

Making Maps

Overview

In this PDF, you will find instructions for the **Map Making** activity. You will need a large-ish piece of paper and some scrap paper, construction paper, scissors, tape, glue, and string.

Find a space, preferably on the floor or a table that is the appropriate height for the child. This should be a space where you can easily lay out all of our materials in a orderly way, without immediate clutter or distraction. You will need a bit of space.

This activity is intended for children ages 3 - 9; we encourage you to adapt to your child(ren) and circumstances as you see fit.

Key Concepts and Connections

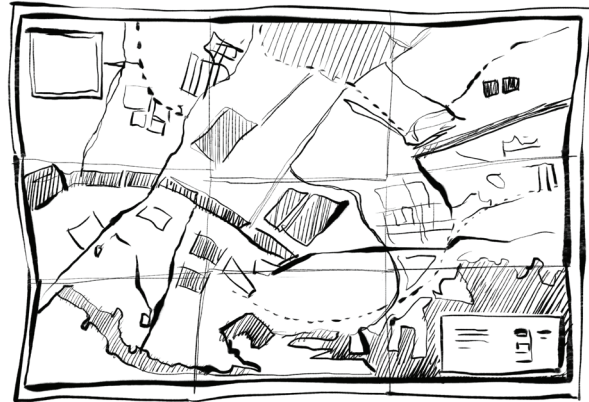
Mapping

Representation

Abstraction

Navigation

Making Maps



Map making is called “cartography,” and people have been making maps for thousands of years. Throughout history, maps have helped adventurers navigate new places, they have helped people encode information – maybe to share secrets about where something is hidden – and they have helped city-builders plan, to create places like your home and school and park, and the roads in between.

It might seem like maps are simple, that they just show what a place looks like from a bird’s eye view. But in fact, every map is different, it shows an abstraction of a place, in a specific way. When we make maps, we have to think about its purpose – Navigating? Encoding? Planning? – and we have to think about what information is useful and important to show. If the goal is to plan out where you will put your desk, lamp, and bed, it’s probably not a good idea to include your school and park. This means we also have to think about the scale – how big is the space you are showing, and how big is the map?

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Activity 1: Make a Map

Objective

Children will learn what a map is, and learn how to create a bird's-eye-view map. Through this activity, children will learn about representation and abstraction. They will also understand the process of making a map, and how this process includes decisions about what to include, and what to exclude.

Materials

- assorted paper: construction paper or whatever you have on hand works—even magazines and newspaper. Color is helpful to match the space. You can also start with your little ones by painting paper with quick watercolor or paint washes.
- tape
- glue
- scissors

Setting Up

1. Cut some pieces of paper that you will likely need, depending on the room that you have chosen to map. Identify the potential key objects and features in the room, and create paper cutouts to represent them. For example, you may have the dining room table, and chairs, or a couch, or a rug...imagine what would be visible from above, and how it appears from above. Include enough scraps and such so that if the child wants to create additional pieces, they can do so when making the map.
2. Create your base map. This will be the map and boundary that you and the child(ren) will use to place the items to create the map. Make sure that it is somewhat accurate in its scale, but of course, this is an approximation. You will be drawing the lines that outline the room (such as walls) and leave space for doorways.
3. Find a spot clear of clutter and distraction, and align your base map with the room you are mapping, i.e. it is not upside down - make sure that you are facing the same direction in the room as the top of the map. Lay out all of the pieces.

Key Questions

Today we are going to create a map! What is a map? Have you ever seen a map? Where did you see it? Why do we use maps?

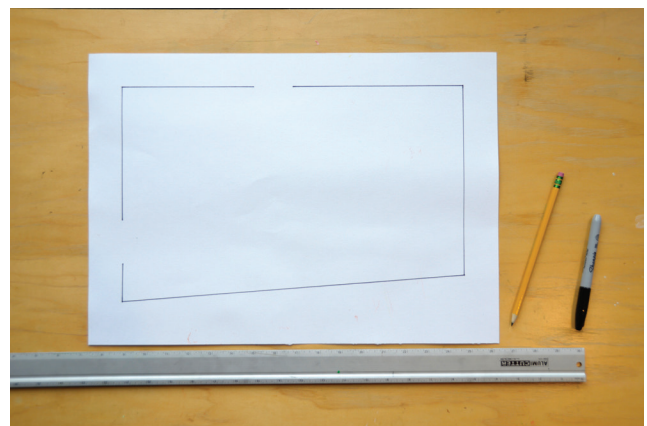
We are going to create a map of our space (whichever room you choose here). Look around the room that you will be mapping together. *What do you see in this room?* Identify the key items in the room, and ask: *What do you think should be included on our map? How do we choose?*

