | |
| • Glass-free thermometer | 58, 59 | | | | |
| • Talking thermometer | 58 | | | | |
| • Other | | | | | |
| c. Performs cooling operations | 58 | | | | |
| • Dry ice | 58 | | | | |
| • Freezer | 58 | | | | |
| • Ice bath | 58 | | | | |
| • Refrigerator/Freezer | 58 | | | | |
| • Other | | | | | |

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|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Temperature, continued | | | | | |
| d. Performs heating operations | 58 | | | | |
| • Bunsen Burner | 60 | | | | |
| • Hot plate | 62 | | | | |
| • Other | | | | | |
| e. Other | | | | | |
| Time | 57 | | | | |
| a. Performs time measurements | 57 | | | | |
| • Analog clock/timer | 57 | | | | |
| • Atomic clock | 57 | | | | |
| • Digital clock/timer | 57 | | | | |
| • Other | | | | | |
| b. Other | | | | | |
| Units of Measurement | | | | | |
| a. Metric vs. Imperial | 40 | | | | |
| b. Table of Metric & Imperial equivalents | 67 | | | | |
| c. Table of Metric Units | 41 | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|--|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Volume | 47 | | | | |
| a. Knows definition | 47 | | | | |
| b. Performs liquid volume measurements | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Other | | | | | |
| c. Determines volume of an object | | | | | |
| • Geometrically shaped | 47 | | | | |
| • Large objects | 48 | | | | |
| • Small objects | 48 | | | | |
| • Other | | | | | |
| d. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---------------------------------|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Weight | 43 | | | | |
| a. Knows definition | 44 | | | | |
| b. Performs weight measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scales | 46 | | | | |
| • Talking scales | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| • Other | | | | | |
| c. Other | | | | | |



Adapting Science for Students with Visual Impairments

Skills Checklist

Catalog Number: 7-00001-00

Name _____

Course Title _____

Instructor _____

Date _____



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The Skills Checklist is designed to be used in conjunction with “Adapting Science for Students with Visual Impairments; A Handbook for the Classroom Teacher and Teacher of the Visually Impaired”. The page numbers listed in the first column of the checklist refer to where information for the topic in the corresponding row can be found in the handbook. The handbook provides suggested items for use, and the abbreviations for the vendors from which they can be obtained. Consult the Appendix in the handbook for details about the suggested vendors.

Adapting Science for Students with Visual Impairments

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| Dissection | 40 | | | | |
| a. Instrument identification | 40 | | | | |
| b. Magnification | 40 | | | | |
| • CCTV | 40 | | | | |
| • Dissecting microscope | 36 | | | | |
| • Stand magnifier | 40 | | | | |
| • Other | | | | | |
| c. Other | | | | | |
| Force | 46 | | | | |
| a. Knows definition | | | | | |
| b. Performs measurement | 46 | | | | |
| c. Other | | | | | |
| Length | 42 | | | | |
| a. Knows definition | 42 | | | | |
| b. Length measurements | | | | | |
| • Meter tapes and rulers | 42 | | | | |
| • String | 43 | | | | |
| • Trundle Wheel | 43 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

| Skills Checklist | Page | Skill Needed | Date Skill Achieved | Type of Magnifier Needed | Identify Adaptation Needed |
|---|-------------|---------------------|----------------------------|---------------------------------|-----------------------------------|
| Liquid Measurement | 49 | | | | |
| a. Consider before dispensing liquids: | 50 | | | | |
| • Fullness of source bottle | 50 | | | | |
| • Does the measuring device: | | | | | |
| o Fit the mouth of the source bottle? | | | | | |
| o Reach the liquid level of the source bottle? | | | | | |
| • Pour a small amount from source bottle into another container | 50 | | | | |
| • Detects meniscus | 50 | | | | |
| • Other | | | | | |
| b. Performs volume measurements: | | | | | |
| • Beakers | 52 | | | | |
| • Bottle top dispenser | 54 | | | | |
| • Graduated cylinders | 51 | | | | |
| • Graduated pipets | 54, 55 | | | | |
| • Syringes | 52, 53 | | | | |
| • Talking Jug | 54 | | | | |
| • Pipettors | 54, 55 | | | | |
| • Measuring volume by mass | 56 | | | | |
| • Other | | | | | |
| c. Other | | | | | |

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| Making Solutions | 18 | | | | |
| a. Magnetic stirrer/magnetic stirring bar | 56 | | | | |
| b. Stirring rod | 56 | | | | |
| c. Knows when solid is dissolved | | | | | |
| d. Other | | | | | |
| Mass | 43 | | | | |
| a. Knows definition | 43 | | | | |
| b. Consider before measuring dry chemicals: | 47 | | | | |
| • Fullness of source jar | | | | | |
| • Size of spatula versus size of jar mouth | | | | | |
| • How far the jar must be tilted to scoop out chemical | | | | | |
| • Ability of student to maintain spatula contents | | | | | |
| • Ability of student to completely empty spatula and weighing container | | | | | |
| c. Performs mass measurements | | | | | |
| • Double cup balance | 44 | | | | |
| • Electronic digital scale | 46 | | | | |
| • Spring scale | 46 | | | | |
| • Talking scale | 47 | | | | |
| • Triple beam balance | 45 | | | | |
| d. Other | | | | | |

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| • Hot plate | 62 | | | | |
| • Other | | | | | |
| e. Other | | | | | |
| Time | 57 | | | | |
| a. Performs time measurements | 57 | | | | |
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| • Atomic clock | 57 | | | | |
| • Digital clock/timer | 57 | | | | |
| • Other | | | | | |
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| Units of Measurement | | | | | |
| a. Metric vs. Imperial | 40 | | | | |
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