

Summary

- Working drawings fall into two categories: detail drawings and assembly drawings.
- A detail drawing includes one or more views of a product, dimensions, and other pertinent information required to make the part.
- An assembly drawing contains views showing where and how the various parts of an object fit into an assembled product.
- Working drawings can contain a variety of views, depending on the product, but must always be created with proper drawing conventions.

Test Your Knowledge

Answer the following questions using the information provided in this chapter.

1. Why are working drawings used?
2. Name five types of information provided on a detail drawing.
3. How does an assembly drawing differ from a detail drawing?
4. What is a *subassembly drawing*?
5. What is the purpose of a bill of materials?
6. Name two reasons why drawings are numbered.

Applying Your Knowledge (optional)

1. From a local company in industry, try to obtain samples of detail drawings. Include samples of assembly drawings and subassembly drawings. Prepare a bulletin board display using the theme *working drawings*.
2. Design a suitable title block for the drawing sheets of a company that you are planning to start. Make sure there are blanks to include all pertinent information required.

3. Design a product with sales appeal. Prepare the drawings necessary to mass-produce it in the school laboratory. Make your drawings on tracing vellum so that a number of prints can be made.

STEM Activities (optional)

1. **Technology:** Obtain a piston and rod assembly from a small single-cylinder gasoline engine. Using a micrometer, practice making accurate measurements of the parts. Once you are comfortable making measurements with the micrometer, record the measurements and prepare detail drawings for the parts. Indicate all dimensions in decimal units.
2. **Technology:** Research the principles of geometric dimensioning and tolerancing (GD&T). Report to the class how industry uses GD&T in preparing assembly drawings. Show some examples.

Communicating about Drafting (optional)

Pick a figure in this chapter. Working with a partner, each of you will take turns explaining the important information being conveyed by that figure. Through your collaboration, develop what you and your partner believe is the most interesting verbal description of the importance of the chosen figure. Present your narration to the class.

Drawing Problems (optional)

Draw the problems shown on the following pages. Draw detail and assembly drawings as indicated. Draw the orthographic and sectional views necessary to describe each object. Follow the directions in each problem and use the dimensions provided. Dimensions are in inches unless otherwise indicated.