Name: _____ Date: _____

Why a Revolving Door Keeps the Wind Out

Circle group

It is a freezing day. A regular door lets cold air in each time it opens. A revolving door fixes that.

A revolving door has three or four walls. They are called wings. The wings turn around a pole in the middle. They sit in a round room with glass sides. A person pushes a wing, and the door turns. Other people can walk in on the other side.

Here is the trick. The wings touch the round wall. At all times, one wing blocks the way. Air from outside cannot rush straight in.

So warm air stays in during winter. In summer, cool air stays in a building with air conditioning. Less heat and cool air is wasted.

A revolving door works best when you walk at a steady pace.

Questions

1. What problem does a revolving door fix?

_____

_____

2. What are the walls of a revolving door called?

_____

_____

3. What do the wings turn around?

_____

_____

4. Why can air not rush straight through?

_____

_____

5. What does a revolving door do in summer?

_____

_____

6. Why might a store with a revolving door spend less on heating?

_____

_____

Words to know

revolving: turning around a center point
wings: the flat walls that turn inside a revolving door
pole: a long, thin, straight post

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Why a Revolving Door Keeps the Wind Out

Triangle group

On a freezing day, a regular door lets a rush of cold air into a building every time someone walks in. A revolving door was made to solve that problem.

A revolving door has three or four walls, called wings, that turn around a pole in the middle. The wings sit inside a round room with glass sides. As a person pushes on a wing, the whole door turns. Other people can enter on the other side at the same time.

The trick is that the wings are always touching the round wall. At every moment, at least one wing is blocking the way. This means the air outside cannot rush straight through to the inside.

That keeps warm air in during the winter. In the summer, it keeps cool air from leaking out of a building that has air conditioning. Less heating and cooling is wasted.

A revolving door works best if you walk at a steady pace and do not push too hard.

Questions

1. What problem was the revolving door made to solve?

_____

_____

2. What are the walls of a revolving door called?

_____

_____

3. What do the wings turn around?

_____

_____

4. Why can air not rush straight through a revolving door?

_____

_____

5. What does a revolving door do for a building in the summer?

_____

_____

6. Why might a store with a revolving door spend less money on heating?

_____

_____

Words to know

revolving: turning around a center point
wings: the flat walls that turn inside a revolving door
pole: a long, thin, straight post
blocking: getting in the way so nothing can pass
leaking: slowly getting out through a small gap

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Why a Revolving Door Keeps the Wind Out

Square group

On a bitterly cold day, an ordinary door allows a rush of freezing air to pour into a building each time someone walks through. The revolving door was designed to solve exactly that problem.

A revolving door has three or four walls, known as wings, which turn around a pole in the center. The wings sit inside a round chamber with glass sides. As one person pushes against a wing, the entire door rotates, and other people can enter from the opposite side at the very same moment.

The clever part is that the wings always touch the curved wall. At every instant, at least one wing is blocking the opening, so the air outside can never rush straight through to the inside.

As a result, warm air remains inside during the winter. In the summer, cool air is kept from leaking out of a building that has air conditioning, and far less heating and cooling is wasted.

A revolving door works best when people walk at a steady pace and avoid pushing too hard.

Questions

1. What problem was the revolving door designed to solve?

_____

_____

2. What are the walls of a revolving door called?

_____

_____

3. What do the wings turn around?

_____

_____

4. Why can the outside air never rush straight through the door?

_____

_____

5. What does a revolving door do for an air conditioned building in the summer?

_____

_____

6. Why might a store with a revolving door spend less money on heating?

_____

_____

Words to know

revolving: turning around a center point
wings: the flat walls that turn inside a revolving door
pole: a long, thin, straight post
blocking: getting in the way so nothing can pass
leaking: slowly getting out through a small gap

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Why a Revolving Door Keeps the Wind Out

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Why a Revolving Door Keeps the Wind Out

Easier · 131 words · Flesch-Kincaid grade 2

1. Cold air rushing in when a regular door opens.
2. Wings.
3. A pole in the middle.
4. One wing is always blocking the way.
5. It keeps cool air in the building.
6. Less warm air gets out, so less heat is wasted.

Triangle: Why a Revolving Door Keeps the Wind Out

This passage · 165 words · Flesch-Kincaid grade 4.7

1. Cold air rushing in every time someone opens a regular door.
2. Wings.
3. A pole in the middle.
4. At every moment at least one wing is blocking the way.
5. It keeps cool air from leaking out.
6. Less warm air escapes, so less heat is wasted.

Square: Why a Revolving Door Keeps the Wind Out

Harder · 175 words · Flesch-Kincaid grade 7.7

1. Freezing air rushing in every time someone walks through an ordinary door.
2. Wings.
3. A pole in the center.
4. At every instant at least one wing is blocking the opening.
5. It keeps cool air from leaking out.
6. Less warm air escapes, so less heat is wasted.