

Forces are pushes and pulls in a particular direction.



Figure 1

Figure 1 shows the first two hills of the Big Dipper with the train about to go down the first drop.

1. Draw an arrow showing the direction the train will be travelling in when it speeds up.
2. Draw an arrow showing the direction the train will be travelling in when it slows down.
3. What force makes the train travel faster?

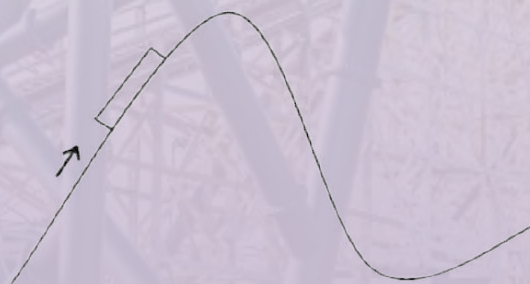


Figure 2

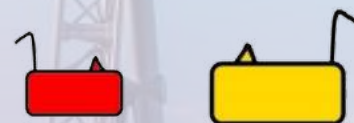
Figure 2 shows The Big One train being pulled up to the top of the first drop.

4. Draw an X at the point where the train will be travelling at its fastest.
5. As it travels around the track, can you think of two things which will take energy away from the train and slow it down?

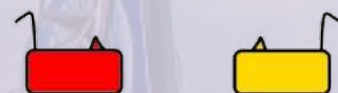
6. Why do you think The Big One train has round shiny surfaces?

7. There is electricity in the grid on the roof of the Dodgem ride. Each car is run by electricity. Draw a dodgem car and show how the electricity gets from the grid on the roof to the car.

8. The red dodgem is not moving. The yellow dodgem, which is twice as heavy and is travelling at a high speed, is about to hit the red one. Draw arrows to show which direction each dodgem will be travelling in after the collision.



9. The red and yellow dodgems are about to collide. Each dodgem is 300 kg and they are travelling towards each other at the same speed. Draw arrows to show which direction each dodgem will be travelling in after the collision.



10. Why do you think dodgems have big rubber bumpers all around the car?

11. At the end of the Rug Rats Lost River Ride, the boat plunges down a slide and into water. What does the water do to the speed of the boat?

