

Work Place IA



WORK PLACE GAMES & ACTIVITIES

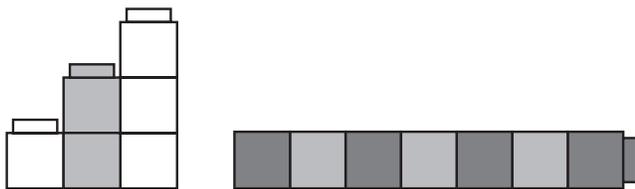
Unifix Cubes

This Work Place basket will need

- ★ about 1000 Unifix cubes

Skills

- ★ counting
- ★ recognizing colors
- ★ comparing length of objects
- ★ identifying more or less



Work Place Instructions

1. What do you think you'll be able to do with the cubes?
2. Do you think you could snap them together in a train as long as your arm?
3. Do you think you could work with a friend to make the train as tall as one of you?
4. How far do you think the cubes would reach if they were all snapped together?
5. How many students could lie down touching heels to heads to measure the train if it reached all the way across the room?
6. What else can you do with Unifix cubes?

Instructional Considerations

Young children are quite amazing when they first encounter the Unifix cubes. It doesn't take them long to discover the joy of working together to share their cubes in order to make their trains longer. It's admirable when they manage to get all the Unifix cube workers to combine efforts to see how long they can make the train. Eventually, you might encourage them to break the train(s) apart in lengths of ten cubes at cleanup time. It's a nice way to get children to count and compare their lengths of cubes as they put them back in the Work Place baskets. It won't be too many days before you begin to notice that some children are using the cubes to make simple repeating patterns. Others may take pleasure in seeing how many of the cubes they can count. Still others just love snapping them together in long trains as they learn how to share the cubes and cooperate with others to accomplish their goals.

Work Place IB



WORK PLACE GAMES & ACTIVITIES

Pattern Blocks

This Work Place basket will need

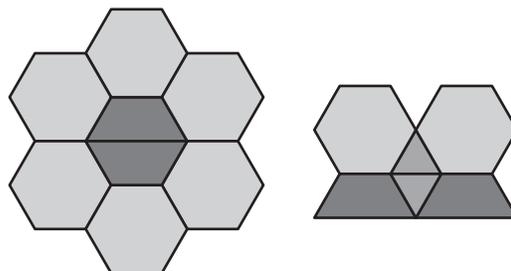
- ★ 3 buckets of pattern blocks

Skills

- ★ sorting by size, shape, and color
- ★ counting
- ★ patterning
- ★ identifying shapes
- ★ exploring relationships between various 2-dimensional shapes
- ★ combining shapes to make other shapes

Work Place Instructions

1. What do you notice about the pattern blocks?
2. What can you do with them?
3. Are the other children creating things that are the same or different than your work? Talk to each other about your work. Do you see lots of good ideas?
4. How can you fit the pattern blocks together to make designs?



Instructional Considerations

Pattern blocks are splendid materials. They provide opportunities for designing, patterning, counting, and discovering relationships among shapes. Many children love to go back to them over and over. You'll see beautiful designs, long lines of simple patterns, and even 3-dimensional structures. The possibilities are endless. Children will begin to notice that the yellow hexagon is the same size as 2 red trapezoids, or that 3 green triangles are the same as the red trapezoid. They may surround a hexagon with triangles and then add trapezoids or rhombuses (diamonds) as they expand their design, carefully fitting each shape into the growing plane.

Work Place IC



WORK PLACE GAMES & ACTIVITIES

Polydrons

This Work Place basket will need

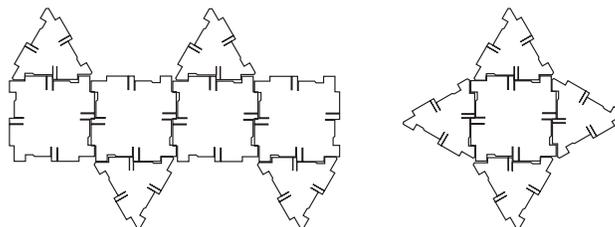
- ★ 80 Polydron squares and 100 Polydron triangles

Skills

- ★ sorting shapes by number of sides and angles
- ★ identifying shapes (square, triangle)
- ★ building and inventing
- ★ creating 3-dimensional shapes with 2-dimensional shapes

Work Place Instructions

1. Can you figure out how to hook 2 pieces together? How can you take them apart? (See note below.)
2. What if you want to add more pieces?
3. Can you find a way to fold your pieces together into a 3-dimensional figure? Is it an open or a closed figure?
4. How many different ways can you find to make a star?
5. What can you make using only triangles? Only squares?
6. What can you make when you combine the two shapes?
7. Talk to a friend about the things you're both making.



Instructional Considerations

The polydrons provide exceptional opportunities for children to create 2- and 3-dimensional figures. It is important to let the children have many days to explore and invent in their own ways with these materials. Nestle in beside students who are working with the pieces and encourage them to talk to you about what they're discovering and creating.

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***Note** If children are have difficulty taking their 3-dimensional figures apart, show them how to insert a corner of another piece into an intersection and give it a slight twist. The pieces should split apart easily.*

Work Place ID



WORK PLACE GAMES & ACTIVITIES

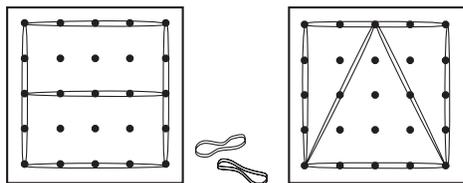
Geoboards & Geobands

This Work Place will need

- ★ 8 geoboards and small paper tubs of geobands for children to share

Skills

- ★ using positional language
- ★ using ordinal numbers
- ★ naming shapes and their attributes



Work Place Instructions

1. Take a geoboard and a few geobands. What can you create?
2. Look around. What are other children doing with their geoboards?
3. Talk to each other about your work.
4. Are you remembering to work safely with the geobands?

Instructional Considerations

For the first few days, you'll want to spend a little time talking about safety issues with geobands. It has been our experience that kindergarten children do not deliberately shoot the bands at anyone. They occasionally lose hold of one as they're trying to attach it and it may fly through the air. We remind children about safety each time the geoboard basket is delivered.

In the beginning, most young children are quite fascinated with the business of fastening geobands to the pegs. At first, their goal seems to be simply to get as many on the board as possible. Eventually, many move beyond that level and begin making various shapes and designs.

Work Place IE



WORK PLACE GAMES & ACTIVITIES

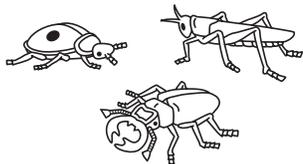
Bucket of Bugs

This Work Place basket will need

- ★ math bucket of bugs
- ★ 10 Counting Mats

Skills

- ★ estimating using a benchmark of 10
- ★ counting by 1's and 10's
- ★ sorting



Work Place Instructions

1. Pull some bugs out of the bucket. Do you see any that you can name? What do they look like? Which are your favorite? Do you see any that you don't like?
2. Do you see any bugs that match? How many can you find of each kind? How many butterflies are there? How many grasshoppers?
3. Work with your friends to sort and count the bugs and then see what kinds of games or bug stories you can make up.

Instructional Considerations

Many kindergartners will want to use the bugs to pursue their own purposes for the first few months of school. Some may count the bugs onto the mats over and over. Others may sort them by appearance, carefully lining up the bugs that match, or finding their favorites. Still others will pull the bugs into fantasy games, many of which seem to involve good bugs and bad bugs. A few students may be content to simply run their hands through the bugs, and may need a bit of direction from you or other children to find constructive ways to use them. These materials will be used in more structured ways eventually. In the meantime, it's important for children to be able to play with them. Remind students to count the bugs back onto the mats at cleanup time to make sure that all 100 find their way back into the bucket.

Work Place IF



WORK PLACE GAMES & ACTIVITIES

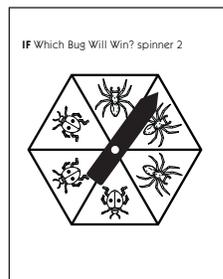
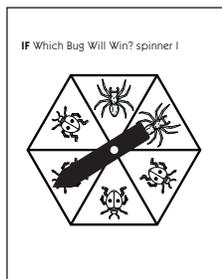
Which Bug Will Win?

This Work Place will need

- ★ 6 Which Bug Will Win? spinners (3 of each kind)
- ★ 6 pencils
- ★ Which Bug Will Win? record sheets (Blackline I.2, run 20–30 copies and place at the bottom of the basket)

Skills

- ★ creating and interpreting a graph
- ★ exploring probability
- ★ counting and comparing quantities



Work Place Instructions

1. Get a spinner, record sheet, and pencil. Circle the spinner you chose on the record sheet.
2. Spin the spinner and then mark a box above one of the bugs to show the results. Continue spinning and recording until one column is completely full.
3. Put the spinner and the pencil away. Show your paper to a friend and share which bug won. Then put your paper in your cubbie to take home.

