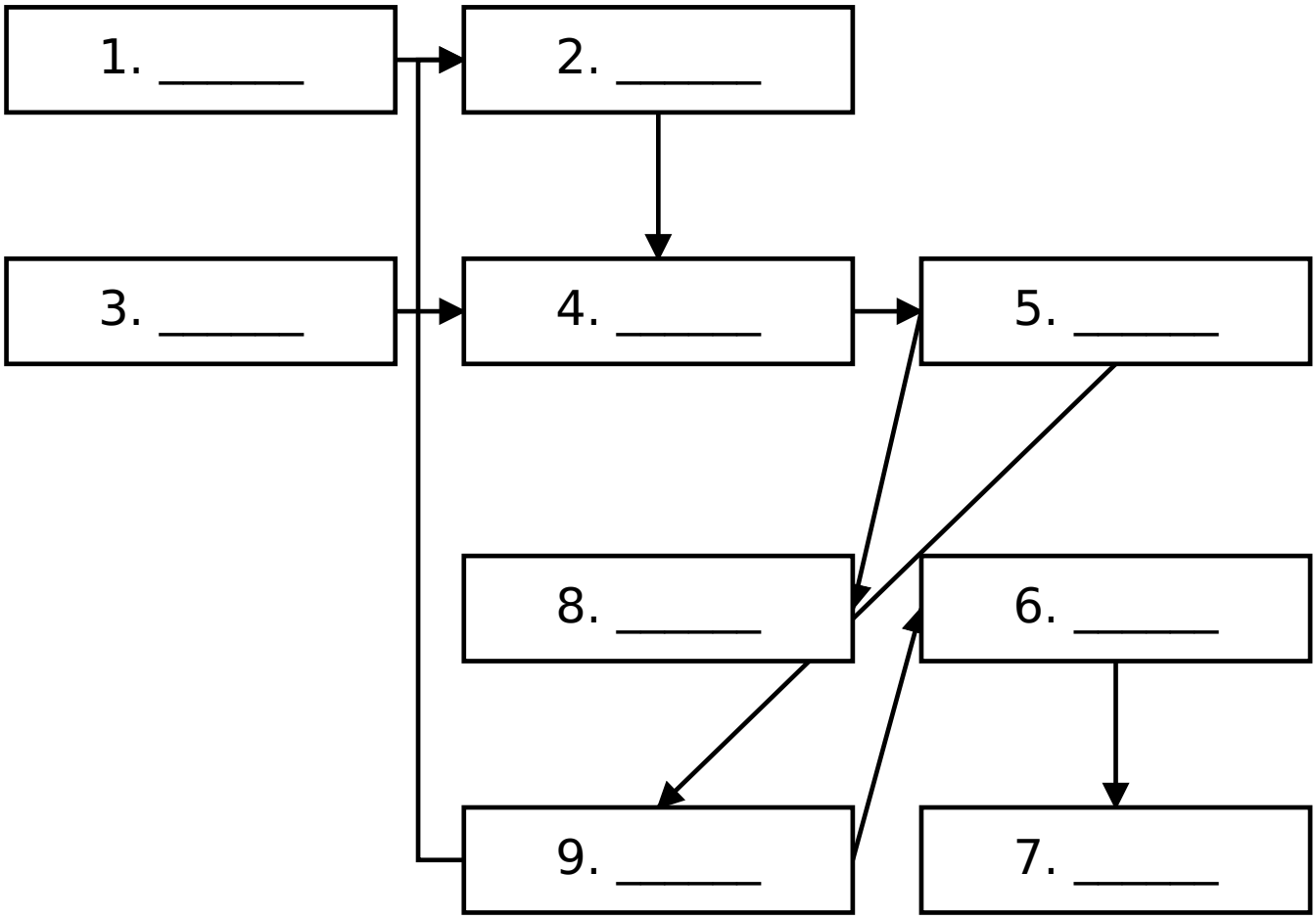
GRID & SILICON
Student sheet

Gas Turbines: From Hot Gas to Electricity

Name _____ Date _____

Keep the explainer beside you. You may look back for every answer.

Look closer



Word bank: Air · Compressor · Fuel · Burning chamber · Turbine · Generator · Electricity · Exhaust · Shaft

1. Which part squeezes air before fuel is burned?

2. Which connection turns both the compressor and generator?

1. Circle the best answer.

1. Which machine uses hot gas to produce rotating motion?

A. Fuel cell B. Battery cell C. Gas turbine

2. A plant needs air at higher pressure before burning. Which part does that job?

A. Exhaust outlet B. Compressor C. Generator

3. Fuel meets compressed air in which part?

A. Combustion chamber B. Generator C. Exhaust outlet

4. The hot gas stream weakens. What directly loses its driving push?

A. The incoming air temperature alone B. The fuel supply pressure C. Turbine blades

5. The compressor and generator turn with the turbine. What transfers that motion?

A. Exhaust duct B. Fuel pipe C. Shaft

6. A spinning shaft must supply a computer with electrical energy. Which part converts the motion?

A. Generator B. Combustion chamber C. Compressor

7. Hot gas leaves after pushing the blades. What is that outgoing flow called?

A. Exhaust B. Compressed intake air C. Incoming fuel

8. A plant captures heat from its exhaust. Why might that help?

A. The generator creates energy from nothing

B. Some fuel energy still leaves as heat

C. Exhaust is unused incoming fuel

9. An air inlet is blocked while fuel is available. What happens to normal power production?

A. Fuel alone keeps the same output

B. It cannot continue normally

C. The generator supplies replacement oxygen

2. Fill in the blank.

Use each word once.

Word bank: compressor · shaft · generator

1. A _____ raises incoming air pressure.

2. A _____ transfers turning motion between machine parts.

3. A _____ changes movement into electrical energy.

3. Label the diagram.

Complete the numbered blanks on page 1 using its word bank.

4. Think about it

1. You blow on a pinwheel. Which part of a gas turbine works in a similar way?

2. A hair dryer produces warm moving air. Which turbine energy steps does that remind you of, and what extra part makes electricity?