Teachers Guide

KINDERGARTEN – UNIT 4 – MODULE 2

BRIDGES®
IN MATHEMATICS

Module 2

Counting, Adding & Subtracting with Forest Animals

Teacher Masters

Pages renumber with each module.

Home Connections Pages

Page numbers correspond to those in the consumable books.

Module 2

Counting, Adding & Subtracting with Forest Animals

Overview

In this module rote counting is extended to 40, and counting objects is extended to 20 (counting on, one-to-one correspondence, counting to answer, "How many?"). Activities continue to focus on representational addition with sums to 10 and subtraction with minuends to 10. Solving story problems with objects is introduced. Two new Work Places are introduced and two Home Connections are assigned. One Checkpoint is available for assessment.

Planner

Session & Work Places Introduced	P&I	WP	A	HC
Session 1 Foxes & Dens The new game, Foxes & Dens, emphasizes counting on as students take turns rolling two dice and adding the numbers. Students spend the rest of the session at Work Places.	●	●		
Session 2 Introducing Work Place 4B Foxes & Dens After playing the game again Foxes & Dens becomes a Work Place, and students spend the rest of the session at Work Places. **Work Place 4B** Foxes & Dens Players roll two dice and add the numbers. If the sum appears in the next den, the player advances to that den. The first to reach the fifth den is the winner.		●		●
Session 3 The Forest Game Students practice adding and subtracting as their squirrels hop into and out of the forest. They spend the rest of the session at Work Places while the teacher conducts the Foxes & Dens Checkpoint.	●	●	●	
Session 4 Beat You to Twenty In this extension of Beat You to Ten, students try to collect 20 Unifix cubes on their side of the game board. They spend the rest of the session at Work Places.	●	●		
Session 5 Introducing Work Place 4C Beat You to Twenty After playing the game again Beat You to Twenty becomes a Work Place, and students spend the rest of the session at Work Places. **Work Place 4C** Beat You to Twenty Players take turns rolling the numbered 0–5 die and covering the indicated number of pictured cubes with Unifix cubes. The first player to cover 20 exactly is the winner.		●		●

P&I – Problems & Investigations, **WP** – Work Place, **A** – Assessment, **HC** – Home Connection

Materials Preparation

Each session includes a complete list of the materials you'll need to conduct the session, as well as notes about any preparation you'll need to do in advance. If you would like to prepare materials ahead of time for the entire module, you can use this to-do list.

Task		Done
Copies	Run copies of Teacher Masters T1–T6 according to the instructions at the top of each master.	
	If you choose to, run a single display copy of Home Connections book pages 83–90.	
	If students do not have their own Home Connections books, run a class set of the assignments for this module using pages 83–90 in the Home Connections Book.	
Work Place Preparation	Prepare the materials for Work Places 4B and 4C using the lists of materials on the Work Place Guides (Teacher Masters T1 & T5).	
Special Items	Get a picture of a fox prior to Session 1.	
	Get a picture of a squirrel prior to Session 3.	

Additional Resources

Please see this module's Resources section of the Bridges Educator site for a collection of resources you can use with students to supplement your instruction.

Session 1
Foxes & Dens

Summary

After a warm-up activity (counting to 40 from a number other than 1), the teacher and students play a new game similar to Bicycle Race. They take turns rolling two dice and adding the two numbers. Emphasis is on counting on from the first number. If the sum is on the next den on the game board, they advance their fox (marker). The first team to reach the fifth den is the winner. Students spend the rest of the session at Work Places.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Represent addition with fingers or verbal explanations (K.OA.1)
- Attend to precision (K.MP.6)
- Look for and make use of structure (K.MP 7)

Materials

Copies	Kit Materials	Classroom Materials
Problems & Investigations Foxes & Dens		
	• Foxes & Dens Game Board • die numbered 0–5 • die dotted 1–6 • 2 game markers, one red and one blue	• picture of a fox • student whiteboards, markers, and erasers (as needed for differentiation)
Work Places in Use		
3B Spill Ten Beans (introduced in Unit 3, Module 2, Session 1) **3C** Butterfly Race (introduced in Unit 3, Module 2, Session 2) **3D** Grab Bag More or Less (introduced in Unit 3, Module 3, Session 4) **3E** Bicycle Race (introduced in Unit 3, Module 3, Session 5) **3F** Fives Up (introduced in Unit 3, Module 4, Session 5) **4A** Scrambled Numbers 1-10 (introduced in Unit 4, Module 1, Session 3)		

HC – Home Connection, **SB** – Student Book, **TM** – Teacher Master
Copy instructions are located at the top of each teacher master.

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

add*
addition
count on*
equation*
strategies
sum or total*

Problems & Investigations

Foxes & Dens

1 Warm-up: With students gathered in your discussion circle, determine how many students are here today. Count up from that number to 40 (from 22 to 40, for example).

2 Introduce the new game by displaying the Foxes & Dens Game Board. Use the think-pair-share routine to have students make observations, and invite a few to share with the class.

- Take a moment to discuss foxes and the fact that their homes are called dens.
- The object of the game is to be the first player to reach the fifth den.
- Students will practice adding and counting on as a strategy in this game.

ELL Have a picture of a fox available to show, and point to the den on the game board as you say the word.

3 Display the two dice and ask students to describe them.

- The first die has the numerals 0–5.
- The second die has dots showing 1–6.

4 Roll the numbered 0–5 die and have students identify the numeral and show that many with the fingers of one hand. Tell them to keep those fingers up.

5 Roll the dotted 1–6 die and have students identify the number of dots and show that many fingers on the other hand.

6 Ask students how many fingers there are in all, and ask students to model how you might count on from the larger number.

> ***Teacher*** *How many fingers do you have up in all?*
>
> ***Students*** *1, 2, 3, 4, 5, 6, 7.*
>
> *I got 7, too, but I said, 4 on one hand and 5, 6, 7* (wiggling each finger as it is counted).
>
> ***Teacher*** *That's pretty efficient. Did anyone do it a different way?*
>
> ***Students*** *I did. I said 4 on one hand and then 5, 6, 7* (pointing each finger to his head as he counts on).

I just counted the dots on the die—5, 6, 7.

I just know 4 + 3 = 7.

Teacher *Let's all try the counting on strategy. Stretch the fingers on the first hand wide—how many? (4) Now count on from 4 with the fingers on your other hand—5, 6, 7! 4 plus 3 is the same as seven.*

7 Repeat steps 4–6 several times.

When a player rolls 11 (5 + 6), they get to roll again. They may choose to roll both dice, or just the dotted one.

8 Place the Foxes & Dens Game Board on the floor where everyone can see it and put the two game markers to the left of the first den.

9 Take the first turn by rolling both dice, having students name the number on the numbered die, and asking them to determine the total. Discuss their strategies, emphasizing adding and counting on.

SUPPORT If students have difficulty reading the numerals on the die, direct their attention to the dominoes at the bottom of the game board.

Teacher *What number is showing on the numbered die?*

Students *Three!*

Teacher *And how many dots on the dotted die?*

Students *Three!*

Teacher *So how many in all? And how do you know?*

Students *Six, because 3 and 3 is 6.*

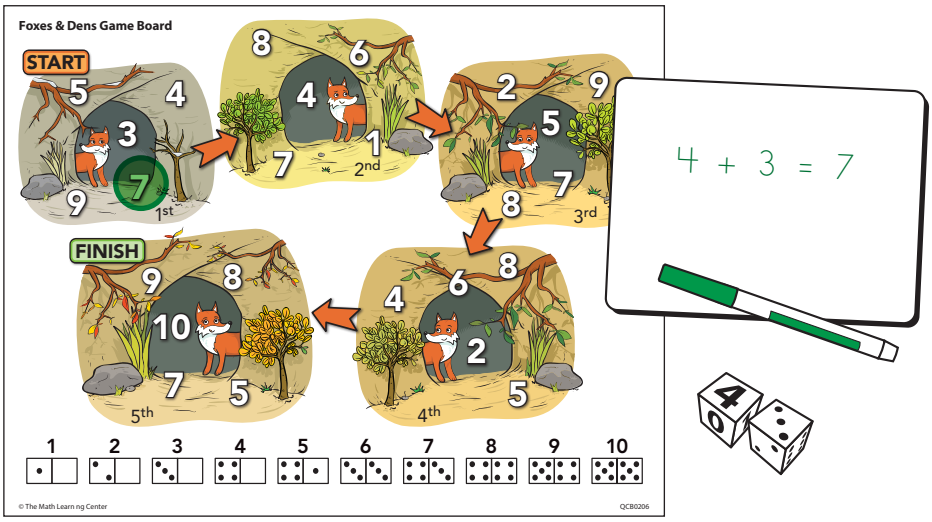
I went 3, then 4, 5, 6 (tapping fingers on head). It's 6.