Instructional Considerations

Although there are very good questions that might be asked of children as they work at this activity (i.e., Which bug is ahead? Why do you think that's happening? How many would the other bug need to catch up? Are your friends getting the same results? Do you think it would turn out the same if you used the other spinner next time you play?), talking with students during Work Places can be tricky business. No matter how well-intended our questions and observations may be, young children often seem to experience our attempts to help them get more out of an activity as an imposition. We've often walked away from a child having asked several brilliant questions, only to turn and find that the child has slipped away to another activity, anxious to avoid our attention and have a little fun!

The message may be to handle questioning with a very light touch during Work Places. Even when the tasks are structured, Work Places should be a time of relative joy and freedom. Children are often most observant and engaged when they're working beside classmates who are involved in the same activity. If we listen carefully to children's conversations, we may find that they get as much, if not more, from talking to each other than to us. Another thing to bear in mind is that learning occurs even when students aren't processing at a verbal level. Babies and toddlers can be seen generating and testing theories continuously without engaging in much speech at all. Perhaps we teachers would do well to remember that we don't need to be at the center of each child's learning all the time!

Work Place IG



WORK PLACE GAMES & ACTIVITIES

Unifix Cube Patterns

This Work Place basket will need

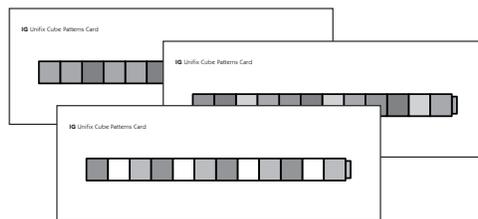
- ★ Unifix cubes
- ★ Unifix Cube Patterns cards
- ★ Unifix Cube Patterns record sheets (optional—
Blackline I.2I, run a half class set and cut in half)
- ★ crayons in Unifix cube colors

Skills

- ★ observing and discussing the characteristics of patterns
- ★ copying and extending patterns

Work Place Instructions

1. Choose a pattern card. What do you notice?
2. Can you copy the pattern with Unifix cubes?
3. What would come next?
4. Can you continue the pattern until it's as long as your arm?
5. Would you like to make a record of the pattern you copied to share with your family? If so, take a record sheet and color the first train of Unifix cubes to match your pattern.
6. Find another card. What do you notice? Can you copy the pattern and then make it as long as your arm?
7. You may want to make a colored copy of the second pattern on your record sheet. Continue in this manner.



Instructional Considerations

The cards for this Work Place show repeating patterns appropriate for kindergartners, many of whom are just beginning to discover, copy, and extend patterns. Most students will be able to count the cubes, name the colors, begin to notice the common features, and extend them beyond what they see on the card. Many children enjoy creating a record of their work to take home to share with their family.

Work Place IH



WORK PLACE GAMES & ACTIVITIES

Geoboard Shapes

This Work Place basket will need

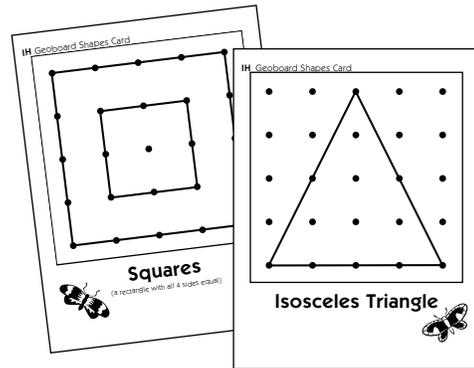
- ★ 6–8 geoboards and geobands
- ★ Geoboard Shapes cards
- ★ Geoboard record sheets (Blackline I.22, run 20–30 copies and place at the bottom of the Work Place basket)
- ★ sheets of 9" × 12" newsprint, rulers, pencils, and some crayons

Skills

- ★ recognizing and naming shapes
- ★ understanding how some of the common shapes are formed

Work Place Instructions

1. Choose a shape card you'd like to copy on your geoboard.
2. What do you notice about the shape?
3. Can you make a shape on your board just like the one on the card?
4. Once you are finished, place your finished geoboard over the card. Do the shapes match?
5. Would you like to copy your shape onto geoboard paper to take home? If so, get a record sheet, a crayon to mark the points, and a pencil and ruler to connect them. Can you copy the shape so it looks just like the one on your geoboard?



Instructional Considerations

In addition to the Geoboard record sheets, put out newsprint, along with pencils and rulers so children can practice drawing lines with rulers. Some children may choose to just experiment with the rulers rather than use the geoboards. Many kindergartners have a very difficult time with diagonal lines

Work Place II



WORK PLACE GAMES & ACTIVITIES

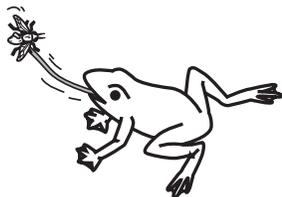
Bucket of Frogs

This Work Place basket will need

- ★ math bucket of frogs
- ★ 10 Counting Mats

Skills

- ★ estimating using a benchmark of 10
- ★ counting by 1's and 10's
- ★ sorting



Work Place Instructions

1. Get some of the frogs out of the bucket. What do they look like? Which are your favorite?
2. Do you see any frogs that match? How many can you find of each kind?
3. Work with your friends to sort, count, and enjoy the frogs.

Instructional Considerations

Although the last few Work Places you've introduced have been more structured than they were during the first month of school, the bucket of frogs returns to a bit of play, and we encourage you to let children pursue their own purposes. Some may count the frogs onto the mats over and over. Others may sort them by appearance, carefully lining up the frogs that match. Still others will pull the frogs into fantasy games of various sorts. These materials will be used in more structured ways later in the year. In the meantime, it's important for children to be able to play with them. Be sure to remind students to count the frogs back onto the mats at cleanup time to make sure that all 100 find their way back into the bucket.

Work Place 1J



WORK PLACE GAMES & ACTIVITIES

Beat You to Ten

This Work Place basket will need

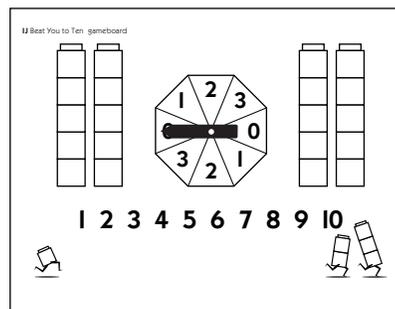
- ★ 3 Beat You to Ten gameboards
- ★ 3 containers of 20 Unifix cubes (Each container should have 10 of one color and 10 of a second color so children can alternate colors as they record each new turn.)

Skills

- ★ counting to 10
- ★ comparing quantities
- ★ reading numbers to 10
- ★ adding 2 or more quantities

Work Place Instructions

1. Get a partner, a gameboard, and a container of cubes to share.
2. Place the Unifix cubes where you can share them easily.
3. Take turns spinning the spinner and counting out the indicated number of cubes. Use the opposite color each time you take a new turn so you can see your own progress clearly. Help each other count carefully.
4. The first person to get to 10 exactly wins the game. If you spin too many on your last turn, you have to wait and try again.



Instructional Considerations

As you nestle in at this Work Place, note whether children are changing Unifix cube colors with each new spin. This definitely helps them be more accurate in counting out the needed quantities each time, and also helps them see number combinations. We encourage you to observe children's interactions and listen to their conversations carefully. Here are a few questions you might ask if it seems appropriate.

- Who has more cubes?
- How many would you need to catch up with your partner?
- I notice you had 3 on your first spin and then got another 2 the second time. Do you remember how many 3 and 2 more make altogether?
- How many more cubes do you need to get to 5? to 10?
- Now that you have 8 cubes, are there any numbers on the spinner that would cause you to lose a turn?

Work Place IK



WORK PLACE GAMES & ACTIVITIES

Pattern Block Designs

This Work Place basket will need

- ★ Pattern Block Designs cards
- ★ 3 buckets of pattern blocks
- ★ 6 small containers of paper pattern block shapes (Blacklines I.38–I.43)
- ★ 20 to 30 pieces of 6" × 9" black construction paper in a folder or ziplock bag
- ★ 6 small bottles of glue

Skills

- ★ recognizing and naming shapes
- ★ counting
- ★ taking shapes apart and fitting them back together
- ★ exploring relationships between various shapes
- ★ matching objects to outlines of their shapes

Work Place Instructions

1. Choose the pattern block design card that you would like to copy.
2. What do you notice about the design? Which shapes will you need? How many? How can you make them fit together?
3. Use your pattern blocks to copy it. Does your design look just the same?
4. If you'd like to make a copy of your work with the paper shapes, find the shape(s) you need. Glue them carefully to the black paper to make it look just like the figure you made.
5. Do you want to take your work home to share with your family or leave it at school for others to see?
6. Can you use the pattern blocks to create some designs of your own?

