November

Module 1

Introducing Squares & Triangles

During the opening module this month, children identify, describe, count, and sort squares and triangles of different colors and sizes. They trace, color, and cut out squares and triangles for the Calendar Grid, and help pattern their markers at the end of the week. They make square puppets, play games in and on giant masking tape squares, and turn triangles into all sorts of things.

<table>
<thead>
<tr>
<th>Session</th>
<th>Number Corner 5–10 minutes</th>
<th>Problems &amp; Investigations 10–15 minutes each</th>
<th>Work Places 15–20 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1 5–10 minutes</td>
<td>CG Today Is… TI Six Squares in a Box</td>
<td>Work Places 2–5 (optional)</td>
<td></td>
</tr>
<tr>
<td>Session 2 15–40 minutes</td>
<td>CG Update TI What Is a Square? 1 Making Squares for the Calendar 2 Square Puppets</td>
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<tr>
<td>Session 3 15–25 minutes</td>
<td>CG Update TI Six Triangles in a Box 1 Giant Squares</td>
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<tr>
<td>Session 4 15–40 minutes</td>
<td>CG Update TI What Is a Triangle? 1 Making Triangles for the Calendar 2 Shark’s Fins, Mountains &amp; Ice Cream Cones</td>
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<tr>
<td>Session 5 5–10 minutes</td>
<td>CG Update TI Patterning Squares &amp; Triangles</td>
<td>Work Places 2–5 (optional)</td>
<td></td>
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</tbody>
</table>

CG – Calendar Grid, TI – Theme Introductions

Half-Day Schedules  Compress Problems & Investigations to 10–15 minutes in Sessions 2 and 4 by having two adults conduct the first investigation with half the group, or one adult with the whole group. Omit Investigation 2 or conduct it as an option during Free Choice.

Materials Preparation

Each day’s session includes a complete list of materials you’ll need, as well as notes about preparation. Use this list to prepare certain materials for the entire module in advance.

<table>
<thead>
<tr>
<th>Type</th>
<th>Items &amp; Notes</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displays</td>
<td>Number Corner Display</td>
<td>Adjust your display for November as described and illustrated on the next page.</td>
</tr>
<tr>
<td>Paper Cutting</td>
<td>Puppet Parts</td>
<td>Before Session 2, cut or assemble a 8” × 16” piece of yellow paper for each child and staple it to form a puppet base (see Preparation in Session 2 for details). In addition, cut the following, keeping any scraps: • 2” squares of paper in a variety of colors, 2 per child plus extras, in a basket or tub • 1 ½” squares of paper, variety of colors, 1 per child plus extras, in a basket or tub • 1” squares of paper, variety of colors, 4 per child plus extras, in a basket or tub</td>
</tr>
<tr>
<td>Special Items</td>
<td>Triangle Examples</td>
<td>Before Session 4, use the Triangle Patterns teacher master to cut a variety of triangles from different colors of construction paper. Glue one of each type of triangle to a separate piece of white drawing paper. Put the rest of the triangles on a large tray.</td>
</tr>
</tbody>
</table>
The Number Corner Display November

- Remove October's paper pumpkins and leaves from the Calendar Grid pocket chart. You can use them for classroom decoration or send them home with the children.
- Use background and title cards to set up Calendar Grid for November of the current year, as illustrated.
- Leave the Number Path pocket charts with numerals and set cards in place. Although you won’t change them until the end of Module 2, they’re a good way to keep math on the wall. Too, some children may enjoy mixing up the cards to play their own version of Chirpy’s Leaf Match Game during Free Choice.
- If you’re displaying birthdays or events in the Calendar Grid, remove the last month’s markers and add those for November. Children can count the days to the next event when they update Calendar Grid each day.

Note: Be sure to consult a calendar of the current year for the beginning day of the month.
Session 1

You’ll use the mystery box to launch this month’s theme, inviting children to picture what’s inside as you offer clues. Then you’ll open the box to reveal a set of squares for the children to count and describe.