I started with the 3, too, but then I counted the dots: 4,5,6.

Teacher *Those are all good strategies—adding the two numbers and counting on from the first number.*

10 If the first den on the game board has a numeral that matches the total, move your fox (marker) to the den and set it on top of that numeral. If the first den doesn't have that numeral, leave your fox where it is.

CHALLENGE Have students record an equation on a whiteboard for each turn.



11 Have a student roll the dice for the student team, name the numeral on the numbered die, add or count on to find the total, and move the fox to the first den, if possible.

SUPPORT Some students will add or count on without support. For those who need help, have them use a ten-frame and game markers or cubes, or two dotted dice, to build the two quantities. You can try to screen the first addend and see if the student can generate the next number word.

12 Continue to take turns spinning, adding, and moving markers ahead, one den at a time. The first team to reach the fifth den wins the game.

13 Conclude this part of the session.

- Ask students what strategy they learned today to help them add more fluently. Give examples.
- Tell students you will play the game again in the next session and then it will become a Work Place.

Work Places

14 Invite students to spend the rest of the session at Work Places.

- Explain that today will be the last day for the Spill Ten Beans Work Place.
- Shuffle the name cards.
- Call students' names and have them place their cards in the Work Places chart.

While they do Work Places, circulate around the room to make observations and provide differentiation. The Work Place Guides include suggestions for differentiating the activities to meet students' needs.

15 Close the session.

- Give students a few minutes of warning before clean-up time.
- Have students clean up and put away the Work Place materials.

Session 2

Introducing Work Place 4B Foxes & Dens

Summary

After a warm-up activity (counting to 40 from a number other than 1), the teacher and students play Foxes & Dens again. They take turns rolling two dice and adding the two numbers together. Emphasis is on the strategy of counting on from the first number. If the sum is on the next den on the game board, they advance their fox (marker). The first team to reach the fifth den is the winner. The game becomes a Work Place, and students spend the rest of the session at Work Places. The Fours & Fives Home Connection is assigned.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Represent addition with fingers, objects, or verbal explanations (K.OA.1)
- Add with sums to 10 (K.OA.2)
- Attend to precision (K.MP.6)
- Look for and make use of structure (K.MP 7)

Materials

Copies	Kit Materials	Classroom Materials
Work Places Introducing Work Place 4B Foxes & Dens		
TM T1–T2 Work Place Guide & Instructions 4B Foxes & Dens	• Foxes & Dens Game Board • die numbered 0–5 • die dotted 1–6 • 2 game markers, one red and one blue • 4B Foxes & Dens Menu Card	• student whiteboards, markers, and erasers (as needed for differentiation)
Work Places in Use		
3C Butterfly Race (introduced in Unit 3, Module 2, Session 2) **3D** Grab Bag More or Less (introduced in Unit 3, Module 3, Session 4) **3E** Bicycle Race (introduced in Unit 3, Module 3, Session 5) **3F** Fives Up (introduced in Unit 3, Module 4, Session 5) **4A** Scrambled Numbers 1-10 (introduced in Unit 4, Module 1, Session 3) **4B** Foxes & Dens (introduced in this session)		
Home Connection		
HC 83–84 Fours & Fives		

HC – Home Connection, **SB** – Student Book, **TM** – Teacher Master
Copy instructions are located at the top of each teacher master.

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

add*
addition
count on*
equation*
strategies
sum or total*

Preparation

In today's session, you'll introduce Work Place 4B Foxes & Dens. Before this session, you should review the Work Place Guide and Work Place Instructions and assemble the bin for Work Place 4B, using the materials listed on the Guide. The Work Place Guide also includes suggestions for differentiating the game to meet students' needs.

Remove Work Place 3B Spill Ten Beans and add Work Place 4B Foxes & Dens, and replace the Menu Card for 3B with the Menu Card for 4B in the Work Place pocket chart.

Work Places

Introducing Work Place 4B Foxes & Dens

1 Warm-up: With students gathered in your discussion circle, ask what today's date is. Count up from that number to 40 (from 8 to 40, for example).

2 Explain that you will play Foxes & Dens again and then it will become a new Work Place as a partner game.

SUPPORT If your students had difficulty counting on yesterday, repeat this activity: Roll the numbered 0–5 die and have students identify the numeral and show that many with the fingers of one hand. Tell them to keep those fingers up. Roll the dotted 1–6 die and have students identify the number of dots and show that many fingers on the other hand. Add the two together by saying the number on the first hand, and model counting on from that number.

3 Using the Work Place Instructions teacher master, summarize the game.

To the students you might say:

> *We'll take turns rolling both dice, naming the number on the first die, and adding or counting on the number of dots on the second die. If the next den on the game board has a number that matches the total, we can move our fox (marker) to the den and set it on top of that number.*

4 Play the game according to the directions on the Work Place Instructions 4B Foxes & Dens Teacher Master.

SUPPORT If students have difficulty reading the numerals on the die, direct their attention to the dominoes at the bottom of the game board.

CHALLENGE Have students record an equation for each turn on a whiteboard.

5 Show students the contents of the Work Place bin and the new Menu Card.

6 Invite students to spend the rest of the session at Work Places.

- Tell students that the Butterfly Race Work Place will be ending soon.
- Shuffle the name cards.
- Call students' names and have them place their cards in the Work Places chart.

While they do Work Places, circulate around the room to make observations and provide differentiation. The Work Place Guides include suggestions for differentiating the activities to meet students' needs.

7 Close the session.

- Give students a few minutes of warning before clean-up time.
- Have students clean up and put away the Work Place materials.

Home Connection

8 Introduce and assign the Fours & Fives Home Connection, which provides more practice with the following skills:

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Write numerals from 0 to 10 to represent a number of objects (K.CC.3)
- Fluently add with sums to 5 (K.OA.5)

Session 3
The Forest Game

Summary

After a warm-up activity (counting to 40 from a number other than 1), a new game is introduced, and the teacher plays against the students. They take turns spinning the arrow and following the direction on the spinner, either adding or subtracting. Their squirrels (game markers) hop in and out of the forest, depending on the direction given. The first to have exactly ten squirrels in the forest is the winner. Emphasis is on the meaning of the operations. Students spend the rest of the session at Work Places, while the teacher conducts the Foxes & Dens Checkpoint.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Count up to 20 objects in a line to answer "how many?" questions (K.CC.5)
- Represent addition and subtraction with objects (K.OA.1)
- Solve addition and subtraction story problems (K.OA.2)
- Attend to precision (K.MP.6)
- Look for and make use of structure (K.MP 7)

Materials

Copies	Kit Materials	Classroom Materials
Problems & Investigations The Forest Game		
TM T3 The Forest Game	• 2 spinner overlays • 20 game markers, 10 red and 10 blue	• picture of a squirrel
Work Places in Use		
3C Butterfly Race (introduced in Unit 3, Module 2, Session 2) **3D** Grab Bag More or Less (introduced in Unit 3, Module 3, Session 4) **3E** Bicycle Race (introduced in Unit 3, Module 3, Session 5) **3F** Fives Up (introduced in Unit 3, Module 4, Session 5) **4A** Scrambled Numbers 1-10 (introduced in Unit 4, Module 1, Session 3) **4B** Foxes & Dens (introduced in Unit 4, Module 2, Session 2)		
Assessment Foxes & Dens Checkpoint		
TM T4 Foxes & Dens Checkpoint		

HC – Home Connection, **SB** – Student Book, **TM** – Teacher Master
Copy instructions are located at the top of each teacher master.