7. Would you like to make a copy of one of your original designs?

Instructional Considerations

After years of watching five-year-olds work with pattern blocks, we've concluded that some children need a jump start. If your class has been producing magnificent creations with the pattern blocks, you may choose to omit the design cards and see what happens. Can they use the paper shapes to reproduce their own pattern block figures? We've often seen kindergartners joyfully glue the paper shapes on a piece of paper in random fashion, totally unconcerned about relating the work to their actual pattern block creations. Copying a design card with pattern blocks and then reproducing it with the paper shapes helps some children make the connection better. Most are then able to consider the number of blocks, the particular shapes, and the ways the shapes fit together. Some will lack the fine motor skills required to achieve accurate reproductions—you'll need to celebrate all their efforts, and trust that with time their work will improve. Be sure to display their creations on a wall or in a bound class book.

Another thing you'll need to consider is that some children won't be ready to stop playing with pattern blocks yet, and will probably disregard the task of copying designs altogether. If this is the case, you might offer to make the pattern blocks available for free play during choosing time or recess in return for students' cooperation in doing the assigned job during Work Places.

Work Place IL



WORK PLACE GAMES & ACTIVITIES

Hungry Caterpillars

This Work Place basket will need

- ★ 6 Hungry Caterpillars gameboards
- ★ 3 Hungry Caterpillars spinners
- ★ 3 containers of pattern blocks (Each container should have 20 of each of the following shapes: triangles, blue rhombuses, and trapezoids.)

Skills

- ★ recognizing and naming shapes
- ★ exploring relationships between various 2-dimensional shapes
- ★ combining shapes to make other shapes
- ★ solving spatial problems

Work Place Instructions

1. You and your partner will need a spinner and a container of pattern blocks to share. Each of you will need your own caterpillar board.
2. Take turns spinning the spinner. Each time you spin a shape, take a pattern block of the same shape and place it on your caterpillar. (We've noticed that some kindergartners tend to place their shapes at random. This is fine, as long as they fit them into the triangular guidelines.)
3. The first person to fill his or her caterpillar wins. The catch is, you have to fill all the hexagons exactly to go out. If all the space you have left is a rhombus and you spin a trapezoid, you miss your turn and have to try for a rhombus or a triangle next time. Continue playing until one person fills his or her caterpillar.



Instructional Considerations

Here are some things you might look for as you watch students play this game and listen to their conversations.

- Do children refer to the shapes by name or by color?
- Do they attempt to fit their shapes into the triangular guidelines of the caterpillar, or do they just set them loosely on the board? If they're attempting to fit the shapes in accurately, can they do so with relative ease?
- Do they seem aware that some shapes fill the hexagonal sections more quickly than others? Are they able to tell how many triangles, rhombuses, and/or trapezoids it takes to fill a hexagon?
- Are they able to take turns and wait patiently as their partner finds his or her blocks and sets them on the gameboard?

Work Place IM



WORK PLACE GAMES & ACTIVITIES

Count & Compare Butterflies

This Work Place basket will need

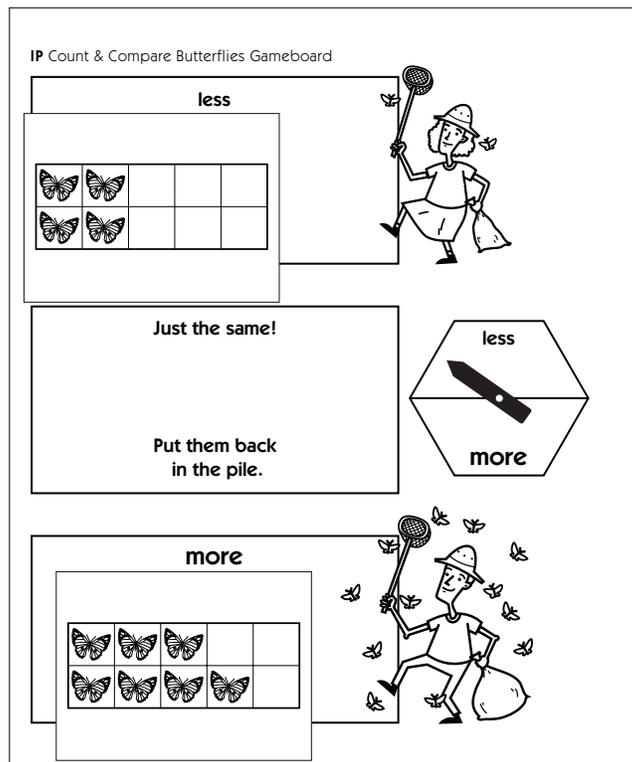
- ★ 3 Count & Compare Butterflies gameboards
- ★ 3 sets of Count & Compare Butterflies cards

Skills

- ★ counting with 1-to-1 correspondence
- ★ comparing sets (more, less, or equal)
- ★ recognizing quantities relative to 5's and 10's
- ★ adding and subtracting
- ★ counting on

Work Place Instructions

1. Find a partner.
2. Get a gameboard and a set of cards from the Work Place basket. Mix up the cards and place them face down between you and your partner.
3. Draw 1 card from the pile and have your partner do the same.
4. Count the butterflies on each card. You and your partner should help each other with this. (Don't worry if some children compare the cards visually rather than counting to find out which card has more and which has fewer. In many cases, it's quite easy to see without counting.)
5. Place your cards where they belong on the gameboard—1 card in the "more" box, the other in the "less" box. (If the 2 cards are equal, put them both back into the stack and draw again.)
6. Spin the spinner to determine who gets to take both cards. If it lands on "more," the person who had the card with more butterflies on it gets to take both the cards. If it lands on "less," the person who drew the card that had fewer butterflies on it gets both cards.



Child Your card has 7 and mine has 4. You have more, but look! The spinner landed on less. I get both cards this time.

7. Take turns drawing cards, counting, and comparing. Spin until you are out of cards. Then count your cards. The player who has more cards should put her stack on the *more* portion of the board. The player with fewer should put his stack on the *less* portion. Finally, spin the spinner to determine the overall winner.

(Continued on back.)

Work Place IM (cont.)

Instructional Considerations

Here are some things you might look for as you watch students play this game.

- Do children count the butterflies on each card to determine who has more and who has fewer, or do they make the comparisons visually?
- If they do count the butterflies, what strategies are they using? Do they count one by one, or are they using a more efficient method, such as counting on from 5, counting by 2's, adding the butterflies in the 2 rows, or looking at how many empty boxes there are to determine how many butterflies are on the card?
- Do they appear to recognize small quantities (1, 2, 3, or 4) instantly, or do they have to count them?
- Do they know that if the top row is filled, it's 5 and if the entire card is filled, it's 10?

Work Place IN



WORK PLACE GAMES & ACTIVITIES

Pattern Block Puzzles

This Work Place Basket will need

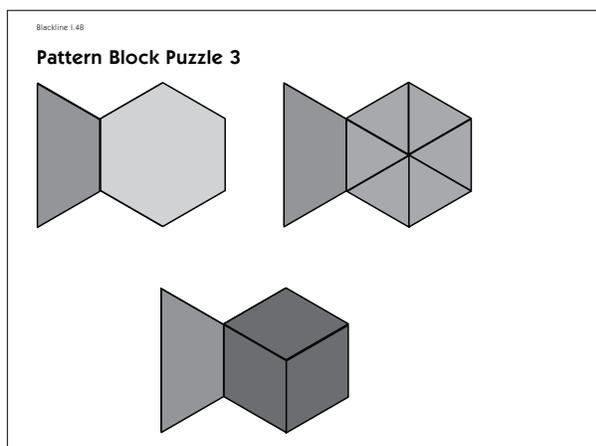
- ★ Pattern Block Puzzles 1–6 (Blacklines 1.46–1.51, run 10 copies of each sheet and organize into folders, manila envelopes, or gallon ziplocks)
- ★ pattern blocks
- ★ precut paper pattern block shapes (Blacklines 1.38–1.43, hexagons, trapezoids, triangles, and blue rhombuses)
- ★ bottles of glue to share

Skills

- ★ exploring relationships between various 2-dimensional shapes
- ★ combining shapes to make other shapes
- ★ solving spatial problems

Work Place Instructions

1. Choose one of the Pattern Block Puzzle sheets and some pattern blocks.
2. Using the pattern blocks, find three different ways to cover the shape on the page you've chosen.



