Waves are connected particles or oscillators, which are connected. An oscillator is a particle which swings. When a few particles are connected and one of them starts to swing the other particles begin to swing, too. A wave was created.

This explanation is very abstract. Therefore we will use an image again. In order to understand the physical phrase: wave. Imagine a plane lake. Throwing a stone into the lake will create wave in a circular shape around the impact location. Lets connect the this image with the abstract explanation of the beginning.

Where are the particles or oscillators in this example?

The particles are the water molecules , which are connected. By watching water, you cannot see the molecules , but water consists of molecules .
(To learn more about the connection of water
molecules
, have a look at the wiki-article:
adhesion
.)

At least one water molecule will start swinging, when it is hit by the stone. The stone push it down and triggers the vibration. For sure the stone is big and will hit a lot of
molecules
, which start vibrating. If the
moleclues
would not be connected, just the parts of the water, which is hit by the stone would move. But as we know the wave spread and a lot of water is moved and not only the impact area.

Now we have the connected particles, which are able to vibrate.

Why can I see a wave, which is moving?

The wave is "moving", because the vibration spreads step by step. The first oscillator is triggered by the stone, the second will be triggered by the first molecule , the third molecule will swing because of being triggered by the second molecule and so on.

This is the theory of a wave. One very important characteristic of a wave that has to mentioned is that a wave does not transport material. The molecule which is triggered by the stone just swings and does not move in the direction of the wave. The oscillators trigger each other but they do not move. What is movin is just the wave or to be more precise the spreading vibration of the first molecule , but not the molecule it self.

Imagine a Mexican wave. The action of standing up is moving and not each person. Therefore it is not possible to transport material with wave, only energy. In order to trigger a movement, you have to invest energy. The movement spreads, therefore energy spreads.