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

add*
addition
count back*
count on*
minus
plus
subtract*
subtraction

Problems & Investigations

The Forest Game

1 Warm-up: With students gathered in your discussion circle, determine how many students are wearing black (or any color) shoes today. Count from that number up to 40.

2 Hold up The Forest Game Teacher Master and give students a moment to observe and then share observations, first with a partner and then with the whole group.

- Show a picture of a squirrel.
- Discuss the fact that squirrels live in trees in the forest and like to eat nuts and seeds.
- During the group discussion, be sure to clarify the meanings of the words and symbols on the spinner.

> ***Teacher*** *What do these symbols mean?*
>
> ***Students*** *The one that looks like a cross means to add.*
>
> *You have to add 1 or 2 or 3—whatever you land on.*
>
> *I think the little line means to take away.*
>
> *Like if there's 5 and you take away 2, there's 3 left.*
>
> ***Teacher*** *So what do you think the words say?*
>
> ***Students*** *The one by the add sign says, "Add." I can see the A.*
>
> *The other one must say, "Take Away."*
>
> *But it doesn't begin with T. It begins with S.*
>
> ***Teacher*** *Yes, this one says, "Add." This one says, "Subtract."*

ELL Demonstrate the meaning of *add* and *subtract*: Say add as you place some cubes or game markers in one hand, and say subtract as you take some out of your hand.

3 Set the stage by telling students the story of The Forest Game and identifying the mathematical skills they will practice.

- Explain that in this game, squirrels are going to hop in and out of the forest to get the nuts, but they have to follow the instructions on the game spinner to do so.
- Students will practice adding and subtracting in this game.

The following summary of the game is primarily for the teacher's benefit: Each player gets 10 squirrels. To start, each player has 5 squirrels in the forest and 5 out of the forest. Players will spin the spinner to see whether squirrels are added to the forest or removed from the forest. The first player who gets all 10 squirrels in the forest wins.

4 First, use a single Forest Game Teacher Master to model how the game board should be set up.

- With students, count out 10 game markers in a single color. These will be your squirrels.
- Place five squirrels on the board, one on each of the first five nuts, and set the other five squirrels to the side of the board.

5 Model how to take a few turns in the game. Spin the spinner and work with students to carry out the indicated action (adding or subtracting squirrels from the forest).

- Ask students to report how many squirrels are left on the nuts in the forest.

Literature Connections

These would be good read-aloud choices:

Nuts to You by Lois Ehlert

The Busy Little Squirrel by Nancy Tafuri

Teacher *The spinner landed on Subtract 2. What do I have to do?*

Students *You have to take 2 away!*

You have to make 2 of those squirrels hop out of the forest.

Teacher *OK, I'll subtract 2. Here they go! How many squirrels are in the forest?*

Students *Three squirrels! Now there are only 3 left!*

Teacher *How many more do I need to make 5? to make 10?*

Note the following as circumstances arise:

- The number of squirrels in the forest changes each time unless it is not possible to carry out the spinner's instructions, for example, if you only have one squirrel on the board and spin Subtract 2, or if you have eight squirrels on the board and spin Add 3. In either case, you have to wait for your next turn to spin again.

6 Set up a second Forest Game Teacher Master next to yours so that students can play a round of the game against you. Place five "squirrels" (game markers) on the first five nuts on each board.

7 Play the game with the students.

- Each time students have a turn, have a student spin the spinner and hop the squirrels in or out of the forest.
- Have students report how many squirrels are in the forest after each turn.
- While you play, model and reinforce the meaning of the addition and subtraction sign, as well as the two operations.
- Continue to ask, "How many more to make 5? to make 10?"

8 When one team has won the game by collecting exactly ten squirrels in the forest, let students know that they will play this game with someone at home in a few days.

Work Places

9 Students will spend the rest of the session at Work Places. Tell the students that you will be in assessment mode and cannot be interrupted.

- Put on your assessment hat or coat.
- Explain that you will call students four at a time to play Foxes & Dens.
- Shuffle the name cards.
- Call students' names and have them place their cards in the Work Places chart.

Assessment

10 While students are engaged in Work Places, today and over the next few days, use the time for a checkpoint, during which you will observe four students at a time playing Foxes and Dens.

This observation checklist focuses on the following skills and concepts:

- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Add with sums to 10 (K.OA.2)

11 Call four students at at time over to the Foxes and Dens Work Place and watch as they play the game in pairs. Provide prompts as necessary.

12 Record your observations on the Foxes and Dens Checkpoint Teacher Master.

13 Use the results of your observations to plan differentiated activities for your students.

14 Close the session.

- Give students a few minutes of warning before clean-up time.
- Have students clean up and put away the Work Place materials.

Assessment Guide

See the Kindergarten Assessment Guide for scoring and intervention suggestions.

Session 4
Beat You to Twenty

Summary

After a warm-up activity (counting to 40 from a number other than 1), the teacher introduces a game that's similar to Beat You to Ten. Players take turns rolling the numbered 0–5 die and covering the indicated number of pictured cubes with actual Unifix cubes. Students work together to see if they can be the first to collect 20 Unifix cubes on their side of the game board. This game presents many opportunities to model various counting strategies and to observe the range of counting skills in your group. Students spend the rest of the session at Work Places.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Count up to 20 objects in a line to answer "how many?" questions (K.CC.5)
- Given a number from 1 to 20, count out that many objects (K.CC.5)
- Represent addition with objects (K.OA.1)
- Add with sums to 10 (K.OA.2)
- Attend to precision (K.MP.6)
- Look for and make use of structure (K.MP 7)

Materials

Copies	Kit Materials	Classroom Materials
Problems & Investigations Beat You to Twenty		
	• Beat You to Twenty Game Board • die numbered 0–5	• 50 Unifix cubes in two different colors, 25 of each
Work Places in Use		
3C Butterfly Race (introduced in Unit 3, Module 2, Session 2) **3D** Grab Bag More or Less (introduced in Unit 3, Module 3, Session 4) **3E** Bicycle Race (introduced in Unit 3, Module 3, Session 5) **3F** Fives Up (introduced in Unit 3, Module 4, Session 5) **4A** Scrambled Numbers 1-10 (introduced in Unit 4, Module 1, Session 3) **4B** Foxes & Dens (introduced in Unit 4, Module 2, Session 2)		

HC – Home Connection, **SB** – Student Book, **TM** – Teacher Master
Copy instructions are located at the top of each teacher master.

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

add*
addition
count on*
ones*
plus
strategies
sum or total*
tens*

Problems & Investigations

Beat You to Twenty

1 Warm-up: With students sitting in the discussion circle, ask students how many real elephants are in the classroom today. This is no doubt zero, so count all the way up to 40.

2 Display the Beat You to Twenty Game Board and have students use the think-pair-share routine to make and share observations.

Be sure to have students count and compare the Unifix cubes pictured on the game board to establish the fact that there are 20 cubes on each side, arranged in two groups of 10, with the 10s divided into groups of 5.

3 Introduce the new game.

- We will take turns rolling the 0–5 die and adding that number of Unifix cubes to the game board. The first team to cover all the cubes pictured on their side of the game board wins, but you must get exactly 20.
- Explain that this is a new game that will help them practice reading, counting, and adding numbers to 20.

