

# Connect the Dots

## Purpose

*Connect the Dots* is a more challenging tool and illustrates more complex ideas than those in the first two activities. Younger participants may not be ready for this activity. It guides the group in creating a Google spreadsheet with information about people with respect to a single, simple issue. Participants then “see” what this information looks like when presented in a “network diagram,” or map. Some participants will appreciate that the online tool is based on a computer algorithm that measures the strengths and directions of specific connections. All participants will gain awareness of network mapping and understand that complex interconnections may at first appear to be very simple. Participants will be encouraged to think about how networks affect the flow of information in the digital age.

## Learning Goals

### Participants will:

- Understand the concept of a network and basic elements such as nodes and connections
- Understand the concepts of “degree” and “centrality” and why the latter is powerful
- Analyze a simple network that they are a part of—using an online network analysis tool—and comprehend the resulting visual “network map”
- Appreciate the value of examining networks
- Reflect on how networks can affect the flow—especially the sharing—of information, especially in a digital universe

## Time

30 Minutes

## Supplies

- Computers (*1 for every 3 participants*)
- Projector and access to the Internet for all computers
- Large pieces of paper (*roughly 2 feet x 3 feet*)
- Thick crayons or markers
- Several large tables or floor space or tape to stick paper to walls so participants can draw

## Facilitator Preparation

**This activity requires that the facilitator understand how to create a [Google Sheet](#) and guide participants in collaboratively entering simple data. (Instructions are provided at this [link](#).)**

The facilitator should familiarize him/herself with the glossary of network terms (see below) and with the sample network diagrams provided in the Connect the Dots tool (<https://civicidea.databasic.io/en/connectthedots/>). Then, the facilitator should practice creating a Google spreadsheet and uploading the data into the tool. To prepare for the activity learners will carry out together, create a list of about five to

seven typical locations participants in this group are likely to gather within their own communities (school, park, place of worship, coffee shop, etc.) Create duplicate copies of this list to give participants or be ready to write it out on a black/white board at the beginning of the activity. Preparation time for this activity will vary for different facilitators, depending on their familiarity with Google spreadsheets and network diagramming.

## INVESTIGATE

# Connect the Dots, *continued*

### Introduce the Activity to Participants

Begin with several open-ended questions to introduce the idea of a network.

- Everyone here today is part of a special “group.” That is, you’re all participants in this curriculum. But each of you is also part of many other groups, and some of these overlap and some don’t. Can you think of any other group you’re **all** part of? (*Perhaps all are in a certain age group, or all from a specific geographic area. If participants only mention very obvious ones, suggest a few more subtle ones about their behaviors or preferences—for example, did they all eat breakfast or a specific thing for breakfast?*)
- Can some of you tell us a few important groups or groupings (characteristics you have in common with others) that you’re sure **not everyone** here today shares with you? (*Allow participants to point out ways in which they are unique from others. Let participants volunteer these characteristics about themselves, rather than pointing out how others in the group may be “different.”*)
- Now, can someone tell me what a network is? (*Participants may suggest a number of ideas that may be helpful. Simple definitions include: a system of intersecting horizontal and vertical lines; a group or system of interconnected people or things; a web, mesh, lattice matrix. In a network, different things crisscross with each other. That’s what gives it strength. A network of people is not just a homogeneous group, but a collection of people who are connected to each other in some way, but have both things in common and things that are not in common.*)

### Introduce and Demonstrate the Tool

Explain to participants that they will be experimenting today with a tool that analyzes networks and also creates maps or diagrams of networks. Open *Connect the Dots* (<https://civicidea.databasic.io/en/connectthedots/>).

Participants are also encouraged to go to <https://graphcommons.com/> to explore the different networks that groups are creating and analyzing. Go to one of the sample networks. Les Misérables Character Co-occurrence may be the easiest one to explain to participants. Explain that the network diagram captures

connections between people, organizations, or things.

Point out the **nodes** (dots) and **edges** (connections) on the diagram and explain what they represent. Keep “color” on “community.” This highlights that the network actually consists of many groups that are linked together by certain people who belong to more than one group.

Explain the meaning of the other terms in the glossary below (**degree** and **centrality**.) (It might be good to create simple diagrams of a node with a high degree and a node with high centrality, to illustrate the difference. This could be done on a blackboard if it isn’t uploaded.) The concept of **centrality** is particularly important. This is a node that may or may not have connections to a lot of other nodes, but it is connected to nodes in several different groups. You can ask participants how common or rare it is to find someone who connects with a lot of groups.

### Glossary of terms for the facilitator to explain to participants in the course of the demonstration:

**Node:** The “dots” on the map. These represent the central organizing thing (in our examples, a person) whose connections/relations you are analyzing.

**Edge:** A connection between one node and another node (lines on the map).

**Degree:** The number of connections a node has.

**Centrality:** Scores how much of a “connector” a node is. A high score means lots of nodes can connect to other nodes by first connecting to this one.

### Launch the Activity

#### Part 1—Group activity

1. Explain to participants that, together, you’re going to create a simple network diagram of people in the room and the places they like to gather.
2. Facilitator creates a public Google Spreadsheet and writes the short url on a blackboard/whiteboard so participants can all open it up. Add a header row with two columns: “Name” and “Place.”

## INVESTIGATE

# Connect the Dots, *continued*

3. Break the room into pairs of participants. Give the teams a choice of various public community spaces to choose from and tell them to select a type of space as their topic (for example: public parks or restaurants in the community) Ask each team to declare their chosen topic/space.
4. Tell each person to add three rows to the shared spreadsheet, each including their name in the first column and then their topic choice in the next (one row for each choice). Tell them it is fine if they choose the same topic.
5. Go into Connect the Dots and copy and paste the person–topic data into the Paste Data tab. Click on Graph.
6. Discuss the output. The diagram of their data is on the left, showing the connections from people to places. Introduce the two types of scores under the chart, which summarize the connection between nodes. Discuss the concept of centrality, showing the top “connectors” in the group.

### Part 2—Team activity

1. Break the room into groups of three, each with a computer.
2. Ask each group to pick a dataset to analyze. They can choose the one they just created or one of the sample sets.
3. Their task is to look for interesting insights into the data based on the network diagram. They should be prepared to demonstrate the diagram to the group and explain what they found interesting and why.
4. Give them 10 minutes.

### Part 3—Sharing of results

1. Each team projects its map to the group and explains what they found interesting and why.
2. The facilitator should help moderate the team presentations to make sure everyone understands the major elements of the diagrams.

## Debrief and Reflect

**End the activity with several open-ended questions to encourage sharing and reflection, such as:**

- Do you think a network diagram is a useful way of visualizing relationships between people? (*Why/why not? Did they find the activity challenging?*)
- What are the benefits and limits of analyzing data as a network? (*Could their findings have been discovered in the spreadsheet version of these data?*)
- Why did we do this activity in a module about media literacy?
- Do you think networks and network maps are especially relevant to a digital age? (*Why/why not?*)