Objective 11: Subitizing to 5

Estimated Time: 1.5 weeks

What Are the Children Learning?

This objective helps develop children’s instant recognition of the number of objects in small groups (1-5) without counting.

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* These pages are to be copied and sent home with children to complete with their parents.

Key Vocabulary: Subitize, linear, dice, random, arrangement, number names (1-5)
Subitize with Me (1-3) and (3-5) Chants

Objective: Subitizing to 5

Objectives:

✓ Children will learn that when subitizing, one does not rely on counting to identify the quantity of items in a small group.

✓ Children will practice subitizing up to five items.

Vocabulary: Subitize, one, two, three, four, five, count

Instructions:

• Cut out 6 clouds from the sheet provided (see below). Using tape, cover the square(s) next to each stanza with the cloud cutouts. Make sure that you can easily lift the cloud flaps to expose the square(s) underneath.

• After reading each stanza aloud with the children, lift up the corresponding cloud on the right, then quickly lower it. Ask the children to indicate the quantity of squares they see behind the cloud by verbalizing the quantity or by using their fingers. Please note that each stanza has a corresponding group of squares next to it.
Opportunities for Exploring

Objective: Subitizing to 5

Exploration/Work Time:

Art Center: Have children stamp on paper plates 1 - 5 dots in different arrangements. They can also draw circles on the plates. Once done, shuffle the stack of paper plates and show one plate at a time to the children to subitize. Hide the plate quickly and ask children to call out how many dots they see. Count the dot(s) to verify the answer, then move on to the next plate.

Transitions:

Before lining up, ask children to think of a finger pattern to represent the numbers 1- 5. After a countdown, ask children to quickly show their finger pattern above their head. Have a child holding up 1 finger point to another child with a finger pattern representing the same quantity. If he/she identifies the correct child with the same amount of fingers up, excuse him/her to go line up first. If not, have the child try again. Have the last child holding 1 finger point to a child with 2 fingers up. Repeat previous steps with finger patterns showing numbers 2 to 5 until all children have lined up. Change the order of arrangement so children with finger pattern denoting 3 can line up first, and so on.

Outside Time:

Place five large hula hoops on the ground, spaced apart. Label each with a numeral or a quantity from 1 - 5 using chalks or bean bags. Have children stand around the hoops. Show a finger pattern, then ask children to walk to the hoop that indicates the right number of fingers shown. Add more hula hoops per each numeral to fit the number of children participating in the activity.
**Objective:**

Children will subitize finger patterns up to 5 and indicate the quantity shown with fingers. Note that subitizing is the ability to recognize a small quantity instantly without counting.

**Common Core Domain:**

Counting and Cardinality

**Vocabulary:** Subitize, finger patterns, numeral names one to five

**Learning Setting:** Small group time

**Materials Provided:**

- None

**Materials Needed:**

- None

**Directions:**

1. Practice counting fingers with the children. Allow them to practice showing quantities of 1-5 with their fingers.
2. Observe finger patterns children use to represent a specific quantity. Make notes of the different types of finger patterns.
3. After the counting activity, explain to the children that they will practice recognizing the number of finger(s) shown without counting.
4. Start with a quick review. Show children 1 to 3 fingers and ask them to put up the same number of fingers as the quantity shown. Let the children know that they can indicate the same quantity using any finger patterns, whether it is the same or different from the one they subitized (showing 1 with an index finger or showing 1 with a thumb).
5. Repeat the previous step with 4 and 5 fingers. Start out with longer exposure time, then decrease the number of seconds to ensure that the children don’t count the amount.
6. Remember to incorporate different finger patterns used by the children during the counting practice activity as well. For example, show the quantity of 4 by holding up the thumb, index, middle and ring fingers and by holding up the index, middle, ring and pinky fingers.

**Extension:**

Ask children volunteers to present a quantity using the finger pattern of their choice to their classmates to subitize.
Subitizing Finger Patterns to 5

Objective: Subitizing to 5

Game Objective:
Children will develop subitizing skills, which refer to the ability to determine the number of objects in a small group without counting.