4 Have a student roll the die for the class team and cover that number of pictured cubes on the game board.

> ***Students*** *It's a 4!*
>
> *Good, that's almost 5.*
>
> ***Teacher*** *OK, cover up the first four cubes on your side of the game board. How many more do you need to make 5?*

5 Take your turn, repeating the process.

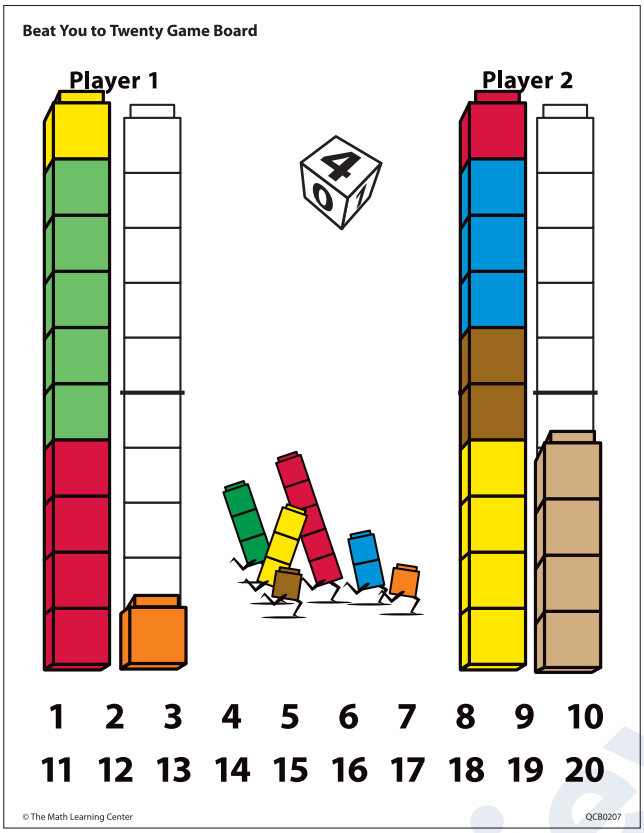
> ***Teacher*** *Now it's my turn. Hmm! I got a 0. I don't think I like that much. Can I cover any cubes on my side?*
>
> ***Students*** *No, 0 means you don't get any this time.*
>
> ***Teacher*** *How many more do I need to make 5?*

6 Continue taking turns and adding on the new number of cubes, alternating colors for each turn.

> ***Teacher*** *Now it's your turn again.*
>
> ***Students*** *Yay! It's a 2. That's better than 0.*
>
> ***Teacher*** *You already have 4 cubes. Let's use a different color this time so it's easy to see how many cubes you've added to your collection. When we cover 2 more, how many will you have altogether?*
>
> ***Students*** *6, it has to be 6.*
> *If you cover just 1, it would be 5, but if you cover 2, it will be 6.*
>
> ***Teacher*** *Good job! My turn to roll. Thank goodness, I got a 4. I was afraid I'd get that 0 again. I'll cover 4 cubes on my side. How many more will I need to catch up with you?*
>
> ***Students*** *We have 6 and you only have 4.*
>
> *You need 2 to catch up with us. It's easy to see.*
>
> *I hope we get a 4 this time. Then we'll have 10.*

Math Practices in Action K.MP.6

This game encourages precision in students' work by showing the 20 total cubes needed to win the game and using a different color for the cubes collected in each spin. As students get older, they will develop ways of attending to precision more independently.



7 Continue playing back and forth until one team reaches 20 exactly.

- Be sure to change colors each time you add cubes.
- Take frequent stops along the way to have students count and compare each team's score.
  - » How many do you have now? How did you count them?
  - » How many more to reach 5? 10? 20? (Ask as you approach the next benchmark.)
  - » Who is ahead? By how much?
  - » What number do you hope to roll? Why?
- As each collection passes 10, be sure to make a point of counting on from 10, as well as continuing to count the growing collections using other strategies.
  - » How many 10s do you have? How many 1s?
  - » How many 5s are there in 17? How many 10s? How many 1s?

8 Close this part of the session by asking students to describe some of the different strategies used to count and add the cubes. Tell them you will play again tomorrow and then the game will become a Work Place.

Work Places

9 Invite students to spend the rest of the session at Work Places.

- Shuffle the name cards.
- Call students' names and have them place their cards in the Work Places chart.

While they do Work Places, circulate around the room to make observations and provide differentiation. The Work Place Guides include suggestions for differentiating the activities to meet students' needs.

10 Close the session.

- Give students a few minutes of warning before clean-up time.
- Have students clean up and put away the Work Place materials.

Session 5

Introducing Work Place 4C Beat You to Twenty

Summary

After a warm-up activity (counting to 40 from a number other than 1), the teacher plays Beat You to Twenty with the class again. Players take turns rolling the numbered 0–5 die and covering the indicated number of pictured cubes with actual Unifix cubes. Students work together to see if they can be the first to collect 20 Unifix cubes on their side of the game board. The game becomes a Work Place, and students spend the rest of the session at Work Places. The Forest Game Home Connection is assigned.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Count up to 20 objects in a line to answer "how many?" questions (K.CC.5)
- Given a number from 1 to 20, count out that many objects (K.CC.5)
- Represent addition with objects (K.OA.1)
- Add with sums to 10 (K.OA.2)
- Attend to precision (K.MP.6)
- Look for and make use of structure (K.MP 7)

Materials

Copies	Kit Materials	Classroom Materials
Work Places Introducing Work Place 4C Beat You to Twenty		
TM T5 Work Place Guide 4C Beat You to Twenty **TM T6** Work Place Instructions 4C Beat You to Twenty	• Beat You to Twenty Game Board • die numbered 0–5 • 4C Beat You to Twenty Menu Card	• 50 Unifix cubes in two different colors, 25 of each
Work Places in Use		
3D Grab Bag More or Less (introduced in Unit 3, Module 3, Session 4) **3E** Bicycle Race (introduced in Unit 3, Module 3, Session 5) **3F** Fives Up (introduced in Unit 3, Module 4, Session 5) **4A** Scrambled Numbers 1-10 (introduced in Unit 4, Module 1, Session 3) **4B** Foxes & Dens (introduced in Unit 4, Module 2, Session 2) **4C** Beat You to Twenty (introduced in this session)		
Home Connection		
HC 85-90 The Forest Game		

HC – Home Connection, **SB** – Student Book, **TM** – Teacher Master
Copy instructions are located at the top of each teacher master.

Vocabulary

An asterisk [*] identifies those terms for which Word Resource Cards are available.

add*
addition
count on*
ones*
plus
strategies
sum or total*
tens*

Preparation

In today's session, you'll introduce Work Place 4C Beat You to Twenty. Before this session, you should review the Work Place Guide and Work Place Instructions and assemble the bin for Work Place 4C, using the materials listed on the Guide. The Work Place Guide also includes suggestions for differentiating the game to meet students' needs.

Remove Work Place 3C and add Work Place 4C, and replace the Menu Card for 3C with the Menu Card for 4C in the Work Place pocket chart.

Work Places

Introducing Work Place 4C Beat You to Twenty

1 Warm-up: With students sitting in the discussion circle, ask to which number the big hand on the clock is pointing. Count up to 40 from that number.

2 Explain that you are going to play Beat You to Twenty again as a class and then it will become a Work Place.

3 Summarize the game.

This partner game is similar to the previous game Beat You to Ten. Players take turns rolling the numbered 0–5 die and covering the indicated number of pictured cubes with actual Unifix cubes. They use a different color on each turn. The first player to cover 20 exactly is the winner.

To the students you might say:

> *We will take turns rolling the 0–5 die and adding that number of Unifix cubes to the game board. We'll change colors on each turn. The first team to cover all the game board cubes wins, but you must get to 20 exactly.*

4 Play the game according to the directions on Work Place Instructions 4C Beat You to Twenty.

5 As you play back and forth, be sure to change colors each time you record the results, and take frequent stops along the way to have students count and compare each team's score.

