

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? *change shape, move* ✓
2. What are the two types of force? *non-contact force, contact force* ✓
3. What is the elasticity limit (彈性限度)?

When the object shape can't change back. ✓

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
| shape(形狀) | non-contact force (超距力) | contact force(接觸力) |
| spring(彈簧) | weight(砝碼) | elasticity limit (彈性限度) |

1. contact force is a type of force that needs the objects to touch for the force to work. ✓
2. The length(長度) of the spring is related to the force. ✓
3. A force can change the shape of an object. ✓
4. Magnetic force(磁力) is a non-contact force. ✓
5. Weight can measure force. ✓
6. A force can make an object move. ✓

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

It's contact force. ✓

2. What changes can be caused by the action of forces?

push more ✓

3. How do you think you can perform better?

don't push so hard or light. ✓

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
4. Under the elasticity limit of the spring, the heavier the suspended weight, the longer the length.
5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

A++

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force?
It'll change the shape, move.
2. What are the two types of force?
Non-contact force and contact force.
3. What is the elasticity limit (彈性限度)?
It's when the object can't change back.

Language

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Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?
It's a contact force game.
2. What changes can be caused by the action of forces?
push hard or less.
3. How do you think you can perform better?
push harder.

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
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change shape, move

2. What are the two types of force ?

non-contact force, contact force

3. What is the elasticity limit (彈性限度)?

When the object can't change back, it is elasticity limit.

Language

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After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

contact force

2. What changes can be caused by the action of forces?

push, and if use more power, it will be long, if use small power it will short.

3. How do you think you can perform better?

don't push so hard

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.

2. Force can be divided into contact force and non-contact force.

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2. What are the two types of force? *non-contact force and contact force.*
3. What is the elasticity limit (彈性限度)? *When the object shape can't change back, It's the elasticity limit.*

Language

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After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force? *contact force*
2. What changes can be caused by the action of forces? *push more or push less.*
3. How do you think you can perform better? *Don't have the water. I think why?*

Thinking: please read the sentence.

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Force and movement- The role of force**Warmer**

1. What happens when an object is subjected to force?
change motion
2. What are the two types of force?
3. What is the elasticity limit (彈性限度)?

Language

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A++

Force and movement- The role of force

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1. What happens when an object ^{物體} is subjected to force?

change shape, move

2. What are the two types of force?

non-contact, contact force

3. What is the elasticity limit (彈性限度)?

如果彈簧超過彈性限度，會不回去。

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It's contact force.

2. What changes can be caused by the action of forces?

push more push bit.

3. How do you think you can perform better?

桌子是平的，有磨擦力。

Thinking: please read the sentence.

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1. What happens when an object is subjected to force?
 變形 移動 ✓
2. What are the two types of force?
 接觸力 and 超距力 ✓
3. What is the elasticity limit (彈性限度)?
 變回原來的彈性限度 ✓

Language

| | | |
|--------------|---------------------------|-------------------------|
| force(力) | object(物體) 6 | influence(影響) |
| shape(形狀) 3 | non-contact force (超距力) 4 | contact force(接觸力) 1 |
| spring(彈簧) 2 | weight(砝碼) 5 | elasticity limit (彈性限度) |

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1. Is this game a contact force or a non-contact force?
 接觸力 ✓
2. What changes can be caused by the action of forces?
 方向 ✓
3. How do you think you can perform better?
 時間長(約20分鐘左右) ✓

Thinking: please read the sentence.

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A++

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1. What happens when an object is subjected to force ?

It will change shape and move.

2. What are the two types of force ?

non-contact force (超距力) - contact force (接觸力)

3. What is the elasticity limit (彈性限度)?

它能變會原狀

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After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

contact force

2. What changes can be caused by the action of forces?

push more or push little

3. How do you think you can perform better?

算好力要多大多小

Thinking: please read the sentence.

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A47

Force and movement- The role of force

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1. What happens when an object is subjected to force?
change shape and move
2. What are the two types of force?
non-contact force and contact force
3. What is the elasticity limit (彈性限度)?
指有彈性

Language

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After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?
Contact force

2. What changes can be caused by the action of forces?
Push more or Push a little bit.

3. How do you think you can perform better?
桌子是平面且具有磨擦力

Thinking: please read the sentence.

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Force and movement- The role of force

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1. What happens when an ^{物體} object is subjected to force?

It's will change shape and move.

2. What are the two types of force?

non-contact force and contact force.

3. What is the elasticity limit (彈性限度)?

When the object can't change.

Language

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2. The length(長度) of the spring is ^{相關} related to the force.

3. A force can change the shape of an object.

4. Magnetic force(磁力) is a non-contact force.

5. Weight can measure force.

6. A force can make an ^{測量} object move.

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Contact force.

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Push more or Push a little.

3. How do you think you can perform better?

Change the power.

Thinking: please read the sentence.

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5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

object = 物體
 subject = 影響
 force = 力量
 changes = 改變
 caused = 造成
 perform = 做
 elasticity
 limit = 彈性限度

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? It will change the shape, ^{move}
2. What are the two types of force? non-contact force and contact force,
3. What is the elasticity limit (彈性限度)? When the object can't change back to the same shape, it the elasticity limit. ^{will call}

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1. Is this game a contact force or a non-contact force?

