



Required Activities and Resources (R)

These are fully integrated components of this CIMC curriculum. They are usually packaged in or with the curriculum and are essential in meeting the learning objectives. To individualize this unit, use the LAP Sheet supplied in your resources.

- Reproducible Handouts and Transparency Masters are included in the Instructor's Manual. Handouts should be copied for all students. Transparency Masters should be used to make overhead transparencies for use during instruction.
- Non-reproducible resources are included in the student's curriculum.

Optional Activities and Resources (O)

These are suggested high-interest activities to help deliver learning objectives to students or to let students achieve objectives in an applied context. Select as many as you wish to use. Some activities use extra resources for further information about unit content. You can make them available in the classroom for in-depth study or optional activities, but their use is not required for meeting CIMC unit objectives.

**GENERAL
INSTRUCTIONS****Assignment Sheets**

- R** Review the directions and any specific guidelines.
- R** Make certain that any needed materials from the Instructor's Manual are available.
- R** Have the students complete the Assignment Sheet. Evaluate each student's performance and provide reteaching and retesting as necessary. Have the students repeat the Assignment Sheet until they achieve mastery.
- R** Complete each student's Profile of Training Mastery.
- O** Have the students volunteer to read aloud the directions and any special guidelines.
- O** Return the completed Assignment Sheets to the students so that they may use them for later reference if needed.

Job Sheets

- R** Review the introduction and evaluation criteria for the Job Sheet. Remind the students that they should not fill in the blanks in the Yes/No columns.



- R** Review and explain all general guidelines, safety cautions, and warnings.
- R** Make sure that all tools, equipment, and supplies are available.
- R** Demonstrate each of the procedures outlined in the Job Sheet.
- R** Allow the students to practice the Job Sheet skills before skills testing. Coach, correct, and supervise as necessary.
- R** Have the students complete the Job Sheet. Evaluate each student's performance and provide remediation as necessary. Have the students repeat the Job Sheet until they achieve mastery.
- R** Complete each student's Profile of Training Mastery.
- R** Return the completed Job Sheets to the students so that they may use them for later reference if needed.
- O** Have the students volunteer to read aloud the job guidelines, cautions, and warnings.

LAP Sheets

The LAP Sheets are an optional component that can be used to individualize instruction. The following instructions should be followed only if you are using the LAP Sheets.

- R** Explain the specific procedures to be followed to the students before they begin using the LAP Sheet. Be sure that each student understands the procedures for using the LAP Sheet.
- R** If you want the students to complete any of the assignments on the LAP Sheet that are labeled optional, assign these to the students. Be sure to provide any needed resources.

OBJECTIVE 1

Distinguish between concrete and cement.

- O** Take a field trip to a cement plant or batch plant.
- O** Visit a testing facility.

OBJECTIVE 2

Describe the stages in making portland cement.

See Objective 1.



OBJECTIVE 3

Identify key points in the history of cement.

See Objective 1.

OBJECTIVE 4

Profile a structure built from concrete. (Assignment Sheet)

R See the general instructions for all Assignment Sheets.

EVALUATION

Pretest

- Use the unit Written Test for *both* the pretest and posttest. Give the students the pretest before they begin the unit.
- You may wish to use the CIMC publication *Measuring Learning Gains with Pretest/Posttest* for instructions and suggestions on giving pretests and using the results. Information for ordering this material is included in the optional resources section.
- Use pretest results to guide individual students in progressing through the unit, doing enrichment work, or moving to the next unit.

Focus Assignment

- Use an informal evaluation of the focus assignments as a diagnostic tool for determining if any students need extra help in basic skills. Refer these students to the appropriate instructor, Learning Resource Center, or Educational Enhancement Center.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.
- Complete each student's Profile of Training Mastery.

Skill Test

- Explain to the students that they will be asked to demonstrate the procedures on the Job Sheets as a skills test.
- Describe the rating scale used on the skills test.
- Reteach and retest as necessary.
- Complete each student's Profile of Training Mastery.



