

BLM Answers

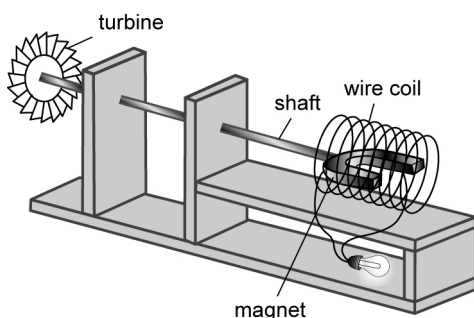
BLM 7-2 Build an Electric Generator

1. a) number of wire coils (10, 20, or 30)
b) current produced
2. a) magnet strength (weaker or stronger)
b) current produced
3. Answers will vary. Students should predict whether or not the number of coils in the wire will affect the amount of electric current produced, and whether the current will get stronger or weaker.
4. Answers will vary. Students should predict whether or not the strength of the magnet used will affect the amount of electric current produced, and whether the current will get stronger or weaker.

BLM 7-3 Chapter 7 Practice Test

1. h) nuclear power
2. b) hydroelectric power
3. i) solar panels
4. d) non-renewable energy
5. e) fossil fuels
6. c) one megawatt (MW)
7. f) electric generators
8. a) geothermal energy
9. a) F. An advantage of wind power is that it is non-polluting.
b) T
c) F. Burning natural gas produces greenhouse gas but not smog.
d) F. Power stations mainly supply electric energy to large communities that are connected to a central power supply.
10. Students should describe any one method to generate energy for each:
a) renewable energy: geothermal energy; solar panels; burning natural gas produced by rotting garbage or animal manure; wind; falling water
b) non-renewable energy: controlled nuclear reactions, burning fossil fuels

11.



12. Look for two advantages for using nuclear power such as:

- only a small amount of uranium is needed to produce a lot of electric energy
- nuclear power does not produce smog or greenhouse gases

Look for one disadvantage such as:

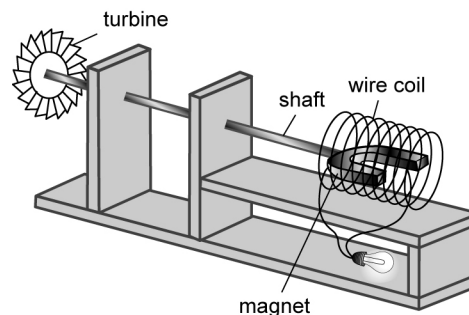
- produces dangerous radioactive waste that is difficult to handle and store

13. a) and b) Opinions will vary. Look for a fact-based point to support the opinion.

BLM 7-4 Chapter 7 Test

1. d) renewable energy
2. g) one megawatt (MW)
3. a) nuclear power
4. c) hydroelectric
5. b) turbines
6. h) geothermal energy
7. e) fossil fuels
8. f) electric generators
9. a) F. Scientists are concerned about greenhouse gases and how they might affect the climate.
b) F. An advantage of nuclear power is that it does not produce greenhouse gas.
c) T
d) F. Solar panels supply energy to buildings in remote areas that are not connected to power stations *or* nuclear power and hydroelectric power supply most of the electric energy for Ontario.
10. a)–c) Students should describe three ways to produce steam such as:
• nuclear power
• burning fossil fuels
• burning natural gas from waste
• solar farms
• geothermal energy

11.



12. Look for one of the following advantages and disadvantages of burning natural gas:

Advantages:

- does not produce smog
- can be produced from waste (making natural gas a renewable energy)

Disadvantages:

- burning natural gas produces greenhouse gas
- uses up natural gas that is formed as a fossil fuel

13. a) and b) Opinions will vary. Look for two fact-based points to support the opinion.

Supporting points for using more wind power include:

- wind is renewable energy
- large wind farms can generate a lot of electric energy
- wind power does not produce harmful waste products, greenhouse gases, or harmful pollution

Supporting points for using less wind power include:

- wind does not blow all the time so wind-generated energy must be backed up by other power sources and stored in batteries
- wind turbines sometimes kill flying birds
- burning fossil fuels or using nuclear power generates more electric energy and does it more easily than wind power