

NAME: _____

WHAT DID YOU LEARN ABOUT THE SCIENCE OF SPEED?

You just completed a unit about aerodynamics and its influence on an object's speed.
Share what you have learned about aerodynamics.

1 The science of aerodynamics studies:

- A** How fast a car or plane can move.
- B** The movement of air.
- C** How objects can change the air.
- D** The weight of objects.

2 What are three key aerodynamics principles?

- A** Drag, distance, and downforce
- B** Drafting, distance, and drag
- C** Drag, downforce, and dynamics
- D** Drag, downforce, and drafting

3 Drag occurs when:

- A** Air pushes against an object.
- B** Air enters an object.
- C** Air avoids an object.
- D** None of the above

4 Downforce is created when:

- A** Fast-moving air moves above an object and slow-moving air moves below it.
- B** Low-pressure air moves above an object and high-pressure air moves below it.
- C** High-pressure air moves above an object and low-pressure air moves below it.
- D** None of the above

5 True or false? Fast-moving air creates high air pressure.

- A** True
- B** False

6 True or false? When two cars draft, the area of low pressure behind the first car sucks the second car forward, causing it to move even faster.

- A** True
- B** False

7 True or false? Drafting is caused by aerodynamics adaptations to racecars.

- A** True
- B** False

8 The flaps on racecars that create drag:

- A** Help the cars move faster.
- B** Slow the cars down to better control their speed.
- C** Help cars increase speed during drafting.
- D** All of the above

9 Downforce is important to NASCAR racecars because:

- A** It helps the cars move faster.
- B** It makes it safer to speed around turns.
- C** It helps cars "stick" to the track.
- D** All of the above

10 In the world of NASCAR racing aerodynamics, engineers:

- A** Create car adaptations that help improve the safety and speed of racecars.
- B** Design helmets that help the drivers focus better when driving.
- C** Invent car adaptations that make the cars heavier and safer.
- D** Develop adaptations that enhance the communication between the car and the driver.