Hector I made 3 fish. Now I'm going to glue paper ones to take home. Every fish has a red tail, but I made different bodies for them.

3. If you want to make a record of your work to take home, get a second copy of the same sheet and reproduce your work by gluing paper pattern blocks shapes directly onto each of the large figures to show your three different ideas.

Instructional Considerations

As you look through the collection of Pattern Block Puzzle sheets, you'll notice that they gradually become more challenging. As you watch children at work on this task, here are some things you might observe:

1. How challenging are the puzzle sheets students have chosen? Are they working with one of the first two puzzles, where the shape outlines are quite obvious, or are they working with one of the last four puzzles, in which the blocks required to cover the shapes are much less obvious?

- Do they rotate the blocks easily to get them to fit together?
- Do they work carefully, fitting the shapes together accurately, or do they leave parts of the puzzle shapes uncovered?
- Do they seem to be aware of some of the relationships among the shapes; aware, for instance, that 2 trapezoids can be put together to form a hexagon, or that 3 triangles can be put together to form a trapezoid?
- How patient are they at working to fill a puzzle? Do they start but give up easily when the solution isn't immediately clear, or do they keep trying again and again until they find a way?
- Do they choose to copy their work with paper pattern block shapes, or do they prefer to work mainly with the actual blocks?

Work Place 10



WORK PLACE GAMES & ACTIVITIES

Which Numeral Will Win?

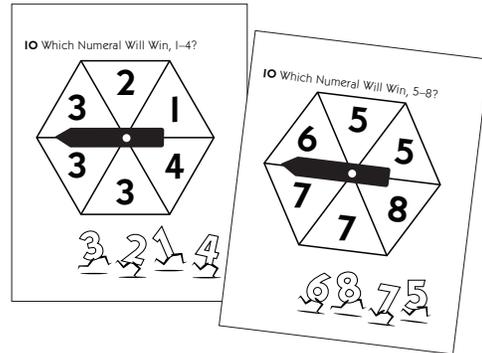
This Work Place Basket will need

- ★ Which Numeral Will Win, 1–4? record sheets (Blackline I.52, run 10–15 copies and place in a folder or gallon ziplock bag)
- ★ Which Numeral Will Win, 5–8? record sheets (Blackline I.53, run 10–15 copies and place in a folder, large envelope, or gallon ziplock bag)
- ★ 3 Which Numeral Will Win, 1–4? spinners
- ★ 3 Which Numeral Will Win, 5–8? spinners
- ★ inexpensive narrow-tip felt pens

Skills

- ★ learning to read and recognize numerals 1–8
- ★ writing numerals 1–8
- ★ recording information on a graph
- ★ recognizing when games or activities depend on chance
- ★ comparing sets (more, less, equal)

Note We've listed two record sheets and three each of two spinners. If it seems too confusing to include both sets of spinners and record sheets in one Work Place basket, you might package the two sets separately, either in two different folders or other containers placed in the same Work Place basket, or in two different baskets. Another possibility is to place only the 1–4 spinners and record sheets in the basket today and add the others later or replace one set with the other in a week or so.



Work Place Instructions

1. Get a spinner, record sheet, and felt pen.
2. Spin the spinner. Find the numeral you just spun on your record sheet and trace over the first dotted numeral in that row. Remember, you can only trace one numeral for each spin.
3. Continue to spin and trace the numerals until one row or more fills completely.
4. Which row filled first on your sheet? Look around the table to see what's happening for your classmates. Are there any numerals that seem to be winning most of the time?

Instructional Considerations

One of the keys to making this Work Place exciting is to put inexpensive felt tip markers into the basket instead of pencils. This seems to make a significant difference to youngsters whose fine motor skills are still immature, and the children love having a more colorful finished product. If this is the first time your children will be using felt pens, model how to place the lid “piggy back” on the pen when it's in use and how to close it tightly as soon as they finish. Remind them too that pens are to be used on paper, not on their hands.

Work Place IP



WORK PLACE GAMES & ACTIVITIES

Count & Compare Pennies

This Work Place basket will need

- ★ 3 Count & Compare Pennies gameboards
- ★ 3 sets of Count & Compare Pennies cards

Skills

- ★ identifying pennies by their name and value
- ★ counting with 1-to-1 correspondence
- ★ comparing sets (more, less, or equal)
- ★ recognizing quantities relative to 5's and 10's
- ★ adding and subtracting

Work Place Instructions

1. Find a partner.
2. Get a gameboard and a set of cards from the Work Place basket. Mix up the cards and place them face down between you and your partner.
3. Draw one card from the pile and have your partner do the same.
4. Count how many pennies there are on each card. You and your partner should help each other with this. (Don't worry if some children compare the cards visually rather than counting to find out which card has more and which has fewer. In many cases, it's quite easy to see without counting.)
5. Place your cards where they belong on the gameboard—one card in the “more” box, the other in the “less” box. (If the two cards are equal, put them both back into the stack and draw again.)
6. Spin the spinner at the bottom of the gameboard to determine who gets to take both cards. If it lands on “more,” the person who had the card with more pennies on it gets to take both the cards. If it lands on “less,” the person who drew the card that had fewer pennies on it gets both cards.
7. Take turns drawing cards, counting, and then comparing the quantities shown, and spinning until you are out of cards. Then count your cards and help your partner do the same. The player who has more cards should put her stack on the *more* portion of the board. The player with fewer should put his stack on the *less* portion. Finally, spin the spinner to determine the overall winner.



Instructional Considerations

Here are some things you might watch and listen for as students play this game.

- Do children count the pennies on each card to determine who has more and who has fewer, or do they make the comparisons visually instead?
- If they do count the pennies, what kinds of strategies are they using? Do they count each penny one by one, or are they moving toward a more efficient method, such as counting on from 5, counting by 2's, adding the pennies in the 2 rows, or looking at how many empty boxes there are to determine how many pennies are on the card?
- Do they appear to recognize small quantities (1, 2, 3, or 4) instantly, or do they have to count them one by one?
- Do they know that if the top row is filled, it's 5 and if the entire card is filled, it's 10?

Work Place 2A



WORK PLACE GAMES & ACTIVITIES

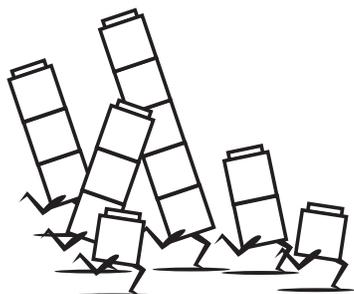
Beat You to 20

This Work Place will need

- ★ 3 Beat You to 20 gameboards
- ★ 3 containers of 50 Unifix cubes (Each should have 25 of one color and 25 of a second color so children can alternate colors as they record each new turn.)

Skills

- ★ counting to 20
- ★ counting on
- ★ comparing quantities
- ★ reading numbers to 20
- ★ adding 2 or more quantities



Work Place Instructions

1. Get a partner, a gameboard, and a container of cubes to share.
2. Place the Unifix cubes where you can share them easily.
3. Take turns spinning the spinner and counting out the indicated number of cubes. Use the opposite color each time you take a new turn so you can see your own progress clearly. Help each other count carefully.
4. The first person to get to 20 exactly wins the game. If you spin too many on your last turn, you have to wait and try again until one of you gets exactly 20.

Instructional Considerations

By listening, watching, and engaging children in conversation when appropriate, you may be able to observe some of the following counting skills as they play this game:

- Instant recognition of the number of objects in a small group: As students spin and pick up cubes, are they able to take two, three, or even four at a time without counting them out one by one? Are they starting to get a good sense of these small groups?
- Counting by 1's or counting on: Can students figure out how many more they'll need to get to 10? to 20? What strategies are they using to try to figure this out?
- Comparing quantities: When the game is over, can students determine who has more and who has less? Can they use the cubes to figure out how many cubes the winner won by?
- Numeral recognition: Can children recognize numerals to 20?

Needless to say, you won't be able to make these observations about every child who plays the game, but there's much to learn about your students here.

Work Place 2B



WORK PLACE GAMES & ACTIVITIES

Bucket of Sea Creatures

This Work Place basket will need

- ★ math bucket of sea creatures
- ★ 10 Counting Mats

Skills

- ★ sorting
- ★ counting

Work Place Instructions

1. Get some of the sea creatures out of the bucket. Do you see any that you can name? What do they look like? Which are your favorites? Do you see any that you don't like?
2. Do you see any that are the same? How many can you find of each kind? How many sharks are there? How many rays?



3. Work with your friends to sort and count the sea creatures and then see what kinds of games or sea creature stories you can make up.