<table>
<thead>
<tr>
<th>Kit Materials</th>
<th>Classroom Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number Corner</strong> Calendar Grid &amp; Theme Introductions</td>
<td></td>
</tr>
<tr>
<td>• Calendar Grid display</td>
<td>• small cardboard box</td>
</tr>
<tr>
<td>• attribute blocks: 3 large thin squares and 3 small thin squares</td>
<td>• chart paper or space on the whiteboard</td>
</tr>
<tr>
<td>• Attribute Cards in order: more than 1, It’s made of plastic, You can play with it, red, blue, yellow, square</td>
<td></td>
</tr>
<tr>
<td><strong>Work Places 2–5</strong> (optional)</td>
<td></td>
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</tbody>
</table>

**Preparation** Number Corner
Conceal the attribute blocks (3 large thin squares and 3 small thin squares) in the box.

**Number Corner**

**Calendar Grid** Today Is…

Explain that the month of October is over and a new month has started. Point to and read the word *November*, and tell children they’ll make new calendar markers later this week. Then update the Calendar Grid as described below.

1. Put the *Today* card behind today’s background card, explaining as you do so.

2. Point to and read the names of the days at the top of the grid, stopping when you reach today’s. Then move your finger down that column and restate the name of the day.

3. Repeat step 2 and invite the children to join you this time.

**Skills & Concepts**
- Observe and describe objects
- Identify and describe shapes
- 1-to-1 correspondence and cardinality to 6
- Compare objects by size

**Vocabulary**
- big
- blue
- little
- month
- more than one
- November
- number words 1–6
- red
- square
- yellow

*Teacher* *(Pointing to the day cards)* Sunday, Monday, Tuesday—ah, here we are. Today is Tuesday.
Theme Introduction  Six Squares in a Box

1. Show children the box and tell them there’s something special inside for November. Explain that you’ll give them some clues to help them figure out what’s in the box.

2. Post the first four attribute cards, reading each as you go.

3. Review the cards posted and invite children to predict what’s in the box. Use words and simple sketches to record a few of their ideas.

4. Post the last three cards. Stop after each so the children can evaluate their predictions in light of the new information.

5. Open the box to reveal the squares. Pull them out and place them in a line, counting them with the class as you go. Restate the total together.

6. Invite children to share observations. Once the shapes have been identified as squares, ask children to explain how they know these shapes are squares.

Work Places

You might opt to extend today’s math activities by giving children another opportunity to choose from among Work Places 2–5.
Session 2

During Number Corner, children learn more about squares from an inquisitive little mouse. Later, they make square markers for the calendar and square puppets to take home.

### Copies

<table>
<thead>
<tr>
<th>Kit Materials</th>
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<tbody>
<tr>
<td>Number Corner Calendar Grid &amp; Theme Introductions</td>
<td></td>
</tr>
<tr>
<td>• Calendar Grid display</td>
<td>• crayons or markers</td>
</tr>
<tr>
<td>• square attribute blocks</td>
<td>• pencils or fine-tipped black markers</td>
</tr>
<tr>
<td>• All About Shapes book (for What is a Square? story)</td>
<td>• scissors</td>
</tr>
</tbody>
</table>

### Investigation 1 Making Squares for the Calendar

<table>
<thead>
<tr>
<th>Kit Materials</th>
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<tbody>
<tr>
<td>• Square Outlines (T1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 8”× 16” pieces of yellow paper, 1 per child, stapled to form a puppet base (see Preparation)</td>
</tr>
</tbody>
</table>

### Investigation 2 Square Puppets

<table>
<thead>
<tr>
<th>Kit Materials</th>
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<tbody>
<tr>
<td></td>
<td>• 2” squares of paper in a variety of colors, 2 per child plus extras, in a basket or tub</td>
</tr>
<tr>
<td></td>
<td>• 1½” squares of paper, variety of colors, 1 per child plus extras, in a basket or tub</td>
</tr>
<tr>
<td></td>
<td>• 1” squares of paper, variety of colors, 4 per child plus extras, in a basket or tub</td>
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<tr>
<td></td>
<td>• construction paper or fabric scraps</td>
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<tr>
<td></td>
<td>• yarn or ribbon in a variety of colors</td>
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<tr>
<td></td>
<td>• scissors and glue sticks, 1 of each per child</td>
</tr>
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</table>

### Preparation Investigation 2

Fold each 8”× 16” piece of yellow paper in half to form an 8-inch square puppet base. Staple along both sides, leaving the bottom open.

