

Complete the statements by writing the correct number in the box.

The first New Glenn rockets would have this many stages.

230

The Falcon 9 Rocket is approximately this many feet high.

318,000

The Saturn V rocket carried this many gallons of liquid oxygen.

51

The New Shepard rocket is this many feet tall.

2

The first stage of Von Braun's reusable rocket would be a huge rocket with this many engines.

60



True or False

Follow the instructions to complete the activity.

NAME

DATE

Using the information in *Building Reusable Rockets*, verify whether the following information is true or false. Check your answers in the book. List the page number where you found your information beside your answer.

Statement 1	The X-33 was designed to be launched upright.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number	<input type="text"/>
Statement 2	Lighter rockets require more force to move.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number	<input type="text"/>
Statement 3	At first, each Falcon 9 rocket was used only twice.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number	<input type="text"/>
Statement 4	Payloads can be anything from satellites that orbit Earth to spacecraft that travel to other planets.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number	<input type="text"/>
Statement 5	Rockets need a steering system.	<input type="checkbox"/> True <input type="checkbox"/> False	Page Number	<input type="text"/>



Falcon 9 Rocket

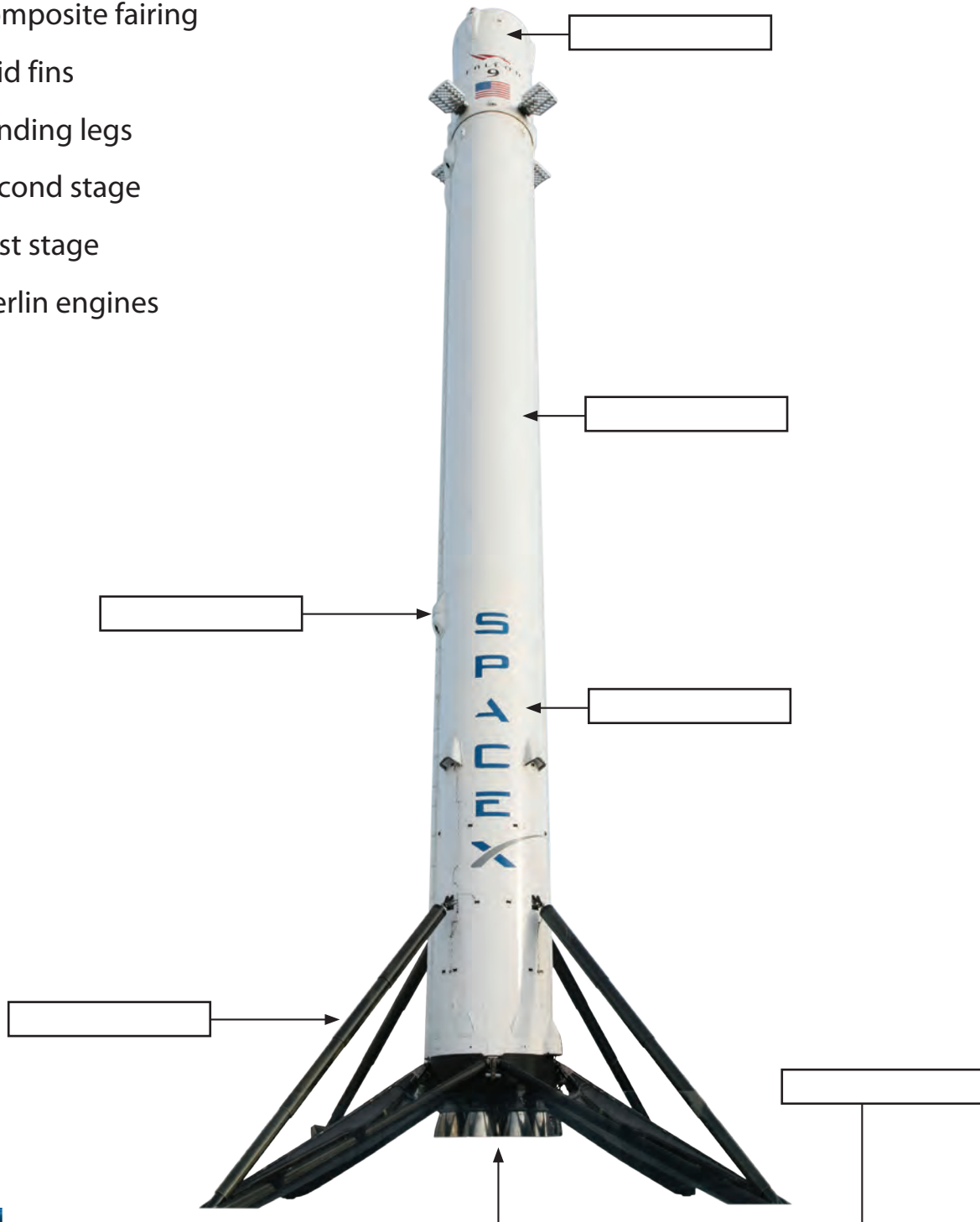
Follow the instructions to complete the activity.

