**A-Team Raceway Research**

**Resources**

<https://www.brainpop.com/science/motionsforcesandtime/distancerateandtime/>

<https://www.brainpop.com/science/motionsforcesandtime/acceleration/>

<https://www.brainpop.com/science/energy/kineticenergy/>

<https://www.brainpop.com/science/energy/forces/>

**Part 1: Vocabulary**

Explain each term in your own words.

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| Distance |  |
| Rate |  |
| Time |  |
| Speed |  |
| Velocity |  |
| Force |  |
| Energy |  |
| Acceleration |  |

**Part 2: Resource Questions**

1. What is distance and how is it found?

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2. What is speed and how is it found?

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3. What is kinetic energy and how does it relate to speed/distance?

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4. Describe and explain how different forces impact speed and distance.

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**Part 3: Find Your Own Resources**

1. How do different designs impact speed and distance?

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2. How does terrain impact speed and distance?

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**Part 4: Putting It Together**

1. When designing a car, how can you maximize speed and distance?

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2. What adjustments do you need to make to maximize speed and distance for off-road racing?

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