- How many do you have now? How did you count them?
- How many more to reach 5? 10? 20? (Ask as you approach the next benchmark.)
- Who is ahead? By how much?
- What number do you hope to roll? Why?

6 As each collection passes 10, be sure to make a point of counting on from 10, as well as continuing to count the growing collections using other strategies.

- How many 10s do you have? How many 1s?
- How many 5s are there in 17? How many 10s? How many 1s?

7 Continue playing until one side reaches 20 exactly.

8 Show students the contents of the Work Place 4C Beat You to Twenty bin and the new Menu Card.

Math Practices in Action K.MP.7

Grouping the cubes by 10 and inviting students to count on from 10 helps them begin to recognize and make use of the base ten structure of our number system. For example, they see that 20 is 2 groups of 10 and that the numbers from 11 to 19 are a group of 10 and some more.

9 Invite students to spend the rest of the session at Work Places.

- Shuffle the name cards.
- Call students' names and have them place their cards in the Work Places chart.

While they do Work Places, circulate around the room to make observations and provide differentiation. The Work Place Guides include suggestions for differentiating the activities to meet students' needs.

10 Close the session.

- Give students a few minutes of warning before clean-up time.
- Have students clean up and put away the Work Place materials.

Home Connection

11 Introduce and assign The Forest Game Home Connection, which provides more practice with the following skills:

- Count up to 20 objects in a line to answer "how many?" questions (K.CC.5)
- Represent addition and subtraction with objects (K.OA.1)
- Solve addition and subtraction story problems (K.OA.2)

Teacher Masters

KINDERGARTEN – UNIT 4 – MODULE 2

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Work Place Guide 4B Foxes & Dens

Summary

Partners play a game in which their "foxes" (game markers) race through dens to the finish. After rolling two dice, they add the numbers together and determine if that number appears in the next den. If so, they can advance to that den. The first one to reach the fifth den is the winner.

Skills & Concepts

- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Represent addition with fingers, objects, or verbal explanations (K.OA.1)

Materials

Copies	Kit Materials	Classroom Materials
TM T1 Work Place Guide 4B Foxes & Dens **TM T2** Work Place Instructions 4B Foxes & Dens	• 3 Foxes & Dens Game Boards • 3 dice numbered 0–5 • 3 dice dotted 1–6 • 6 translucent game markers, three red and three blue	

Assessment & Differentiation

Here are some quick observational assessments you can make as students begin to play this game on their own. Use the results to differentiate as needed.

If you see that…	Differentiate	Example
A student has difficulty adding the numbers, either mentally or by counting on.	SUPPORT Remind students to count on, using the strategies learned previously.	Use a ten-frame and cubes, their fingers, or the dots on the dotted die to count on.
A student has difficulty reading the numerals on the die.	SUPPORT Help the student use the dominoes at the bottom of the game board. Invite students to play game variation A.	
A student or pair of students easily reads the numerals and adds.	CHALLENGE Make a graph to record how often the sums come up. Invite students to play game variation B, C, or D.	Columns on the graph would be numbered 1–10. An X is recorded in the correct column each time a sum is obtained.

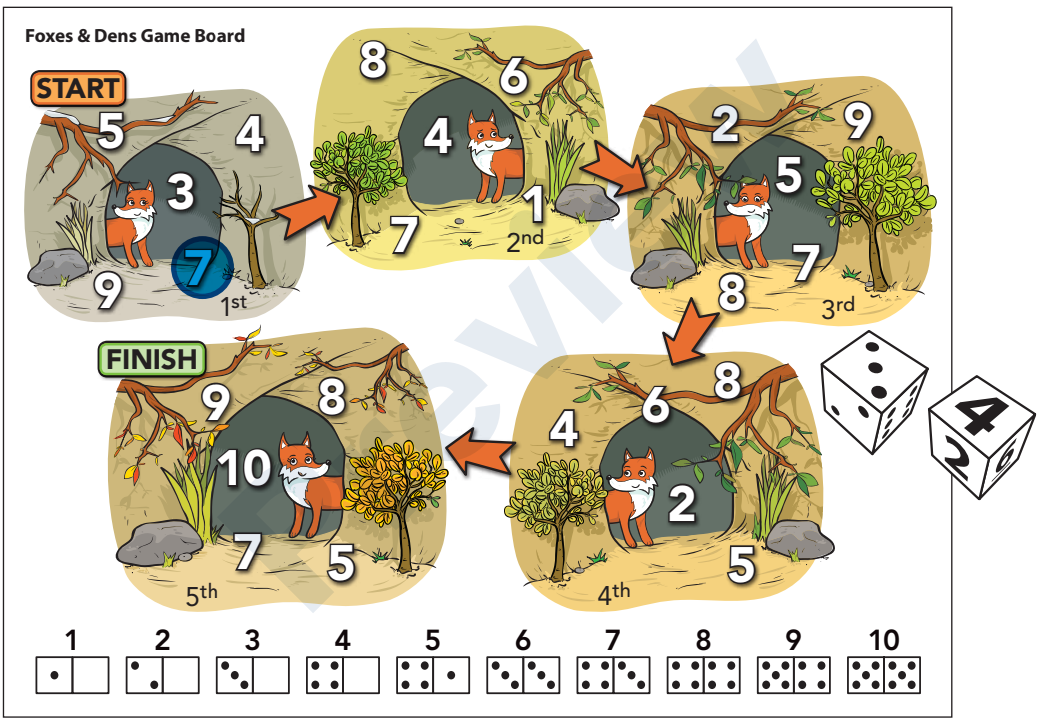
Work Place Instructions 4B Foxes & Dens

Each pair of players needs:

- 1 Foxes & Dens Game Board
- 1 die numbered 0–5
- 1 die dotted 1–6
- 2 game markers, 1 red and 1 blue

1 Player 1 rolls the two dice and adds the numbers together.
   - A player might start with the numeral and add on the dots (4 + 3 = 7).
   - A player might start with the numeral and count on the dots (4, 5, 6, 7).

2 The player checks to see if that number (the sum) is on the next den on the game board. If it is, the player's fox (marker) can move to that den.
   When a player rolls 11 (5 + 6), they get to roll again. They may choose to roll both dice, or just the dotted one.



3 Players take turns until one of them reaches the fifth den. That is the winner.

Game Variations

A Players use two dice dotted 1–6 and play as usual.
   When a player rolls 11 or 12, they may roll again. They may choose to roll both dice, or just the dotted one.