Depending on the age of the child(ren), you can open up this discussion to include the subjective nature of maps. *We are creating the map, and so how do we choose what is represented? How do you make decisions about what to show and what not to show?*

Maps can tell a kind of story; they can tell parts of a larger story, and they can isolate certain parts of a story.

Imagine you are a bird...and you can fly! If you fly up and above the room, and look down, what will you see? How is that different than what you see now?

As a bird, you are above the room, and you can see the tops of everything. Today we will create what is called a Bird's Eye View map - this means we will represent this space as a bird would see it, from above.



Tip: It may be useful to first roughly sketch out the room so that you have a sense of the objects and their scale before you begin the base map and cutting out potential pieces.

Process

1. Show the base map of the room that you created. Point to the lines you drew to define the space. Explain: this is the beginning of our map, and these lines represent this space, pointing to the room. *What do you think these lines represent?* (i.e. the walls, doors, shape of the room, etc.) Together, add indications for windows and doors, agreeing on where they should go. This will help the child to connect the physical space with the map.

2. Now look at the room...Describe the space, using locating words such as near, behind, beside, close to, far, across, under, over, in front of, etc. As we said before, imagine the you are a bird, and you can fly above everything up near the ceiling. As you look down, what do you see?

There are a lot of things in this room! Some are big and some are small - *it would be difficult to include everything on our map, wouldn't it?* Point out small details in the room that will likely be omitted. Discuss. A map is a kind of *abstraction*. This means that it reduces lots of details into a simplified representation. For example, we can represent this couch as a simple shape, even though there are a lot of details on the actual couch (point out a comparable example, including its specific details.)

3. Ask the child to identify something that they would see from above that they think should be on the map. With younger children, you can ask, what is the biggest thing that you see? *Where should it go?* Discuss together using the location words from before.

4. Together, place other pieces on the map. Don't glue them down yet, so that you can continue to arrange and shift the pieces as you go. Locate objects in physical space, pointing to them and then pointing to the map, making the connections with language.