Instructional Considerations

Many kindergartners will want to use the sea creatures to pursue their own purposes for weeks. Some may count them onto the mats over and over. Others may sort them by appearance, carefully lining up those that are the same, or finding their favorites. Still others will pull the creatures into fantasy games. If you've had trouble with things disappearing, remind students to count the sea creatures back onto the mats at cleanup time to make sure that all of them find their way back into the bucket. They'll all be needed the next time the Work Places come out.

Work Place 2C



WORK PLACE GAMES & ACTIVITIES

Ten & More

This Work Place will need

- ★ 3 sets of Ten & More Ten-Frames
- ★ 3 sets of Ten & More Number cards

Skills

- ★ counting quantities between 10 and 20
- ★ exploring counting strategies
- ★ reading numbers from 10–20
- ★ matching sets and numbers

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Note Package the sets of ten-frame and number cards together by placing the number cards with the seals in the same ziplock as the seal ten-frame cards, and so on.

Work Place Instructions

1. Take a sack of cards from the basket. This sack should contain both the ten-frame and number cards you'll need. You can work alone or with a partner.
2. Open the sack and set out all of the sea creature cards and the number cards.
2. See how quickly you can find each matching pair.
3. Ask a friend or a teacher to check your work. Are all of the pairs correct?



Instructional Considerations

Here are some things you might notice as you watch and listen to children work at this activity:

- Can students figure out how many sea creatures are on each card? How are they counting the sea creatures?
- Can they find the number to match each ten-frame card? (If it seems necessary, point out that the 1 on each number card stands for 1 group of 10.)

Work Place 2D



WORK PLACE GAME & ACTIVITIES

Sock Boxes & Coins Beat You to 20¢

This Work Place Will Need

- ★ 3 sock boxes, each filled with 40 pennies
- ★ 3 Sock Boxes & Coins spinners
- ★ 6 Sock Boxes & Coins gameboards

Skills

- ★ recognizing pennies and nickels by name and value
- ★ counting quantities to 20
- ★ exploring counting strategies
- ★ comparing quantities

Work Place Instructions

1. Get a partner, 2 gameboards, 1 spinner, and a sock box full of pennies.
2. Take turns spinning the spinner and reaching into the sock box to collect the appropriate number of coins.
3. If you spin an amount that is more than you need at the end, you lose that turn.
4. The first player to reach 20¢ exactly wins the game.



Instructional Considerations

Here are some things to watch for as children play this game with one another:

- Are they able to identify the nickel and count out five pennies?
- How are they counting their growing collections?
- Are they aware as they're reaching the end of the game, that some sections of the spinner will cause them to lose a turn?

Work Place 2E



WORK PLACE GAMES & ACTIVITIES

Race You to 15¢

This Work Place Will Need

- ★ 3 Race You to 15¢ gameboards
- ★ 3 containers of coins (Each container needs 18 pennies and 5 nickels. Use snack-sized ziplock bags or other small containers. Use Blackline 2.1 to label each container.)

Skills

- ★ recognizing pennies and nickels by name and value
- ★ trading 5 pennies for a nickel
- ★ counting quantities to 15
- ★ counting 5's to 15
- ★ comparing quantities



Work Place Instructions

1. Get a partner, a gameboard, and a container of coins to share.
2. Decide who will get to play first and have that player spin the spinner. How many pennies should she get? Be sure to wait until she counts them out on her board.
3. Take your turn to spin. How many pennies should you get? Your partner needs to wait until you set all of your pennies on your board.
4. It's time for your partner to spin again. How many pennies should she get? Will that make 5 or more? If there are more than 5 pennies, set any extras to the side for a minute. Trade 5 pennies in for a nickel and then move any extra pennies onto the penny strip. How much money does your partner have altogether?

5. It's your turn to spin. How many pennies should you get? Does that make 5 or more? If so, set any extra pennies to the side and trade 5 of them in for a nickel. Then move the extra penny or pennies onto your penny strip. How much money do you have altogether?

6. Continue taking turns spinning and collecting pennies and nickels until one player has exactly 3 nickels (15¢). If you're almost there and you spin a number that's more than what you need to have 15¢ exactly, you lose that turn.

Instructional Considerations

The challenging part of this game for children is to understand that the nickels are worth 5¢. As we've field tested this game over the years, we've found that even though some of our students didn't fully understand the idea that 3 nickels made 15¢, they were always happy when they could trade their last 5 pennies for another nickel and end up with the 3 nickels. Each of them could tell us that a nickel was worth 5 pennies. We nestled in often to observe and occasionally guide. We found that children who had the idea were usually good teachers and often used their fingers to demonstrate how they were figuring their totals. We occasionally borrowed a counting mat from the Sea Creatures basket, and used it along with some extra pennies to show children how 1 nickel was worth 5 pennies, but found it was usually best to trust that they were all learning whether or not they could count their winnings with consistent accuracy.

Work Place 2F



WORK PLACE GAMES & ACTIVITIES

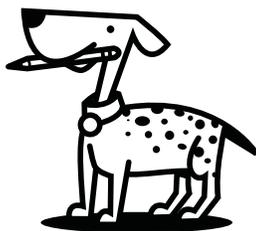
Spin & Write

This Work Place Will Need

- ★ 6 Spin & Write spinners
- ★ Spin & Write: Which One Will Fill First? (Blackline 2.2, run 15 or 20 copies.)
- ★ narrow felt tip markers

Skills

- ★ recognizing and counting quantities between 10 and 20
- ★ reading and writing numbers from 11–18
- ★ identifying more or less from a graph
- ★ recognizing when an activity depends on chance

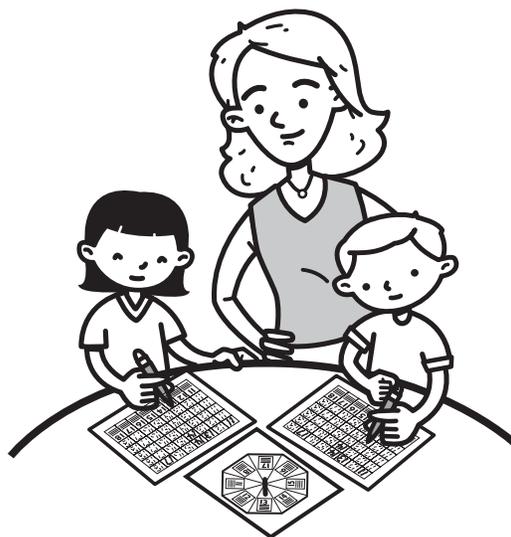


Work Place Instructions

1. Get a record sheet, a pen, and a spinner
2. Spin the spinner and read the number it landed on or count the spots to figure it out.
3. Find the number you just spun on your record sheet and trace over the first dotted number in that column. Work from the bottom of the sheet to the top. Remember, you can only trace one number for each spin.
4. Continue to spin and trace the numbers until one column or more fills.

Instructional Considerations

As we field tested this Work Place, we found one of the keys to success was putting inexpensive felt tip markers into the basket instead of pencils. That seemed to make a significant difference to youngsters whose fine motor skills were still immature, and the children loved having a more colorful finished product.



We discovered, too, that some of our students wrote the number in the 1's place first as we nestled in beside them so we talked again about how these numbers were Ten & More and that their older brothers and sisters wrote the 1 for the ten before they wrote the second number. That helped in most cases. Once again, we realized that numeral writing in itself was an important skill and that for those youngsters who didn't write the number in the 10's column first, it really wasn't a big problem at this time. This Work Place also provided us with opportunities to make observations about children's skills at reading and writing numerals, as well as counting quantities between 10 and 20.

Work Place 2G



WORK PLACE GAMES & ACTIVITIES

Ten & More Memory

This Work Place basket will need

- ★ 3 sets of Ten & More Ten-Frames
- ★ 3 sets of Ten & More Number cards

Skills

- ★ recognizing and counting quantities between 10 and 20
- ★ reading numbers between 10 and 20
- ★ comparing quantities

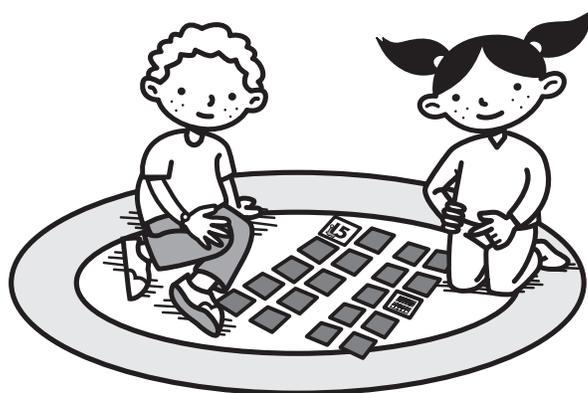
Note Package the ten-frame and number cards together by placing the number cards with the seals in the same ziplock as the seal ten-frame cards, and so on.