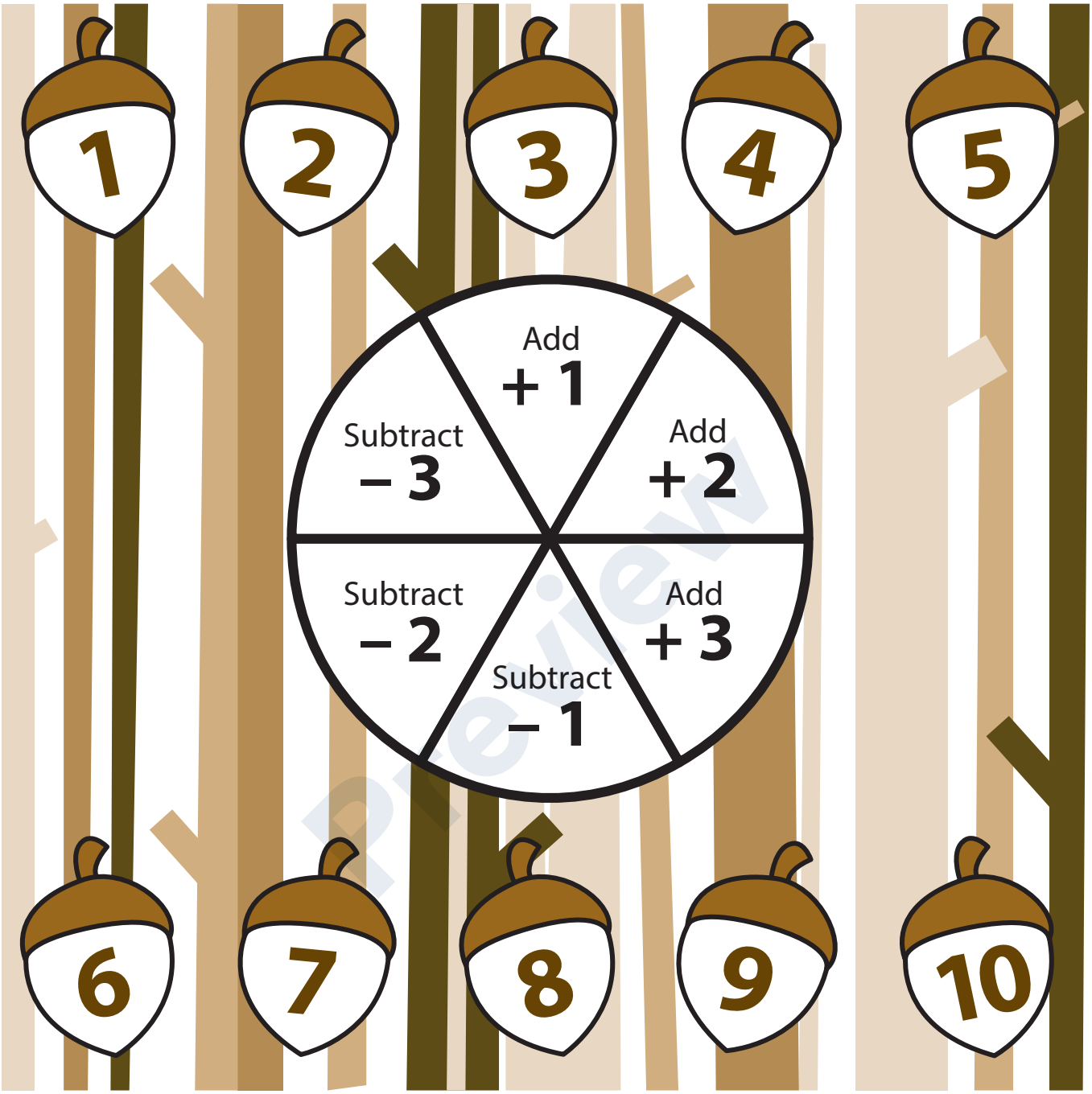
B Players use two dice numbered 0–5 and play as usual.

C When a player rolls 11, they may advance to the next den instead of rerolling, no matter what numbers are shown on the next den.

D Players roll the numbered die twice and add the two numbers. Then, they roll the dotted die and subtract that number of dots from the total (for example, 4 + 5 = 9, then 9 – 2 = 7).

E Players play to the 5th den and back again.

The Forest Game



Foxes & Dens Checkpoint

Instructions

- Observe 4 students playing Foxes & Dens during Work Places.
- Mark the boxes that best characterizes each student's actions and responses during the game.
- If you don't readily observe a skill, use the prompts under the suggested observation to elicit the information you need.

	Prompt 1: Observe how students determine the total when they roll the dice.			**Prompt 2:** Observe students' degree of ease and comfort at identifying the numbers they need as they move from one den to the next on the board.		
	Adds with sums to 10 (K.OA.2)			Read numbers from 0 to 10 (supports K.CC)		
	"I see you just rolled 4 and 3. How much is that in all?"			*"So, you got 7 on that last roll. Is there a 7 in the next den on the game board? Can you move your marker or do you have to stay where you are?"*		
Student Name	Counts on or makes use of a familiar fact to find the total (e.g., solves 4 + 3 by counting on from the 4 or the 3, or using 3 + 3 to help).	With prompting, counts on or uses a strategy more efficient than one by one counting to find the total.	Counts one by one, starting from 1 to find the total.	Finds the needed numbers easily as he/she moves from one den to the next.	Has to work to find the needed numbers, but is generally successful.	Struggles to find the needed numbers.

Work Place Guide 4C Beat You to Twenty

Summary

This partner game is similar to the previous game Beat You to Ten. Players take turns rolling the die numbered 0–5 and covering the indicated number of pictured cubes with actual Unifix cubes. They use a different color on each turn. The first player to cover 20 exactly is the winner.

Skills & Concepts

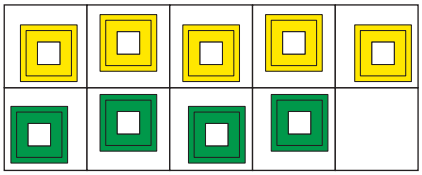
- Count forward from a given number, rather than starting at 1 (K.CC.2)
- Count objects one by one, saying the numbers in the standard order and pairing each object with only one number name (K.CC.4a)
- Identify the number of objects as the last number said when counting a group of objects (K.CC.4b)
- Count up to 20 objects in a line to answer "how many?" questions (K.CC.5)
- Given a number from 1 to 20, count out that many objects (K.CC.5)
- Represent addition with objects (K.OA.1)
- Add with sums to 10 (K.OA.2)

Materials

Copies	Kit Materials	Classroom Materials
TM T5 Work Place Guide 4C Beat You to Twenty **TM T6** Work Place Instructions 4C Beat You to Twenty	• 3 Beat You to Twenty Game Boards • 3 dice numbered 0–5 • Numbers to Ten Counting Mats, as needed for differentiation	• 3 containers of 50 Unifix cubes (25 of each of two different colors in each container)

Assessment & Differentiation

Here are some quick observational assessments you can make as students begin to play this game on their own. Use the results to differentiate as needed.

If you see that…	Differentiate	Example
A student continues to count by 1s each time instead of counting on.	SUPPORT Be sure the student is changing colors with each turn, and then focus on counting on from the last total, either by touching and counting the cubes or by using another counting on method.	"You had 7 before and now you rolled 3 more. Can you count on from 7 to get the total?"
A student does not use any strategies to add numbers.	SUPPORT Have the student put the cubes on a ten-frame first in order to see different ways of combining them.	 "I can say, 5… 6, 7, 8, 9." "I see doubles—4 + 4—that's 8, and 1 more makes 9." "There's only 1 empty space on the ten-frame, so there are 9 cubes."
A student or pair of students easily reads the numerals and adds.	CHALLENGE Have students record an equation to describe their turns. Invite students to play Game Variation A or B.	20 = 2 + 4 + 3 + 5 + 3 + 2 + 1

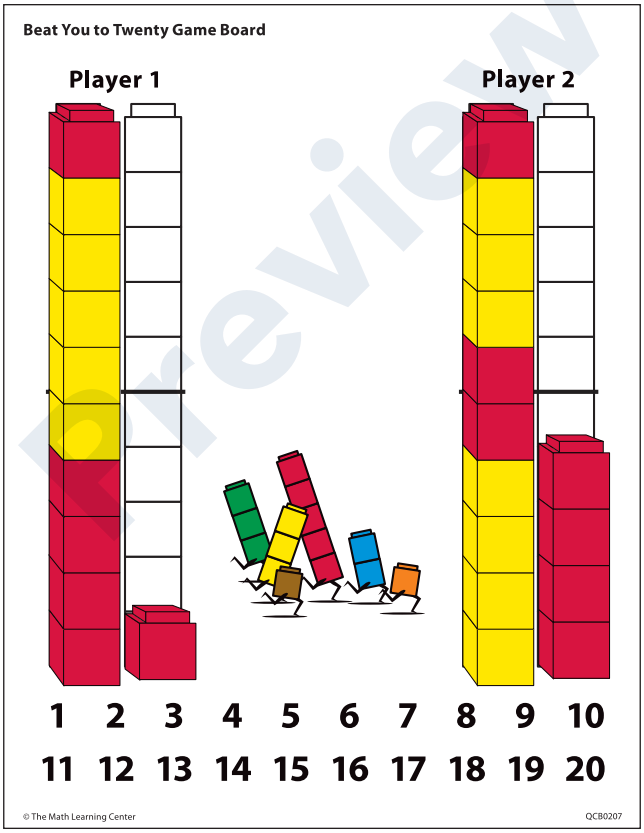
Work Place Instructions 4C Beat You to Twenty

Each pair of players needs:

- 1 Beat You to Twenty Game Board
- 1 die numbered 0–5
- a container of Unifix cubes

1 Players take turns rolling the die and covering the pictured cubes on their side of the game board with the number of cubes indicated by the die. They change cube colors with each turn.