It is a contact force.

2. What changes can be caused by the action of forces?

You need to push it harder.

3. How do you think you can perform better?

I think you can practice more, or change the force.

Thinking: please read the sentence.

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2. What are the two types of force?
3. What is the elasticity limit (彈性限度)?

影響

change shape, move

non-contact force and contact force
當物體無法變回原本的形狀

Language

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就超過
彈性限

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1. Is this game a contact force or a non-contact force?

It's a contact force.

2. What changes can be caused by the action of forces?

You need push more, use more power.

3. How do you think you can perform better?

You need practice more.

Thinking: please read the sentence.

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when the object can not change back.

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contact force
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push more
3. How do you think you can perform better?
have a lucky day → get more water.

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move. change shape. ✓

2. What are the two types of force?

non-contact force and contact force. ✓

3. What is the elasticity limit (彈性限度)?

能回到原本形狀的限度 ✓

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It's contact force ✓

2. What changes can be caused by the action of forces?

Push the bottle. ✓

3. How do you think you can perform better?

控制力道的大小 ✓

Thinking: please read the sentence.

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move, change shape. 物體
2. What are the two types of force?
non-contact force, contact force.
3. What is the elasticity limit (彈性限度)?
彈性的極限.

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Contact force.

2. What changes can be caused by the action of forces?
Push the bottle, it can be longer.

3. How do you think you can perform better?
Change your force a little.

Thinking: please read the sentence.

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move - change - shape

2. What are the two types of force ?

non-contact force

contact force

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彈性的極限

Language

| | | |
|--------------|---------------------------|-------------------------|
| force(力) | object(物體) ✓ | influence(影響) |
| shape(形狀) ✓ | non-contact force (超距力) ✓ | contact force(接觸力) ✓ |
| spring(彈簧) ✓ | weight(砝碼) ✓ | elasticity limit (彈性限度) |

- contact force is a type of force that needs the objects to touch for the force to work.
- The length(長度) of the spring is related to the force.
- A force can change the shape of an object.
- Magnetic force(磁力) is a non-contact force.
- weight can measure force.
- A force can make an object move.

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

contact force

2. What changes can be caused by the action of forces?

push the bottle

3. How do you think you can perform better?

chang your fore a little

Thinking: please read the sentence.

- The action of force can change the shape and state of motion of an object.
- Force can be divided into contact force and non-contact force.
- When the force of the spring is different, the length of extension is also different.
- Under the elasticity limit of the spring, the heavier the suspended weight, the longer the length.
- In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? 一動、交反、互反 A+
2. What are the two types of force? 超距力、接觸力 ✓
3. What is the elasticity limit (彈性限度)? 彈性的極限 ✓

Language

| | | |
|--------------|---------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
| shape(形狀) ✓ | non-contact force (超距力) ✓ | contact force(接觸力) ✓ |
| spring(彈簧) ✓ | weight(砝碼) | elasticity limit (彈性限度) |

1. Contact force is a type of force that needs the objects to touch for the force to work. ✓
2. The length(長度) of the 彈簧 is related to the force. ✓
3. A force can change the 形狀 of an object. ✓
4. Magnetic force(磁力) is a 超距力. ✓
5. 砝碼 can measure force. ✓
6. A force can make an 物體 move. ✓

← Please in English.

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

接觸力 ✓

2. What changes can be caused by the action of forces?

Push the bottle. ✓

3. How do you think you can perform better?

chang your force a little. ✓

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
4. Under the elasticity limit of the spring, the heavier the suspended weight, the longer the length.
5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

Wa te



Force and movement- The role of force

Warmer

1. What happens when an ^{物體} object is subjected to force?
move, change shape.
2. What are the two types of force?
non-contact force, contact force.
3. What is the elasticity limit (彈性限度)?
彈性的極限.

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
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Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?
contact force.
2. What changes can be caused by the action of forces?
Push the bottle.
3. How do you think you can perform better?
change your force a little.

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
4. Under the elasticity limit of the spring, the heavier the suspended weight, the longer the length.
5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

A+

Aqueous solution- electrical conductivity

Warmer

1. In addition to conductivity, what other properties does the aqueous solution have?

味道-顏色 Acidity 特性 水溶液

2. How can we use LED lights? Acidity ✓

?