Work Place Instructions

1. Set out all the sea creature cards and the numeral cards face down. Be sure the sea creature cards are in one group and the number cards in a second group.
2. Take turns selecting a card from each group and turn the cards face up. Do the cards match? Has your partner had time to look at the cards?
3. If the cards match, you can keep that pair and take another turn.

4. If the cards don't match, turn them face down. Now your partner gets a turn.

5. The player with more cards at the end of the game wins.



Instructional Considerations

Are students able to take turns and wait for their partner to see each pair? Are they able to remember some of the card locations? Are they able to count the sea creatures accurately and read the numbers cards correctly?

Work Place 2H



WORK PLACE GAMES & ACTIVITIES

Sock Boxes & Coins Beat You to Zero!

This Work Place Basket will need

- ★ 6 Sock Boxes & Coins gameboards
- ★ 3 Sock Boxes & Coins spinners
- ★ 3 sock boxes, each filled with 40 pennies
- ★ extra pennies in case some get misplaced

Skills

- ★ recognizing pennies and nickels by name and value
- ★ counting quantities to 20
- ★ exploring counting strategies
- ★ comparing quantities



Work Place Instructions

1. Find a partner, a sock box of pennies, 2 gameboards, and a spinner.
2. Fill your gameboards completely with pennies—20¢ on each board.
3. Take turns to spin and wait until each player takes off the correct number of pennies.
4. Count and compare as you go. Who has fewer pennies? How many do you still need to subtract before you reach zero? How many does your partner still need to subtract?
5. If you spin an amount greater than what you need to subtract as the game is drawing to a close, you lose that turn.
6. The first player to reach zero *exactly* wins the game.

Work Place 21



WORK PLACE GAMES & ACTIVITIES

Sea Creature Handfuls

This Work Place basket will need

- ★ bucket of sea creatures
- ★ 15 Counting Mats
- ★ Sea Creature Handfuls record sheets (Blackline 2.19, run a class set.)
- ★ 6 pencils
- ★ crayons

Skills

- ★ estimating with benchmarks of 10's, 5's, and 1's
- ★ counting and grouping objects into 10's and 1's
- ★ comparing quantities to 25
- ★ writing 2-digit numbers

Work Place Instructions

1. Get yourself a record sheet, a pencil, and a crayon.
2. Take a handful of sea creatures. How many mats do you think your handful will fill?
3. Color in your best guess on the mats at the top of the worksheet.
4. Set your sea animals on the counting mats. How many mats did they fill? How many creatures do you have altogether?
5. Color the part of the worksheet that shows how many you actually got.
6. Ask a friend to write his or her name on your paper and then take a handful.
7. Do you think your friend fished out about the same number of creatures as you did? Color your best guess on the third set of mats shown on the worksheet.

8. Count your friend's handful onto the counting mats. Was your best guess a good one? Color the pictures of the mats at the bottom of the worksheet to show the number of sea creatures your friend really caught.

9. Show your paper to your teacher.

Instructional Considerations

The worksheet for Handfuls adds accountability and nudges children beyond playing with the sea creatures, but it doesn't come trouble free. Many young children can learn to make reasonable estimates and consider factors such as hand size and sea creature size in adjusting estimates for their friend's handful. Recording the information is another matter. We don't think it's essential for students to work from top to bottom, left to right, as they color in the pictures of the mats on the worksheet to show their estimates and actual totals, though. As long as they color the pictures of the mats in ways that make sense to them, we're happy.



After you add this Work Place to your collection, you'll want to spend time there for the next few days supporting your students. Watch, listen, and guide as needed. This will be a Work Place where the children who are strong in their number skills can help others get started. It's the kind of task where small group or individual help seems to provide more support than additional whole group instruction.

Work Place 2J



WORK PLACE GAMES & ACTIVITIES

Frog Handfuls

This Work Place basket will need

- ★ bucket of frogs
- ★ 15 Counting Mats
- ★ Frog Handfuls record sheets (Black-line 2.2I, run a class set and place at the bottom of the basket)
- ★ 6 pencils
- ★ crayons

Skills

- ★ estimating with benchmarks of 10's, 5's, and 1's
- ★ counting and grouping objects into 10's and 1's
- ★ sharing counting strategies
- ★ comparing sizes
- ★ writing 2-digit numbers

Work Place Instructions

1. Get yourself a record sheet, a pencil, and a crayon.
2. Take a handful of frogs. How many mats do you think your handful will fill?
3. Color in your best guess on the pictures of the mats at the top of the worksheet and write in the number to show your estimate.
4. Set your frogs on the counting mats. How many mats did they fill? How many frogs did you get?
5. Color the part of the worksheet that shows how many you got in your handful and record the number.
6. Ask a friend to write his or her name on your paper and then take a handful of frogs.
7. Do you think your friend pulled out about the same number of frogs as you did? Color your best guess on the third set of mats shown on the worksheet. Remember to write the number that shows your estimate.

8. Count your friend's handful onto the counting mats. Was your best guess a good one? Color the pictures of the mats at the bottom of the worksheet to show the number of frogs your friend caught, and record the number.

9. Show your paper to your teacher.



Instructional Considerations

Here are some things you might think about as you watch children work at this activity:

- Are they getting the idea of making an estimate after they've had a look at their handful?
- Are they able to color in the pictures of the mats to show their best guess?
- Can they count out their creatures onto the mats and determine the total?
- Can they record that amount accurately on the worksheet?
- Can they write the numbers to show their estimates and totals? If they aren't sure how to write the numbers, where do they go for help? Do they ask you or a friend, or do they look for an example of the number written somewhere in the room?
- Are they able to make use of the information they gained from counting their own handful to estimate the number of frogs in their friend's handful more accurately?

Work Place 2K



WORK PLACE GAMES & ACTIVITIES

Unifix Cube Measuring

This Work Place basket will need

- ★ Unifix Cube Measuring record sheets (Blacklines 2.22–2.23, run a class set of each sheet, back-to-back or two sheets stapled.)
- ★ 200 Unifix cubes snapped into 10's (each group of 10 needs to be a single color)

Skills

- ★ estimating length using a benchmark of 10 Unifix cubes
- ★ measuring with nonstandard units
- ★ counting quantities to 30 and beyond
- ★ recording and comparing results

Work Place Instructions

1. Get both record sheets, a pencil, and 3 or 4 stacks of 10 cubes. Make sure each of the stacks you take is a different color.
2. Go to one of the items in the room that's been marked with a Measuring Sign. Look carefully at the sign and the masking tape so you can see where you're supposed to measure the item.
3. Build a train with your cubes that you think will exactly match the masking tape. Record your estimate on the worksheet.
4. Now use your cubes to measure the masking tape that's been run along the item. Start at the very beginning of the tape and run your cubes clear to the end. How many cubes did it take? Show the results on your record sheet.

5. Go to another item pictured on your record sheet and repeat the process of estimating, measuring, and recording. (You don't have to measure the four items in order, but if you don't finish the task in one Work Place period, be sure to give your sheets to the teacher so he or she can return them to you the next time you go out to Work Places.)



Instructional Considerations

Whenever a worksheet is involved in a kindergarten task, some students need extra help. We find that support is best offered in small groups or one on one. The concept of measuring is new to many children, and some may need to be shown again where to begin and end their measuring with the Unifix cubes, while others will need help to mark their estimates and actual results. Once they've completed one of the measuring tasks with your help, most will be able to work on their own or with a friend to measure the other three items.

Work Place 2L



WORK PLACE GAMES & ACTIVITIES

Count & Compare Unifix Cubes

This Work Place basket will need

- ★ 3 Count & Compare Unifix Cubes gameboards
- ★ 3 sets of Count & Compare Unifix Cubes cards

Skills

- ★ counting quantities from 10–27 using benchmarks of 10's, 5's, and 1's
- ★ comparing sets (more, less, or equal)

Work Place Instructions

1. Find a partner.
2. Get a gameboard and a set of cards from the Work Place basket. Mix up the cards and place them face down between you and your partner.
3. Draw 1 card from the pile and have your partner do the same.
4. Figure out how many Unifix cubes are on each card. You and your partner should help each other with this.
5. Place your cards where they belong on the gameboard—1 card in the “more” box, the other in the “less” box.
6. Spin the spinner at the bottom of the gameboard to determine who gets to take both cards. If it lands on “more,” the person who has the card with more Unifix cubes on it gets to take both the cards. If it lands on “less,” the person who drew the card that had fewer Unifix cubes on it gets both cards.
7. Play until you've used up all of the cards.
8. Each player needs to count his or her winnings. Who has more cards? fewer?
9. Place the stacks on the appropriate side and spin the spinner to determine the winner.