- How many cubes did you have on the game board?
- How many cubes did you add?
- How many cubes do you have now?
- How many more cubes do you need to make 5? 10? 20?
- How many 10s and 1s do you have?
- Who has more? Who has less?



2 The first player to cover all 20 game board cubes wins, but it must be 20 exactly.

Game Variations

A Players use two dice numbered 0–5, and add the numbers rolled to show how many cubes to cover. When a player is within 5 cubes from the end, only one die is used.

B Players start with 20 pictured cubes covered and subtract the number rolled, with 0 as the final goal.

Home Connections

KINDERGARTEN – UNIT 4 – MODULE 2

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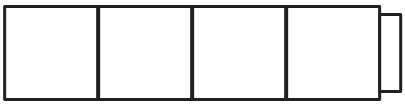
Note to Families

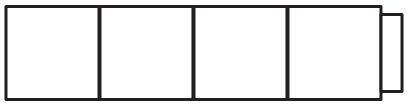
Help your child "count on" instead of counting from 1 every time. For example, if there are three dots on the first hand and two on the second, say "3, 4, 5!"

1 Color the cubes to match each equation.

1 + 3 = 4



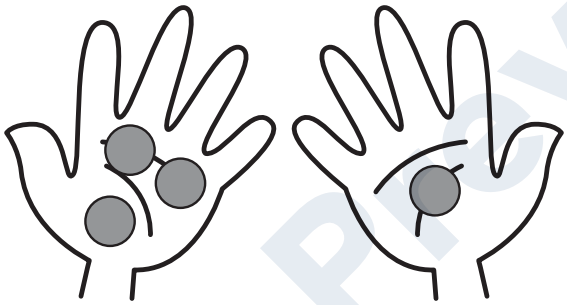
2 + 2 = 4



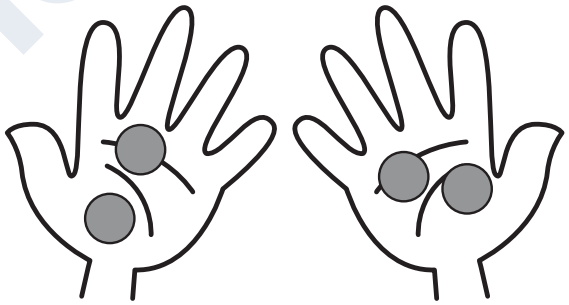
4 + 0 = 4

3 + 1 = 4

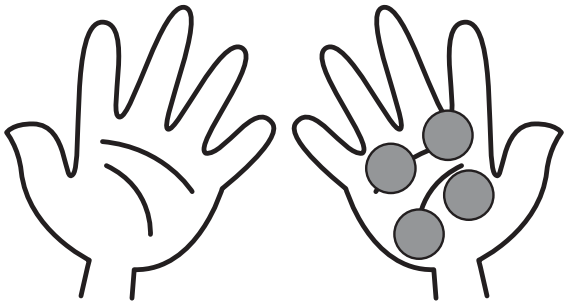
2 Trace the numbers and solve the problems. Use the pictures to help.



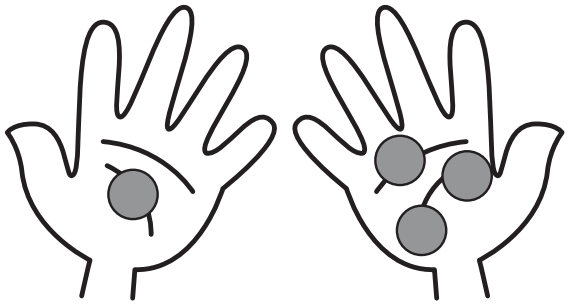
3 + 1 = ____



2 + 2 = ____



0 + 4 = ____



____ + ____ = 4

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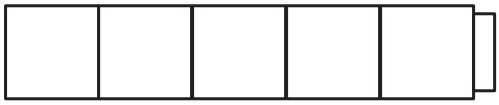
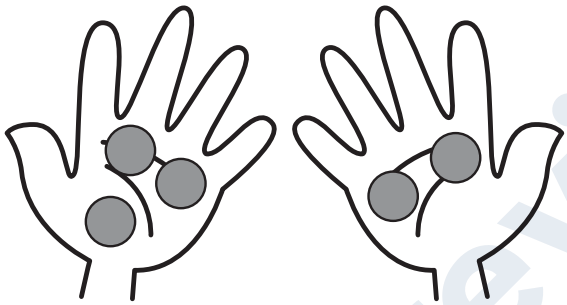
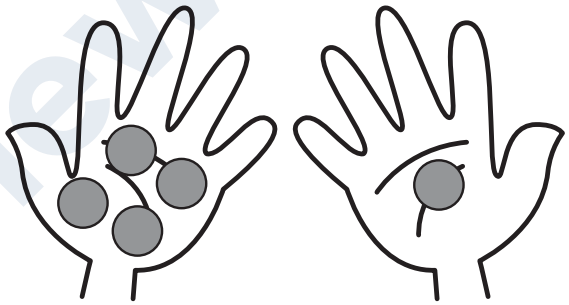
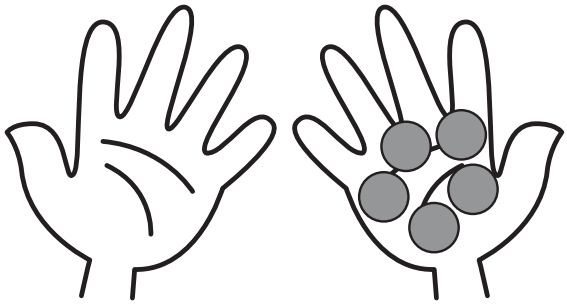
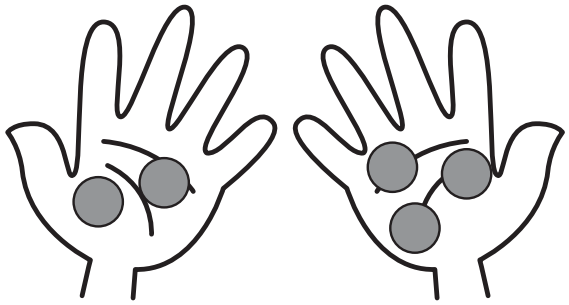
3 Color the cubes to match each equation.

 1 + 4 = 5	 5 + 0 = 5
 2 + 3 = 5	 4 + 1 = 5

4 Trace the numbers and solve the problems. Use the pictures to help.

 3 + 2 = ___	 4 + 1 = ___
 0 + 5 = ___	 ___ + ___ = 5

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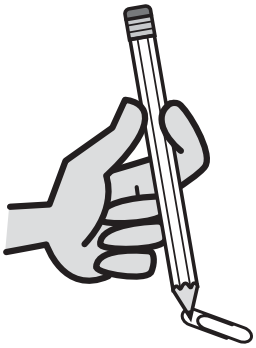
The Forest Game page 1 of 4

Note to Families

This game will help your child practice adding and subtracting by following the directions on the spinner. Your child may recognize the words *Add* and *Subtract* on the spinner; if not, help read the words and the signs (+ and –) that go with them.

Materials



- The Forest Game, pages 1–4
- paperclip and pencil (for spinning)
- 20 game markers (pennies, cereal pieces, dry beans, etc.)

