

## Forces in Action



You will be amazed to learn that many different forces play an important part in the game of bowling. Remember:



- A force can be a push or pull
- A force can change the speed or direction of an object
- We cannot see forces

1. Look at and feel a bowling ball. Can you think of some words to describe the balls surface? Why do you think is it like that?

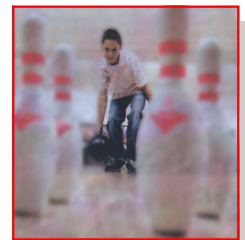


2. Watch as a ball is bowled along the lane. Describe or draw how the ball moves.

3. How can we speed the ball up?

4. What happens to the pins when the ball hits them? Why?

5. Look carefully at the bowling lane. Can you describe the surface of the bowling lane? What makes the bowling lane good for bowling on?



6. Can you show all the forces that are acting on this person as they bowl a ball at the pins? Use arrows to show the direction of the force.



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## **Forces in Action**



### **National Curriculum Links**

Science: Key Stage One - Sc4 2a, 2b, 2c

### **QCA Links**

Science: 1E 'Pushes and Pulls' and 2E 'Forces and Motion'



### **Learning Objectives**

Children will:

1. Observe and describe different ways of moving
2. Begin to understand that pushing or pulling an object can make it start or stop moving.
3. Know that pushing or pulling an object can make it change direction.
4. Know that a push or pull can also make an object speed up or slow down.

### **Activity**

Children to closely observe a bowling ball and the motion used to propel a bowling ball along the lane. Then children can describe their observations using the worksheet provided. They can draw pictures to illustrate their ideas as well as using more appropriate vocabulary. Plenty of discussion is suggested.

### **Resources Required**

- Selection of bowling balls
- A bowling lane
- Child worksheets
- Pens / pencils

### **Important Vocabulary**

push	pull	force	movement	direction
fast	slow	speed up	slow down	rotate
twist	turn	distance	slide	swerve