Instructional Considerations

Here are some things to look for as you watch students play this game and listen to their conversations.

- Are students able to figure out how many cubes are on each card and compare the two quantities to determine more and less? (It's fairly easy for many children to compare cards visually to see which shows more and which shows less. It is more challenging to determine how many cubes are actually on each card. You'll need to stop by this Work Place frequently to encourage children to count the cubes instead of just working visually.)
- What strategies are they using to determine how many cubes there are on each card? Do they need to touch and count each cube by 1's? Can they count on from 10 or even from 20? Can they count by 10's and switch to 1's as needed?

You might gently nudge the children who only count by 1's, encouraging them to try another method. Once you leave, most will go right back to their comfort level of counting one by one, but eventually some will try out new ways.

Work Place 2M



WORK PLACE GAMES & ACTIVITIES

Race You to 30¢

This Work Place basket will need

- ★ 3 Race You to 30¢ gameboards
- ★ 3 sets of pennies and dimes (Each set should have 24 pennies and 5 dimes. Use snack-size ziplock bags or other small containers to hold the coins. Use Blackline 2.25 to label each container.)

Skills

- ★ recognizing pennies and dimes by name and value
- ★ counting and comparing quantities from 1–30
- ★ trading 10 pennies for a dime
- ★ counting by 10's to 30

Work Place Instructions

1. Find a partner and get yourselves a gameboard and a set of coins to share.
2. Decide who gets to have the first turn and have that player spin.
3. Collect the designated number of coins and place them directly on top of the pennies on your side of the gameboard.
4. Continue taking turns and collecting pennies. Be sure to wait for your partner to count out his or her pennies and set them on the board.
5. Each time a player gets 10 or more pennies, he or she will need to trade 10 for a dime.
6. If a player is getting close to 30¢ and spins a number that is greater than the number of pennies needed to win, the player loses that turn.
7. The first player to get 3 dimes (30¢ exactly) wins the game.

Instructional Considerations

As children play this game, some may need help remembering to wait for one another to collect the designated number of pennies and figure out whether it's time to trade for a dime. Encourage students to help one another figure out how much money they've accumulated with each new turn. If you're lucky enough to have parent volunteers or "buddy" helpers, this would be a good Work Place for them to supervise. Encourage classroom helpers to give children adequate time to count their growing collections of coins before they offer assistance.

Some youngsters will have trouble remembering that dimes are worth 10¢, especially after the dimes have been set on the gameboard and the pennies return to their container for the next turn. These students may think that they're winning simply because they have 4 and their partner has 3, even if they have 4 pennies and their partner has 1 dime and 2 pennies. Again, consider that there is something in the game for every learner. Perhaps reading the numbers on the spinner and collecting the appropriate number of pennies will be the only area of comfort for some students. (This may be especially true if your school has a high turnover rate and some of the children in the class are relatively new to your program.)

Other youngsters may remember that the dimes are worth 10¢ each, but have a hard time counting to determine their totals. You may also have students who can comfortably count their totals, make comparisons, and figure out which numbers they hope to spin to win the game. Over time, with peer and teacher help, every child will grow in his or her counting skills.

Work Place 2N



WORK PLACE GAMES & ACTIVITIES

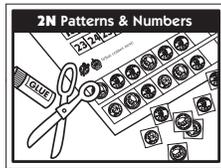
Patterns & Numbers, Part I

This Work Place basket will need

- ★ Patterns & Numbers worksheet I (Blackline 2.26, run a class set)
- ★ pencils to share

Skills

- ★ writing numerals from 1–20
- ★ counting by 2's
- ★ exploring number patterns
- ★ counting up to 20 objects

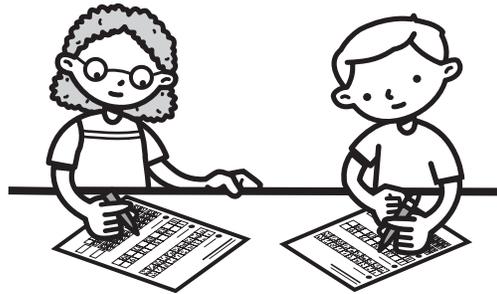


Work Place Instructions

1. Get yourself a worksheet and write your name at the top.
2. Try hard to be neat as you trace the numbers. Don't forget to start each numeral at the top.
3. Can you figure out which numbers are missing and write them in?
4. How many frogs are in each set? Count them and write the numbers that show how many.
5. Be sure to show your completed paper to your teacher.

Instructional Considerations

When kindergartners are asked to do a math paper, some are thrilled, convinced that they're doing "real math" just like their older siblings. On the other hand, you'll probably have a few children who don't want to complete a paper if given a choice, especially if they're battling immature fine motor skills. Perhaps you could serve as their scribe. Since students only need worksheets and pencils, there can easily be more than six children participating in this activity on any given day.



As they count the frogs at the bottom of the sheet, some of your students may be unsure of how to write the 2-digit numbers to record what they see. We suggest that you let them write the numbers in their own way. You might then record the totals in conventional notation underneath their work, and give youngsters a brief explanation of what your notation means.

Work Place 2N



WORK PLACE GAMES & ACTIVITIES

Patterns & Numbers, Part 2

This Work Place basket will need

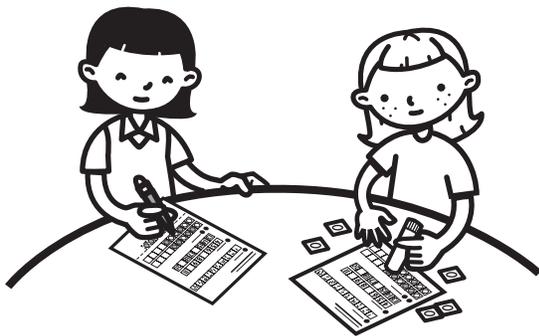
- ★ Patterns & Numbers worksheets 1–2 (Blacklines 2.26–2.27)
- ★ pencils and glue

Skills

- ★ writing numerals from 1–20
- ★ determining what's missing in a counting sequence
- ★ interpreting and extending coin patterns
- ★ recognizing and naming pennies, nickels, and dimes

Work Place Instructions

1. Get yourself a worksheet and write your name at the top.
2. Try hard to be neat as you trace the numbers. Don't forget to start each numeral at the top.
3. Can you figure out which numbers are missing and write them in?
4. Look at the coin patterns. "Read" each pattern with a friend. What comes next?



5. Cut out the boxes at the bottom of the paper and figure out where the coins should be placed. Have a friend check to see if you're right before you glue the coins down.

Instructional Considerations

Because this worksheet demands less writing than the first sheet, you probably won't have to worry so much about children whose fine motor skills are still fragile.

Many kindergarten children don't yet have a good sense of left and right so even if they're beginning to grasp place value concepts, they may very well reverse the order of the two digits in numbers like 16 and 18, writing them as 61 and 81. If this happens, you can explain why the digits need to be written in the reverse order and help youngsters erase and try again.

Some children may quickly glue down their coin boxes and then figure out after the fact that their pattern doesn't work. Keep a few extra worksheets on hand so you can cut apart extra coins for repair work as needed.

Work Place 20



WORK PLACE GAMES & ACTIVITIES

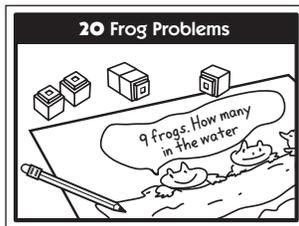
Frog Problems

This Work Place Basket will need

- ★ Frog Problem worksheet (Choose 2 of the student problems, reduce each 50%, glue the 2 reductions side by side on copier paper, leaving space below for students to record their strategies and solutions —as shown below on the right. Run a class set.)
- ★ pencils
- ★ Unifix cubes

Skills

- ★ interpreting visual information
- ★ counting quantities to 12
- ★ reading and writing numerals to 12
- ★ exploring basic operations and inventing ways to solve problems
- ★ sharing strategies and solutions



Work Place Instructions

1. Get a worksheet, a pencil, and some Unifix cubes (if you think they'll be helpful).
2. Write your name on the worksheet.
3. Solve both the problems on the sheet. Be sure to show your strategies by drawing pictures and writing numbers so other people will know how you solved the problems. Be sure, also, to show the answer to each problem on the sheet.
4. Show your work to the teacher when you're finished.

Instructional Considerations

Even though children will have seen or heard solutions to both of the problems when you introduced the worksheet, each student will approach this task in a fresh way. There's value in working backwards from an answer to clarify one's thinking.