### Skills & Concepts

- 1-to-1 correspondence and cardinality to 6
- Identify shapes in the environment and in isolation
- Name basic shapes regardless of size or orientation
- Describe and draw shapes
- Compare objects by size

### Vocabulary

- big
- circle
- color words
- corners
- length
- little
- medium-sized
- number words 1–6
- rectangle
- shape
- sides
- square
- straight
Number Corner

Calendar Grid Update

Work with the children to update the Calendar Grid as described in Session 1.

Theme Introduction What Is a Square?

1. Introduce the story *What Is a Square?* by reading the title and inviting children to predict some things they might see in the story, and some things they might learn.
2. Read the story to the group, taking time to discuss each page as you go. Use the square attribute blocks to support the discussion.
3. When you get to the last two pages, press children to explain how they know each shape is or is not a square.

Tips & Prompts

- As you discuss each page in the story, here are some prompts you might use:
  - Let’s count the sides of the square in the picture.
  - Do you think our big red square also has 4 sides? Who’d like to come up and point to each side on the big red square as we count them?
  - What do you think the mouse means when she says that all 4 sides are the same length?
  - Let’s count the corners on the square in the picture.
  - Do you think our big blue square also has 4 corners? What about our little yellow square? Who’d like to come point to each corner on this square as we count them?
  - Have you ever seen a square checkerboard, a square clock, a square of chocolate? Where else have you seen squares? Can you point to something that is square in our classroom?
- In discussing the last page, using examples that are not squares and gently challenging children to defend and explain their assertions is an effective way to help them grasp the most important features of the shape.

Problems & Investigations

Investigation 1 Making Squares for the Calendar

Give each child a square outline to trace with a pencil or black marker. Have children color or decorate their squares and then cut them out.

*You’ll need 15 square markers for November. If you have fewer than 15 students, have some make extra markers. Children can also make extras to take home.*

Investigation 2 Square Puppets

1. Set out the three sizes of paper squares for all to see. Invite children’s observations.
2. Show the children a folded and stapled puppet base. Explain that this will be the puppet’s head, and they’ll use the other squares to give their puppets eyes, nose, and a mouth.
3. Give each child a puppet base, and have them count out 2 big squares for the eyes, 1 medium-sized square for the nose, and 4 little squares for the mouth.
4. Set out the other supplies—glue sticks, scissors, crayons and markers, yarn or ribbon, and paper scraps—and let them go to work.

*Support* Reinforce that all the shapes are squares. There are many different colors and they come in three different sizes—big, medium, and little.
Session 3

The mystery box returns, with 6 triangles hidden inside this time. During Problems & Investigations, the children gather in groups of 4 to play in and on giant squares made of masking tape.

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<tr>
<td>• attribute blocks: 3 large thin triangles and 3 small thin triangles</td>
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<td>• Attribute Cards in order: <em>more than 1, It’s made of plastic, You can play with it, red, blue, yellow, triangle-shaped</em></td>
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| **Investigation 1 Giant Squares** |
| • painter’s masking tape |
| • Unifix cubes and a few containers for them |

**Preparation Number Corner**

Conceal the attribute blocks (3 large thin triangles and 3 small thin triangles) in the box.

**Preparation Investigation 1**

• Use painter’s tape to outline a 2-foot square on the floor for every group of four children. Make the squares as far apart as possible—if your classroom is very small, you might want to use a larger space, such as a cafeteria or gym.

• Put about 200 Unifix cubes in a basket or container for each group.

**Number Corner**

**Calendar Grid Update**

Work with the children to update the Calendar Grid as described in Session 1.

**Theme Introduction Six Triangles in a Box**

1. Repeat the Theme Introduction activity from Session 1 with triangular instead of square attribute blocks.

**Skills & Concepts**

- Observe and describe objects
- Identify and describe shapes
- 1-to-1 correspondence and cardinality to 6
- Compare objects by size
- Follow simple directions related to proximity (beside, next to, in, out, on, off, around)

**Vocabulary**

- big
- blue
- corners
- little
- more than one
- number words 1–6
- red
- sides
- straight
- triangle
- yellow

**Attribute Blocks for Free Choice**

Make the attribute blocks available for children to play with during Free Choice throughout the rest of the month.
Problems & Investigations

Investigation 1 Giant Squares

1. Show the children that there are some masking tape squares on the floor. Explain that they’re going to go in small groups to one of the squares to play some games.