Language

| | | |
|--------------------|--------------------|-------------------------|
| LED(發光二極體) | circuit(電路) | conduct electricity(導電) |
| Traffic sign(交通號誌) | Electric shock(觸電) | open circuit(斷路) |

- Paper clips can conduct electricity. ✓
- Observe the Traffic sign, traffic will be smooth. ✓
- Turn off the switch to form an open circuit. ✓
- This LED design is great. ✓
- Easy to get an electric shock with wet hands. ✓
- Salt water is easy to conduct electricity. ✓

Experiment

| | | |
|-------|---------|-----------|
| title | purpose | equipment |
| step | result | discuss |

| | |
|-----------|---------------------------------------|
| step | The process of the experiment. |
| purpose | What the experiment wants to prove. |
| result | Something produced by the experiment. |
| title | About the name of this experiment. |
| discuss | Description based on the results. |
| equipment | Things needed for the experiment. |

Thinking

| | | |
|------------------|------------------------|------------------------|
| K(What I know) | W(What I want to know) | L(What I have learned) |
| 知道酸到鹹有 0-14 ✓ | 知道其他水溶液的 英文 ✓ | 我們竟記得一些 水溶液的英文 ✓ |

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? change shape and move
2. What are the two types of force? non-contact force and contact force
3. What is the elasticity limit (彈性限度)? 拉 spring 直到不能拉

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
| shape(形狀) | non-contact force (超距力) | contact force(接觸力) |
| spring(彈簧) | weight(砝碼) | elasticity limit (彈性限度) |

? No.
是無接觸力
力能變厚化

1. contact force is a type of force that needs the objects to touch for the force to work.
2. The length(長度) of the shape is related to the force.
3. A force can change the shape of an object.
4. Magnetic force(磁力) is a non-contact force
5. weight can measure force.
6. A force can make an object move.

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?
contact force
2. What changes can be caused by the action of forces?
push move
3. How do you think you can perform better?
luck lucky

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
4. Under the elasticity limit of the spring, the heavier the suspended weight, the longer the length.
5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

A+++

Force and movement- The role of force**Warmer**

1. What happens when an object is subjected to force? Change, shape, move.
2. What are the two types of force? non-contact force, contact force.
3. What is the elasticity limit (彈性限度)? When the object can't change back.

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
| shape(形狀) | non-contact force (超距力) | contact force(接觸力) |
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6. A force can make an object move.

Content**Cup Sliding Game**

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

Contact force.

2. What changes can be caused by the action of forces?

push more.

3. How do you think you can perform better?

locky. lucky.

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
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簡豆苟

A++

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? *物體 影響 力*
 move . change shape
2. What are the two types of force?
 non-contact force . contact force
3. What is the elasticity limit (彈性限度)?
 when object can't change back.

Language

| | | |
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| force(力) | object(物體) | influence(影響) |
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Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?
 contact force
2. What changes can be caused by the action of forces?
 Push big forces and push small forces
3. How do you think you can perform better?
 change force

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
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5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? change shape. move
2. What are the two types of force? non-contact force, contact force
3. What is the elasticity limit (彈性限度)?
當一個物體變不回原來的形狀時,就達到了它最大的彈性限度

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
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Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

It is a contact force.

2. What changes can be caused by the action of forces?

You need to push it harder.

3. How do you think you can perform better?

I think you can practice more.

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
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5. In a tug of war(拔河比賽), the rope is subjected to two opposite forces.

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? *change shape, move*
2. What are the two types of force? *non-contact force and contact force.*
3. What is the elasticity limit (彈性限度)? *When the object can't change back to the same shape, it will call the elasticity limit.*

Language

| | | |
|------------|-------------------------|-------------------------|
| force(力) | object(物體) | influence(影響) |
| shape(形狀) | non-contact force (超距力) | contact force(接觸力) |
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4. Magnetic force(磁力) is a non-contact force.
5. Weight can measure force.
6. A force can make an object move.

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

It is a contact force.

2. What changes can be caused by the action of forces?

You need to push it harder.

3. How do you think you can perform better?

Use more force.

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
2. Force can be divided into contact force and non-contact force.
3. When the force of the spring is different, the length of extension is also different.
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Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force? Change shape, move ✓
2. What are the two types of force? non-contact force - contact force ✓
3. What is the elasticity limit (彈性限度)? When the object can't change back. ✓

Language

| | | |
|------------|-------------------------|-------------------------|
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1. contact force is a type of force that needs the objects to touch for the force to work. ✓
2. The length(長度) of the spring is related to the force. ✓
3. A force can change the shape of an object. ✓
4. Magnetic force(磁力) is a non-contact force. ✓
5. Weight can measure force. ✓
6. A force can make an object move. ✓

Content

Cup Sliding Game

Using the bottle filled with water, slide the game on the table, who can get closer to the edge of the table is the winner.

After the game, discuss the following questions with the group

1. Is this game a contact force or a non-contact force?

Contact force. ✓

2. What changes can be caused by the action of forces?

Push more. ✓

3. How do you think you can perform better?

Locky. ✓

Lucky ✓

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
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A+

Force and movement- The role of force

Warmer

1. What happens when an object is subjected to force?
 move, change shape. ↑ 物體 ↓
2. What are the two types of force?
 non-contact force and contact force.
3. What is the elasticity limit (彈性限度)? When object can't change back.

Language

| | | |
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3. A force can change the shape of an object.
4. Magnetic force(磁力) is a non-contact force.
5. force can measure force.
6. A force can make an object (move.) → 移動



Weight

Content

Cup Sliding Game

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1. Is this game a contact force or a non-contact force?

contact force.

2. What changes can be caused by the action of forces?

push they're.

3. How do you think you can perform better?

不要讓cup到出 water

Thinking: please read the sentence.

1. The action of force can change the shape and state of motion of an object.
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