Circulate to help as needed while children work on this sheet. You'll find that some students write only the answer and happily hand you their Frog Problems paper. Once again, a judgment call is in order. Can the child explain how he solved the problems, or has he simply copied the answers from a friend? If the child can't explain his solutions, we ask him to go back and work on the paper some more so that we can understand his thinking. Sometimes it helps to have him get out some Unifix cubes or frogs from the Math Bucket and playact the problem to get a better handle on the situation. If the student is able to explain how he reached his answers, we usually record his remarks on the sheet.

6

2

Dan pointed to each frog and explained that they each have 2 eyes. He said that $2 + 2 + 2$ is 6.

Dan said that you just have to keep counting. 4-5, 6.

Work Place 2P



WORK PLACE GAMES & ACTIVITIES

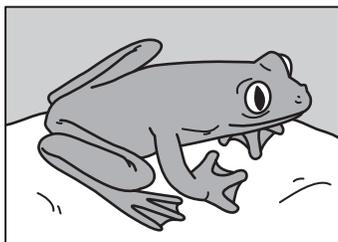
Frog Jump Measuring

This Work Place will need

- ★ Frog Jump Measuring record sheets (Blackline 2.29, run 30 copies and place at the bottom of the Work Place basket)
- ★ masking tape
- ★ scissors
- ★ a basket of popsicle sticks
- ★ 3 frog necklaces (Blackline 2.28)
- ★ crayons and pencils to share

Skills

- ★ estimating distance
- ★ measuring with nonstandard units
- ★ looking at halves
- ★ recording and comparing data
- ★ counting



Work Place Instructions

1. Find a friend so you can help each other.
2. Set out a masking tape starting line.
3. How far do you think you can jump? Color your best guess on the worksheet.
5. Put on a frog necklace, place the toes of one foot on the “start” tape and take your very best jump. Don’t move your feet yet.
6. Have your friend cut a piece of masking tape and place it at the front of the foot that landed first.
7. Set out a line of popsicle sticks from the starting line to the second piece of masking tape.
8. Count the sticks. How far did you jump?
9. Use a different color to record the results of your jump.
10. Give your friend a turn.
11. Once you’ve both had one turn, do it all over again.
12. Be sure to show your teacher your worksheets.

Work Place 2Q



WORK PLACE GAMES & ACTIVITIES

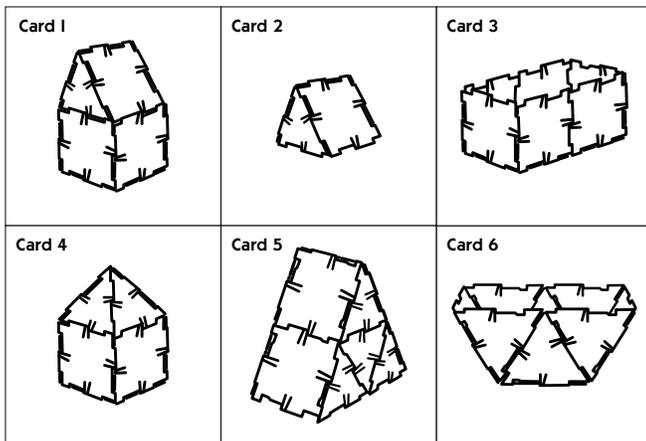
Polydrons Can You Build It?

This Work Place basket will need

- ★ 6 Polydrons: Can You Build It? cards
- ★ container of Polydrons
- ★ Polydrons: Can You Build It? key (Keep this away from the work area.)

Skills

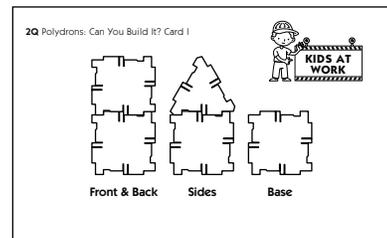
- ★ investigating and predicting the results of putting together and taking apart 2- and 3-dimensional shapes
- ★ interpreting visual instructions
- ★ recognizing and representing shapes from different perspectives
- ★ flipping and rotating 2-dimensional shapes to create 3-dimensional structures



Work Place Instructions

1. Choose a building card.
2. What pieces will you need to form the front and the back of the building?
3. What pieces will you need for each side of the building?
4. Snap the pieces together.
5. Do you need a base?

6. What did your pieces make?
7. Does your building look like the structure on the key?
8. Show a friend and show the teacher.



Instructional Considerations

If you've had your polydrons put away for a long time, some of your children won't be able to resist playing with the pieces. Don't despair! Every time they manage to flip and rotate the pieces, they're experiencing some geometric principles. Encourage reluctant students to try a Can You Build It? card after they've had some time to experiment, and then trust them to their own purposes. They'll be using polydrons again in the first grade *Bridges* program and geoblocks in the second grade *Bridges* program to explore more 3-dimensional geometry.

Here are some things you might look for as you watch students at work.

- Can they interpret the visual information on the building cards?
- Can they make the flips and rotations needed to snap the required shapes together for the front, back, and sides? Can they add the base as directed?
- Are they able to tell whether their completed structures match those pictured on the key card?

Work Place 2R



WORK PLACE GAMES & ACTIVITIES

Fill It First!

This Work Place basket will need

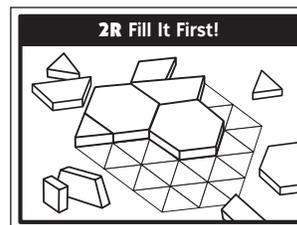
- ★ 6 Fill It First! gameboards
- ★ 3 Fill It First! spinners
- ★ 3 containers of pattern blocks (Each container should have 20 trapezoids, 20 blue rhombuses, and 25 triangles. If children run short of a shape, they can borrow from other players.)

Skills

- ★ recognizing and naming shapes
- ★ exploring relationships between various 2-dimensional shapes
- ★ combining shapes to make other shapes
- ★ solving spatial problems

Work Place Instructions

1. You and your partner will need to get a spinner and a container of pattern blocks to share. Each of you will need your own gameboard.
2. Take turns spinning the spinner. Each time you spin a shape, take a pattern block of the same shape and place it on your board.
3. The first person to fill the apple on his or her gameboard wins. The catch is, you have to go out exactly. If all the space you have left is a rhombus and you spin a trapezoid, you miss your turn and have to try for a rhombus or a triangle the next time around. Continue playing until one person fills his or her apple entirely.



Instructional Considerations

Here are some things you might look for as you watch students play this game and listen to their conversations.

- Can children name the shapes?
- Do they recognize that some shapes fill the puzzle more quickly than others?
- Can they make the needed flips and rotations to make shapes fit into the triangular guidelines on the gameboards?
- Are they able to take turns and wait patiently as their partner finds his or her blocks and sets them on the gameboard?
- Are they able to place each shape they collect in places that will give them some flexibility toward the end of the game?

Work Place 2S



WORK PLACE GAMES & ACTIVITIES

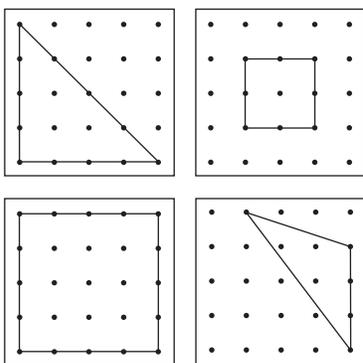
Geoboards Squares & Triangles

This Work Place basket will need

- ★ 6 geoboards and containers of geobands to share
- ★ Geoboard Squares and Geoboard Triangles record sheets (Blacklines 2.30–2.31, run 15–20 copies of each.)
- ★ 6 clear rulers
- ★ crayons and pencils to share

Skills

- ★ recognizing and naming shapes
- ★ describing the attributes of squares and triangles
- ★ finding squares and triangles in the classroom
- ★ determining and matching positions to accurately copy shapes
- ★ solving spatial problems



5. Use a ruler to connect the dots and copy your shape onto the worksheet.
6. Can you make another shape that's different from your first one?
7. When you finish, give your paper to your teacher.

Instructional Considerations

Here are some things you might look for as you watch students at work.

- Can children make triangles or squares on their geobands?
- Can they copy each shape accurately onto a record sheet?

Note If a student is having difficulty, encourage her to ask a friend to help hold the ruler in place to connect the dots.

As with any of the tasks you've posed to kindergartners which involve a record sheet, this task will be difficult for those youngsters whose fine motor skills are still a problem. Assist or even serve as a scribe if necessary.

Work Place Instructions

1. Get yourself a geoboard and a few geobands.
2. Decide whether you're going to make triangles or squares today and get the appropriate worksheet.
3. Use the geobands to make your first shape. Does it have the proper number of sides and corners?
4. On the record sheet, use a crayon to mark the dots that show where the corners of your shape are.