

# Factory Network

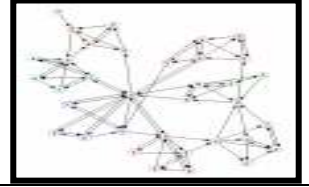
## Engage:

You have seen and worked with networks so let's make some observations about a network when compared to the inner workings of a factory. In your notebook, make a space for "Observations" and make some observations from the following prompts:

Describe the components necessary for a factory to effectively and efficiently make Pez etc...

Identify other examples besides a factory that function in a similar fashion.

Create a network (like the cell phone network) based off of the video.



Components of a factory:

Other examples:

Factory network:

**Explore 1:**

Directions: You will be comparing three types of cells under magnification. During this you should be keeping track of your data (drawings/qualitative and quantitative observations) in your laboratory book or packet.

Materials:

- Microscope
- Prepared slides
- Laboratory book

Observations:

Drawings:

Cell 1	Cell 2	Cell 3

Answer the following questions in your laboratory book or packet.

1. What things did you find in common between the cells you looked at?

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2. Were there any differences between the cells? If so list characteristics that differed.

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3. Describe some of the parts that you see in your cells. Take a guess as to what their jobs in the cell are.

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**Explore 2:**

You have had a good introduction into cells this far but now we need to delve a little deeper. You will be making more observations of cells but this time you will be looking at several pictures of cell parts and matching those parts to their places in the generalized cell...

**Elaborate:** Now that you have a little more background concerning cells, let's look at the cell phone network again.

1. What part of the cell would 3E represent and why?

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2. What would 5C represent and why?

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3. On the network there are sub-networks (called motifs)...Do you think that motifs exist in cell networks? Explain your answer.

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4. In what ways does this network sufficiently represent the cell?

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5. In what ways does this network fail to represent the cell?

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6. Go back and look at your network you created for the Pez factory...
  - a. Re-label with the names of organelles

7. Is the Pez factory network you created a better representation of the cell than the cell phone network supplied to you? Explain why it is or why it isn't.

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