2. Have groups of 4–5 go to a square, stand on the tape, and wait for instructions.

3. Have groups do tasks that reinforce their location and position relative to the square.
   - Step off the tape so you’re standing outside the square.
   - Put your elbow [foot, hand, knee, head, nose, thumb…] on the square.
   - Put your hand [foot, elbow, knee, head, nose, thumb…] inside the square.
   - Stand [sit crisscross, kneel, hop on one foot] next to, but not in, the square.

4. Have groups do tasks that reinforce the key attributes of a square—4 equal sides and 4 corners.
   - Stand on one corner of the square, one person per corner. Is everyone in your group standing on a corner? Is there anyone left over? If so, have that person stand right in the middle of the square.
   - Stand on one side of the square, one person per side. Without moving, reach out to hold hands with the people on either side. What shape are you making right now?

5. Give each group Unifix cubes, and ask them to make a train that goes all the way around the square. When they’re finished, ask them to name the shape they just built.

Differentiation

Challenge. Have children line the perimeter of the square with miniboards instead of Unifix cubes, and then count to see how many miniboards it took.

Extension

Leave the tape squares on the floor for a couple of days. Children might like to line up Unifix cubes, miniboards, blocks, or toy vehicles along the tape during Free Choice. Others may enjoy hopping in and out of the squares or sitting in them.
Session 4

Little Mouse returns to help the children learn more about triangles. Later, they make triangle calendar markers, and turn various types of triangles into all sorts of things.

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<tr>
<td><strong>Investigation 1</strong> Making Triangles for the Calendar</td>
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<tr>
<td>• Triangle Outlines (T2)</td>
<td></td>
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<tr>
<td><strong>Investigation 2</strong> Shark’s Fins, Mountains &amp; Ice Cream Cones</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Triangle Patterns (T3)</td>
<td>• sheets of drawing paper, class set plus 4 for display and several extras</td>
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</tr>
<tr>
<td></td>
<td>• construction paper in several colors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• glue sticks, crayons or markers</td>
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<tr>
<td></td>
<td>• cafeteria tray or shallow box lid</td>
<td></td>
</tr>
</tbody>
</table>

**Preparation** Investigation 2

Use the Triangle Patterns master to cut a variety of triangles from different colors of construction paper. Glue one of each type of triangle to a separate piece of drawing paper (see illustration on the next page). Put the rest of the triangles on a large tray or in a box lid.

**Number Corner**

**Calendar Grid** Update

Work with the children to update the Calendar Grid as described in Session 1.

**Theme Introduction** What Is a Triangle?

1. Read the story *What Is a Triangle?* to the group, discussing each page as you go. Use the triangle attribute blocks to support the discussion.

2. When you get to the last two pages, press children to explain how they know each shape is or is not a triangle.

   The shapes on the last page (clockwise from top left) are a triangle, a quadrilateral, a triangle, and a trapezoid. If children identify the quadrilateral or trapezoid as triangles, work with them to double-check each shape to see if it has 3 straight sides and 3 corners.

**Tips & Prompts**

Here are some questions you might pose as you read and discuss each page:

- Let’s count the sides of the triangle in the picture.
- Do you think our big yellow triangle also has 3 sides? Who’d like to come up and point to each side on the big yellow triangle as we count them?
- What do you think the little mouse means when she says that the triangle is very steep?
- Let’s count the corners on the triangle in the picture.
- Do you think our big blue triangle also has 3 corners? What about our little red triangle? Who’d like to come up and point to each corner on one of our triangles as we count them?
- Have you ever seen a triangle-shaped traffic sign? Have you ever had a piece of cheese or a sandwich cut into triangle-shaped halves? Where else have you seen triangles? Can you point to something that is triangle-shaped in our classroom?