Instructions

1 Each player needs a game board (pages 3 and 4) and 10 game markers—these will be your squirrels.

2 Set up your boards with 5 squirrels on the first 5 nuts, and another 5 squirrels off to the side for each player.

3 Look at the spinner before you start playing. Talk about what the words and signs mean.

4 Take turns spinning the spinner. Follow the directions on the spinner.

- Your squirrels will hop in and out of the forest depending on the spinner directions.
- If the spinner says *Add*, add that number of squirrels to your board. How many squirrels are in your forest now? How many more do you need to get to 10?
- If the spinner says *Subtract*, hop that number of squirrels off your board (and out of the forest). How many squirrels are in your forest now? How many more do you need to get to 10?

5 Take turns spinning, adding or subtracting squirrels, and reporting the results until one player has collected exactly 10 squirrels in the forest. That player wins the game.

6 Complete the worksheet (page 2) and return the paper to your teacher.

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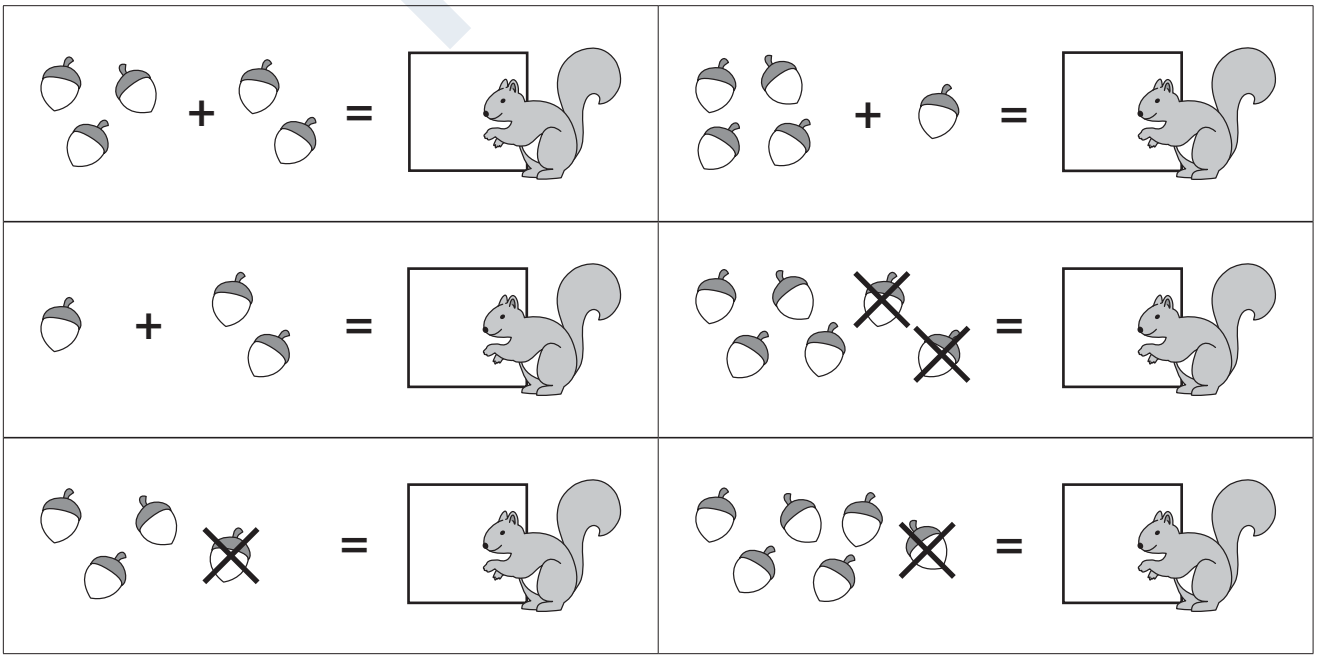
1 What did you think of The Forest Game? Talk about it together. Think about these questions. Ask an adult to write down your answers.

a What did you like about it?

b What did you learn?

c Were you counting by 1s, counting on, or did you just "see" how many squirrels you had in the forest?

2 Solve some Squirrels & Nuts problems. Help the squirrels get some nuts by adding and subtracting.



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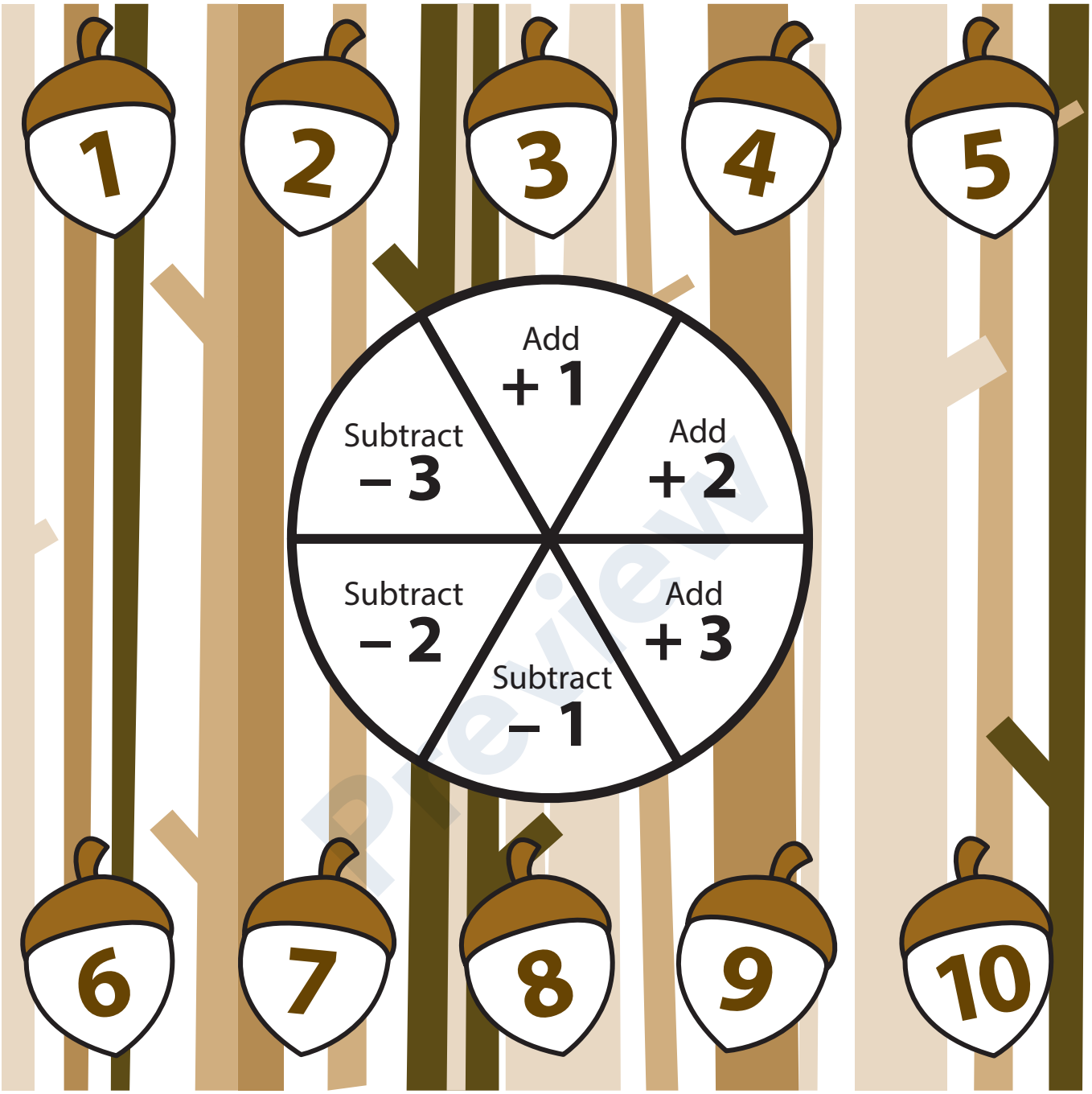

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