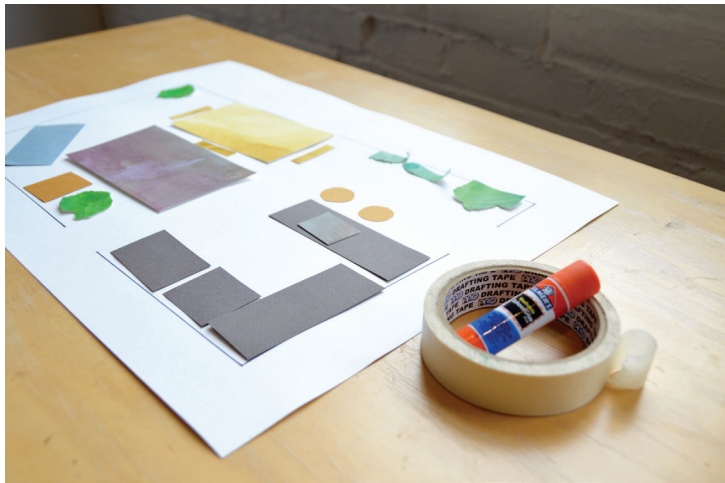
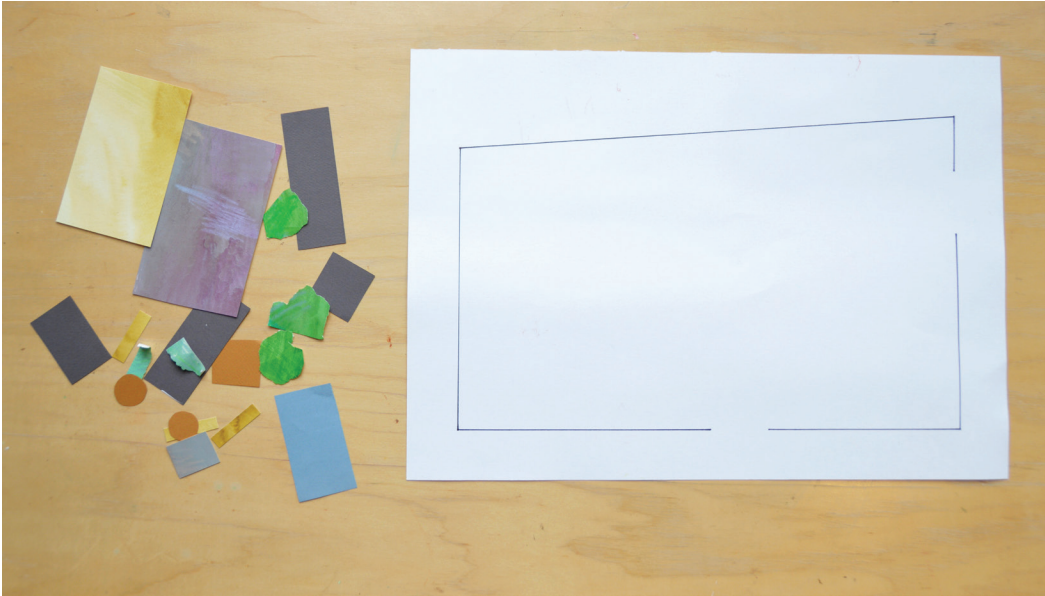
5. When all of the pieces have been placed on the map, together ask and confirm that they are in the correct place. You can glue (or tape) the pieces to the base map.

New Vocabulary:

map

representation

abstraction



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Activity 2: Navigating a Map

Objective

Children will learn how to navigate a physical space using a map as a guide.

Materials

string or yarn

tape

the map you created from Activity 1

Setting Up

1. Complete Activity 1 and use the map that you created together to guide this activity. Set up the map in the space, oriented/aligned the same direction as you are facing in the room.

Key Questions

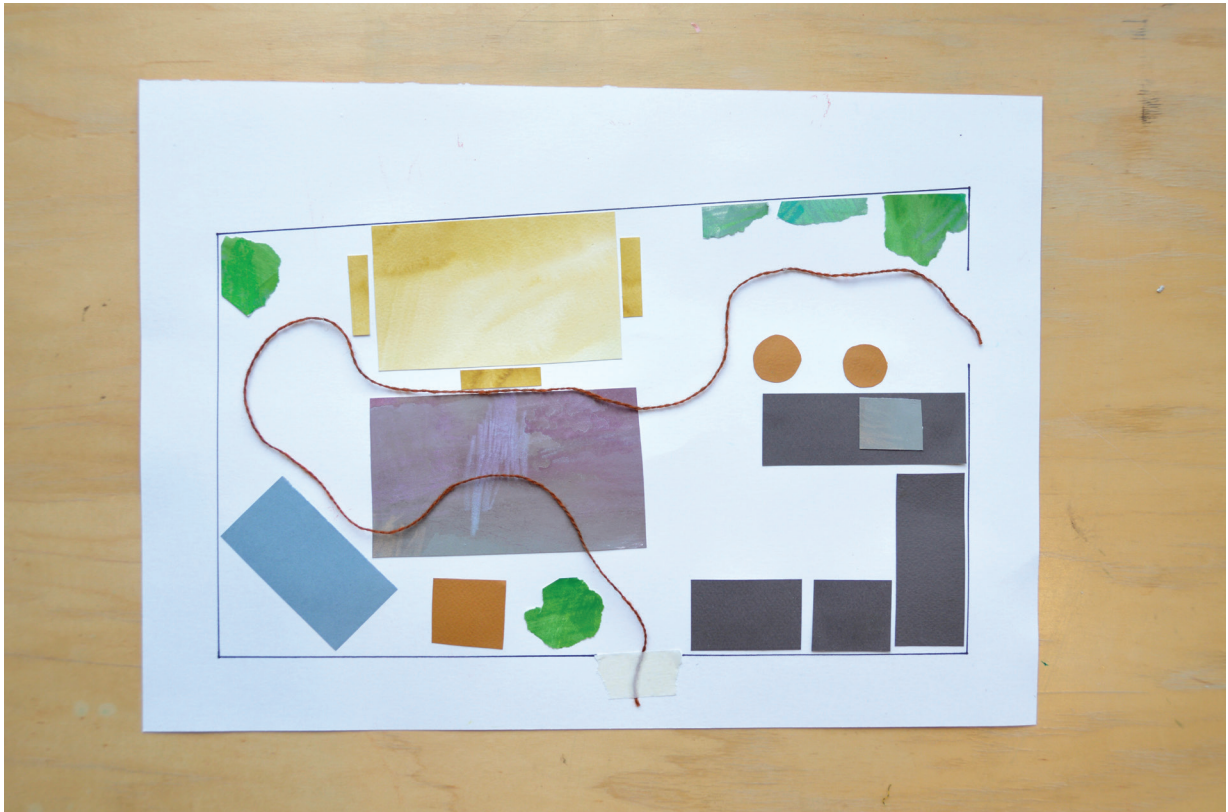
1. Why do we use maps? When are they helpful?
2. Take the map that you have created together, and remind the child that the map represents this room (kitchen, living room, bedroom, etc.)
3. Maps help us navigate through space. What does the word navigate mean? Discuss.