**Skills & Concepts**

- Identify shapes in the environment and in isolation
- Name basic shapes regardless of size or orientation
- Describe and draw shapes

**Vocabulary**

- big
- color words
- corners
- half
- little
- shape
- sides
- square
- straight
- triangle

**Types of Triangles**

See the November introduction for information about the different types of triangles. Preschoolers don’t have to identify the different types of triangles, but can certainly appreciate the fact that not all triangles look the same.
Problems & Investigations

Investigation 1  Making Triangles for the Calendar
Give each child a triangle outline to trace with a pencil or a black marker. Have children color or decorate their triangles and then cut them out.
You'll need 15 triangle markers for November. If you have fewer than 15 students, have some make extra markers. Children can also make extras to take home.

Investigation 2  Shark's Fins, Mountains & Ice Cream Cones

1. Show children the four triangles on drawing paper. Invite and prompt observations:
   - How are these shapes alike? How are they different?
   - Do any of these triangles remind them of things they’ve seen at home, at school, at the park or the store?

2. Choose one of the sheets and work with input from the children to transform the triangle into something else.

3. Set out the tray of paper triangles. Invite each child to choose one and think about what they might turn it into. Then make the art materials available, and let them go to work.

Extensions
- Ask children to tell you about their work. Write their descriptions on their pictures.
- Invite children to combine two or more triangles to create their pictures.
Session 5

Today, children work with you to pattern the square and triangle markers they made earlier in the week.

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<tbody>
<tr>
<td><strong>Number Corner Calendar Grid &amp; Theme Introductions</strong></td>
<td></td>
</tr>
<tr>
<td>* Calendar Grid display</td>
<td>* selected children’s paper squares &amp; triangles, 15 of each, in a basket</td>
</tr>
<tr>
<td></td>
<td>* small zip top bag</td>
</tr>
<tr>
<td></td>
<td>* 3 ¼” construction paper squares, 15 in each of 2 contrasting colors (optional, see Preparation)</td>
</tr>
</tbody>
</table>

**Work Places 2–5 (optional)**

**Preparation** Number Corner
Select 15 squares and 15 triangles to use on the Calendar Grid. If you would like to make the two types of markers more distinct from one another, glue the squares to 3 ¼” squares of paper in one color and the triangles to squares of paper in a contrasting color.

**Number Corner**

**Calendar Grid Update**
Work with the children to update the Calendar Grid as described in Session 1.

**Theme Introduction** Patterning Squares & Triangles

1. Hand out the square and triangle markers to the children and briefly discuss them. Try to distribute the squares and triangles in roughly equal numbers. You may want to let children know that they probably won’t receive the marker they made.
2. Ask those with triangles to hold them up. How do they know these shapes are triangles?
3. Have those with squares hold them up. How do they know these shapes are square?
4. Call four children one by one and have them line up in an AABB pattern—square, square, triangle, triangle—holding their markers in front of them. Then walk behind the row, pointing to each child as the group names the shape they’re holding.

**Skills & Concepts**
- Sort shapes by type
- Recognize, verbalize, and extend an AABB repeating shape pattern

**Vocabulary**
- line
- pattern
- repeat
- square
- triangle
5 Call up four more children (square, square, triangle, triangle) to join the line. Again, walk behind the row of children, pointing while the group names their shapes.

6 Add a ninth child (holding a square) to the line. Ask everyone to think about which shape belongs next in the line and whisper the answer to the person sitting next to them. Invite some volunteers to share and explain their thinking.

7 Repeat the process described in steps 5 and 6, adding four children at a time, then reciting the pattern as a group, until everyone is in line. If necessary, have children exchange their shapes for others so they can join the line.

8 Walk along the line once more while everyone names the shapes. This time, at the end of each unit of repeat (square, square, triangle, triangle), have those four children sit down right where they are. Emphasize that this 4-part chunk—square, square, triangle, triangle—repeats over and over.

Store the shape markers in a small ziptop bag and keep it near the Calendar Grid.

Work Places

You might opt to extend today’s math activities by giving children another opportunity to choose from among Work Places 2–5.
Square Outlines

Cut along the solid lines, leaving the dotted line squares for children to trace and cut out.
Triangle Outlines

Cut along the solid lines, leaving the dotted line triangles for children to trace and cut out.
Triangle Patterns

Use this sheet as a template to cut different types of triangles out of several colors of paper. Cut enough triangles for each student to have two or more.

**KEY**
A) Right Triangle  
B) Scalene Triangle  
C) Equilateral Triangle  
D) Isosceles Triangle 

The letters on the triangles are for your reference only.