NAME

DATE

Fill in the blanks in this diagram of the Falcon 9 Rocket.

- a. Composite fairing
- b. Grid fins
- c. Landing legs
- d. Second stage
- e. First stage
- f. Merlin engines



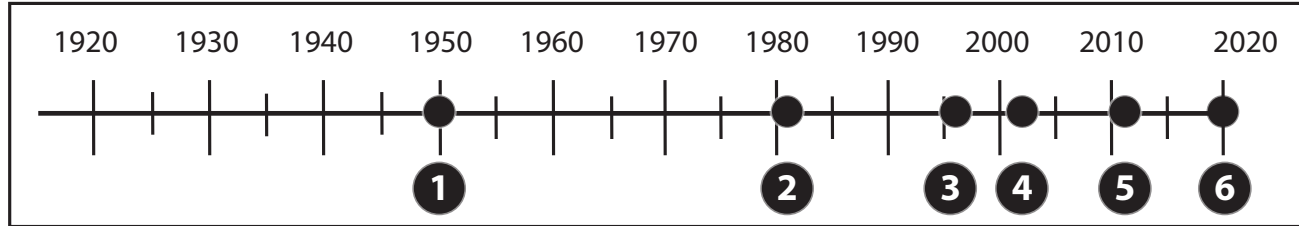
Timeline

Follow the instructions to complete the activity.

NAME

DATE

Number the events below in the order they should appear on the timeline. Write the number in the box beside each event. Check your answers with page 33 of the book.



The International Space Station was completed.

The first space shuttle was launched. It was the first partially reusable rocket.

During the decade starting this year, Wernher von Braun designed a reusable rocket.

Elon Musk founded SpaceX. The company creates reusable rockets.

Russia plans to begin testing a reusable rocket.

X-33, the first reusable rocket, was designed by NASA.



Fill in the Blanks

Follow the instructions to complete the activity.

NAME

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Use the information found in *Building Reusable Rockets* to help you complete the following activity.

1. Grasshopper was a Falcon 9 first stage with only one .
2. Making parts of the shuttle was supposed to save money on space launches.
3. Chinese began using rockets in the 1200s CE.
4. Wernher Von Braun was the main designer of the rocket.
5. The bell-shaped *Dragon* capsule holds on board the Falcon 9 rocket.
6. The first space shuttle was made up of four parts, including a shuttle orbiter that attached to the side of a huge tank.



Key Words Match-Up

Write the words from the list below in the box above the correct definition for each word.

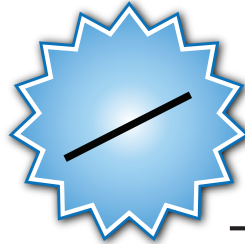
NAME

DATE

KEY WORDS

altitude	friction	satellites
atmosphere	orbit	stages
booster	payload	
capsule	propellants	

Your Score is



_____ %

1.
the layers of gases that surround a planet or moon

2.
the section of a spacecraft that carries the crew and often returns to Earth by parachute

3.
to repeatedly follow a curved path around another object because of gravity

4.
a combination of fuel and oxygen that burns in a rocket engine to create thrust

5.
segments of a larger rocket that drop off after using all of their fuel

6.
height above the ground

7.
the first stage of a large rocket, or a small rocket added to the side of a large rocket for extra thrust

8.
a force generated by the rubbing of one thing against another

9.
an object carried to space by a rocket or other vehicle

10.
objects or vehicles that orbit a planet or moon, often to collect information



Quiz

Test your knowledge by answering these quiz questions.

NAME

DATE

1

How many people can fit into the Blue Origin capsule?

2

What did the Saturn V do?

3

Who was Wernher von Braun?

4

What are the four forces in rocketry?

5

Why do engineers try to design rockets to be as light as possible?

6

What is the name of Elon Musk's space company?

7

What is the name of Virgin Galactic's latest *SpaceShipTwo* vehicle?

8

How many pounds of cargo can *Dream Chaser* carry?