Game Description:
This game helps develop children’s subitizing skills. A finger configuration representing the number of fingers presented (1-5) is displayed shortly before fading behind a cloud with its silhouette still visible. Children are asked to select the same type of finger pattern, given a few options. In the next level, the finger pattern shown will slowly disappear completely behind the cloud. The children will need to select the same type of finger pattern again, but this time, without the aid of the silhouettes. If the correct answer is selected, the right amount of birds will appear to lift up the same amount of blocks shown on the ground. Selecting the wrong answer will result in one of two situations. If a finger pattern with too few fingers is selected, the extra bird(s) from the original finger pattern will carry away a small part of the ground leaving a hole behind, which keeps JiJi from moving forward. If a finger pattern with too many fingers is selected, the extra block(s) from the chosen finger pattern will block JiJi from getting across the screen since there are not enough birds to lift all the blocks away.

Number of Levels: 2

Common Core Domain:
- Counting and Cardinality

Common Core Standards:
- K.CC.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
- K.CC.4a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.4b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.CC.4c Understand that each successive number name refers to a quantity that is one larger.
Subitize Dot Patterns (1-5)

Objective: Subitizing to 5

Objectives:
- Children will subitize up to 5 dots arranged in different arrangements: linear, dice and random.
- Children will also produce a matching amount of dots.

Common Core Domain:
- Counting and Cardinality

Vocabulary: Subitize, numeral names one to five, linear, dice, random, arrangement, dot pattern

Learning Setting: Small group time

Materials Provided:
- Cutout C

Materials Needed:
- Shaving cream or playdough

Directions:

1. Give each child enough shaving cream to spread into a thin layer, about the size of a piece of paper. If shaving cream is not available, give children playdough and ask them to flatten it into a thin layer.

2. Work with children on how to “draw” a dot in shaving cream or playdough by using their finger, and then to “erase” by spreading the shaving cream or playdough back out.

3. Use cards with 1-5 dots in linear, dice, and random arrangements.

4. Remind children that cards with dots will be shown and put down quickly. They need to produce the same number of dots on the shaving cream or the flattened playdough without counting the number of dots on the cards.

5. When children can subitize 1 to 5 dots in linear arrangement with ease, introduce the dice and random arrangements of these quantities.

6. Mix cards with 1-5 dots in linear, dice and random arrangements and continue to limit the time the children can see the cards. Gauge children’s number sense skills to determine if verbalization of the quantity of dots is feasible at this point in time.

Extension:

Provide children with a pile of blank cards (construction paper cut into smaller pieces) and writing utensils. Instead of having children produce and/or verbalize the number of dots, encourage children to write down the numeral representing the amount of dots shown.
Subitizing Birds and Fingers to 5

Objective: Subitizing to 5

**Game Objective:**
Children will develop subitizing skills, which refer to the ability to determine the number of objects in a small group without counting.

**Game Description:**
A number of birds (1-5) arranged in dice or linear formation is displayed shortly before fading behind a cloud with a silhouette still visible. Children are asked to select the finger pattern that represents the quantity of birds shown. In the next level, the birds shown will slowly disappear completely behind the cloud. The children will need to select the correct finger pattern again, but this time, without the aid of the birds’ silhouettes. Difficulty increases as the display time of the birds is decreased. Selecting the wrong answer will result in one of two situations. If a finger pattern with too few fingers is selected, the extra bird(s) will carry away a small part of the ground leaving a hole behind, which keeps JiJi from moving forward. Alternately, if a finger pattern with too many fingers is selected, the extra block(s) from the chosen finger pattern will block JiJi from getting across the screen.

**Number of Levels:** 3

**Common Core Domain:**
- Counting and Cardinality

**Common Core Standards:**
- K.CC.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
- K.CC.4a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.4b Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.CC.4c Understand that each successive number name refers to a quantity that is one larger.