

GUIDING FUNCTION

STUDENT BOOK

Chapter 12, page 383

GOAL

Determine the type of guide in various technical objects.

OBSERVATION CRITERIA

1. A special vocabulary is used when describing technical objects. What is meant by the term *component*?
-
2. What is meant by *basic mechanical function*?
-
3. What is meant by *guiding function*?
-
4. There are two main types of guide. Fill in the table below, providing the name of each type of guide and a brief description and an example of it.

Type of guide	Description	Example
<div></div> <div></div>	<div></div> <div></div> <div></div> <div></div>	<div></div> <div></div>
<div></div> <div></div>	<div></div> <div></div> <div></div> <div></div>	<div></div> <div></div>



MATERIALS

- scissors
- mechanical pencil
- glue stick
- retractable utility knife
- beam balance
- hot glue gun

**PROCEDURE**

1. Observe the motion of each of the following guided parts:
 - the handles and the blades of the scissors
 - the graphite in the mechanical pencil
 - the glue in the glue stick
 - the blade in the retractable utility knife
 - the rider on the beam balance
 - the fold-out wire stand on the hot glue gun
 - the glue stick in the hot glue gun
2. From the guiding components listed in the box below, find those that provide the type of motion you observed in each object above.

barrel of housing	plastic tube	beam
opening in housing	metal tip	
groove in plastic casing	rivet	

3. Determine the type of guide provided by each of these components.

OBSERVATIONS

Record your observations in the table below. Give the table a title.

Title: _____

Object	Guided part	Guiding component	Type of guide
Scissors	Handles and blades		
Mechanical pencil	Graphite		
Glue stick	Glue		
Retractable utility knife	Blade		
Beam balance	Rider		
Hot glue gun	Fold-out wire stand		
	Glue stick		



REFLECTING ON YOUR OBSERVATIONS

1. Did you find it difficult to observe the difference between a translational guide and a rotational guide? Explain your answer.

2. If the guiding components were removed from a technical object, would the object be functional? Explain your answer.