Process

1. Using the string, tape one end that will be the START to a spot on the map (one place to start may be a doorway). Use the string to create a line that moves through the space.
2. Ask the child to start on the starting point, in the physical actual space and then walk through the space, following the line that you have created with the string.
3. After you have completed some simple paths, be creative in designing fun and playful paths - you can curl the string around, and loop around objects for example.
4. Ask the child to create a line for you - and then follow it.

Extension

1. Using one of the paths created by the string, ask: How could you describe that path to someone who cannot see the map?
2. Have the child create a path with the string, without your seeing it. Now ask the child to provide instructions on how to navigate the path of the string, without showing you the map. Agree on the starting point, and then have the child provide detailed instructions on how to follow the path, such as “take two steps forward, turn left, take four steps forward, etc.”
3. Take turns doing this.



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Activity 3: Making a Map from Memory

Objective

Children will further demonstrate an understanding of how maps represent physical things and spatial relationships, and create a map that represents their memory of a space.

It is best to do this activity after completing Activity 1.

Materials

- assorted paper: construction paper or whatever you have on hand works—even magazines and newspaper. Color is helpful to match the space. You can also start with your little ones by painting paper with quick watercolor or paint washes.
- tape
- glue
- scissors

Setting Up

- cut assorted paper: these pieces will represent the features on your map; so it is helpful if they correspond to the physical space in their scale and color.
- find a spot that is clear of distractions, such as a table appropriate for the child's height.
- choose a room/space to work; this will be a different space/room than the one that you will be mapping.

Key Questions

Choose the room that you will map together - and you will be working from a different room to create the map. Ask about the room that will be mapped. For example, *can you describe to me your bedroom? What is in there? Can you describe it to me as if I have never seen it?* Encourage locating words such as near to, beside, across, behind, etc.

We will create a map of your bedroom (or whichever other room) completely from memory!

Process

1. Together, create a base map of the room that you are mapping.
 2. Remember, we are going to create a map as if we were birds flying above and looking down. If you were a bird flying above your bedroom, what would you see?
 3. Show the child the cut out shapes. Ask the child to identify something that should be on the map. Together, arrange the pieces in the room, and create new ones as needed.
 4. When all of the pieces have been placed on the map, together ask and confirm that they are in the correct place. You can glue (or tape) the pieces to the base map.
 5. When the map is completed, take the map and go to the room that was mapped. Together, compare the physical space with the map. *What do you notice? What did we miss? How closely does this map represent this room?*
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Activity 4: Treasure hunt

1. In the same room(s) that you have mapped, hide “treasures” - small Easter eggs, candy, toys, etc.
2. On the corresponding map, designate where the treasures are hidden using stickers or some other marker.
3. Ask the child to find the hidden treasure based on the treasure map.

