



Build & Learn *with* K'NEX

Ferris Wheel Fun!

Age: 8+

Objective:

Learn all about Ferris Wheels, from the first one ever built to the tallest ever created. Then, test your knowledge by building one of your own.

Materials Needed:

- K'NEX Parts (see parts list on next page)

Discussion Point #1:

Start off by asking your child some general questions about the Ferris Wheel.

- How old is the Ferris Wheel ride?
The Ferris Wheel was designed by American Engineer George Ferris in 1893 (over 100 years old)
- How tall do you think the first Ferris Wheel was?
This original was 264 feet high and had room for over 2000 people.
- How tall was the tallest Ferris Wheel ever?
The tallest Ferris Wheel ever built was 328 feet tall and was made in London in 1894.

Discussion Point #2:

Ask your child for examples of other purposes a Ferris Wheel could be used for in addition to it being a ride.

Some possible answers:

- A way to stay cool on a hot day.
- Lookout tower.
- A place to watch fireworks from.

Discussion Point #3:

Have your child discuss how they would plan a Ferris Wheel assembly at a carnival site.

Some possible answers:

- Assemble away from tall trees.
- Assemble away from Power Lines.
- Assemble where the best view is available.

Activity #1:

Have your child build a Ferris Wheel out of K'NEX pieces. For those who do not want to design and build from their imaginations, use the picture of a Ferris Wheel on the next page for inspiration!





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Ferris Wheel Fun! (Continued)

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11	16	2	22	10	4	3	4	3	36
20	16	7	1	4	2				



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Activity #2:

Have your child add more pieces to one of the seats to make it larger. Have him/her observe and discuss the effect this has on the wheel in motion and at rest.

This action will increase the weight of that seat which will send the Ferris Wheel out of balance so that it will not turn.

Your child should then try the experiment on other seats and observe the results.

Activity #3:

Ask your child to identify the wheel and axle of the model Ferris Wheel.

Challenge your child to lengthen the axle and add a second wheel with swings.

Questions to ask after Ferris Wheel activities are complete:

1. What makes it possible for the swings to rotate?
Gravity pulls the swing down; the Rod can move easily in the hole in the gray connector. This is important so that the swings remain parallel to the ground and the passengers do not fall out.
2. What is the most important rod used in the wheel?
It is the center Rod, or axle without which, the wheel would not revolve