OPTIONAL RESOURCES

Posttest

- After they have completed the unit, give students the Written Test again.
- Explain to the students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- You may wish to use the CIMC publication *Measuring Learning Gains with Pretest/Posttest* for instructions and suggestions on giving posttests and using the results. Information for ordering this material is included in the optional resources section.
- Reteach and retest as necessary to meet individual student needs and state standards for student learning and competency gains.
- Complete the appropriate sections of the Profile of Training Mastery.
- Review individual and group performance to evaluate teaching effectiveness. Adjust scope, sequence, or instructional methods for additional lessons as required.

Associations/Agencies

- American Concrete Institute International®
PO Box 9094, Farmington Hills, MI 48333
248 848-3700.
- Portland Cement Association
5420 Old Orchard Road
Skokie, Illinois 60077
voice: 847-966-6200
fax: 847-966-8389
info@portcement.org
- National Concrete Masonry Association
2302 Horse Pen Road
Herndon, VA 20171-3499
Phone: 703 713-1900
Fax: 703 713-1910
- National Ready Mix Concrete Association
900 Spring Street
Silver Spring MD, 20910
301 587-1400
Fax 301 585-4219



Online Resources

✓ **NOTE:** Web site addresses were accurate and all content on referenced web sites was appropriate during development and production of this product. However, web sites sometimes change; the CIMC takes no responsibility for a site's content. The inclusion of a web site does not constitute an endorsement of that site's other pages, products, or owners. You are encouraged to verify all web sites prior to use.

- www.concrete.com/

✓ **NOTE:** Web site designed to bring Internet resources to professionals in the concrete industry.

- www.aci-int.org/

✓ **NOTE:** Web site of the American Concrete Institute which strives to be the world's premier developer and disseminator of information on the use of concrete for structures and facilities.

- www.portcement.org/cb/concretebasics_history.asp

✓ **NOTE:** Web site of the Portland Cement Association whose mission is to improve and expand the uses of portland cement and concrete.

- www.worldofconcrete.com/default_event.asp

✓ **NOTE:** Web site for the annual concrete exposition and conference that features exhibits, demonstrations of equipment and procedures, and other services for construction professionals.

- www.ncma.org/

✓ **NOTE:** Web site for The National Concrete Masonry Association (NCMA). The NCMA is an association of producers of concrete masonry products, and suppliers of products and services related to the industry. NCMA offers a variety of technical services and design aids through publications, computer programs, slide presentations and technical training.

- www.nrmca.org/membership_information/

✓ **NOTE:** Web site for the National Ready Mixed Concrete Association that is devoted to improving the ready mixed concrete industry.



UNIT REFERENCES

Publications

- *Measuring Learning Gains with Pretest/Posttest*. Stillwater, OK: Oklahoma Department of Career and Technology Education, Curriculum and Instructional Materials Center, 1998. For ordering information call 1-800-654-4502.

Videos

- *Modern Marvels: Concrete*. Available from the Portland Cement Association. 5420 Old Orchard Road, Skokie, IL 60077. 847-966-6200.

Publications

- *Fundamentals of Carpentry*. Stillwater, OK: Oklahoma Department of Career and Technology Education, Curriculum and Instructional Materials Center, 1999. For ordering information call 1-800-654-4502.
- *Fundamentals of Concrete and Cement Masonry*. Stillwater, OK: Oklahoma Department of Career and Technology Education, Curriculum and Instructional Materials Center, 1999. For ordering information call 1-800-654-4502.
- *Fundamentals of Construction*. Stillwater, OK: Oklahoma Department of Career and Technology Education, Curriculum and Instructional Materials Center, 1995. For ordering information call 1-800-654-4502.





Name _____

Check the blank as you complete each step.

1. **Take** _____ the pretest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.
2. **Read** _____ the introduction, unit objective, and specific objectives.
3. **Do** _____ the focus assignments.
4. **Stop** _____ and have your instructor evaluate your work from the focus assignment. After your work has been evaluated, follow your instructor's recommendations.
5. **Study** _____ the Information Sheet, objectives 1-4.
6. **Do** _____ the Assignment Sheet.
7. **Stop** _____ and have your instructor evaluate your work from the Assignment Sheet. After your work has been evaluated, follow your instructor's recommendations.
8. **Take** _____ the posttest provided by your instructor. Have your instructor evaluate your completed test. After your test has been evaluated, follow your instructor's recommendations.



