

**Builder 1****WHAT DO I NEED ?**

A sense of humour and flexible knees.  
Most of these lessons happen on the floor.



**Basic DUPLO bricks.** You probably have some already. The children will be absolutely boggled with your skills, and so will you. BUT those old DUPLO bricks will never be the same - or enough. So get more !



**Any DUPLO Theme materials** - House, Farm, Airport, Boats, Animals, Shop, Train, Brick Runners, Tubes.  
You name it - we can use it.



**Junk materials**  
See lessons for specifics.



**Tools and other materials**  
See lessons for specifics.

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Illustrated by : **Nancy Frank**

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**The only limit to your imagination ... is the power of your mind !**

## Builder 1

### Page Numbers

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Intro **WHAT DO I NEED ?**

**LET'S GO! 1 - 4**



1 **SECRET FISHING ROD**

*long thick rigid short thin balance*

2 Resources

3 **DMT - A Funky Fish**



4 **PET ROCKS**

*sort classify match compare*

5, 6 Resources

7 **DMT - A Talking Bird**



8 **TALL TOWER**

*strong study tall balance*

9 Resources

10 **DMT - A Parachute**

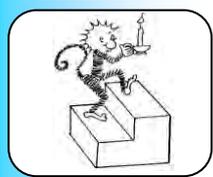


11, 12 **HUMPTY DUMPTY**

*weak strong on top of next to test*

13 Resources

14 **DMT - An Egg Cup**



15, 16 **JACK'S MAGIC STAIRCASE**

*stability weight height support flexible*

17 Resources

18 **DMT - A Magic Bean Jar**



19 **CASTLE**

*stability strength structures*

20 Resources

21 **DMT - A Fairytale Castle**

22 **CLASS PROJECT - Castle**

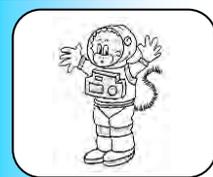


23 **BRIDGE**

*flexible structure forces measure*

24 Resources

25 **DMT - A Bridge**

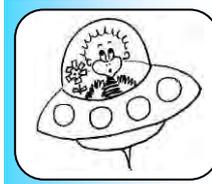


26 **SPACE ROCKET**

*strong stable support height weight*

27 Resources

28 **DMT - Rocket Pen Tidy**



29 **SPACE FLOWER**

*strong stable support height weight*

30 Resources

31 **DMT - Space Age Artifacts**



32, 33 **SAMMY SNAKE**

*move slide flexible swivel hinge pattern*

34 Resources

35 **DMT - A Snake Hook**



36, 37 **PAPER PRANKS**

*rough smooth grip attach texture*

38 Resources

39 **DMT - A Caterpillar**

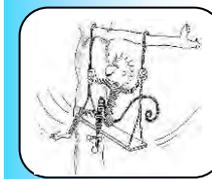


40 **CHAIRS for BEARS**

*strength stability hard soft*

41 Resources

42 **DMT - Clothes for the Bear Family**



43 **FUN in the PARK - Swings**

*swing move join studs flexible*

44 Resources

45 **DMT - A Party Hat**



46 **FUN in the PARK - Slide**

*swing move join studs flexible*

47 Resources

48 **DMT - A Super Duper Playground**



49, 50 **FUN in the PARK - Game**

*low high space distance easy difficult*

51 Resources

52 **DMT - Guessing Box**



53 **FUN in the PARK - Skittles**

*stability high higher highest balance supports stays cables jib*

54 Resources

55 **DMT - A Set of Skittles**



56 **FUN in the PARK - Trampoline**

*bounce elasticity forces springs*

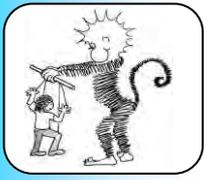
57 Resources

58 **DMT - Hot Bunnies**

## Builder 1

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59, 60 **FUN in the PARK - Puppets**  
*attach move flexible*

61 Resources

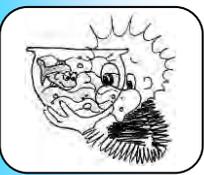
62 **DMT - A Puppet Monster**



63 **FUN in the PARK - J Gym**  
*safety stability challenge height length*

64 Resources

65 **DMT - Waterproof Clothing**



66 **FISH TANK**  
*behind in front clear transparent*

67 Resources

68 **DMT - A Fun Fishing Game**



69, 70 **GREENHOUSE**  
*height width needs shelter compare*

71 Resources

72 **DMT - Green-haired Creatures**



73 **SAILBOAT**  
*float sink stable move*

74 Resources

75 **DMT - A Wind-powered Boat**



76 **WIND RACERS**  
*stable move energy power size*

77 Resources

78 **DMT - A Kite**



79 **PADDLE STEAMER**  
*stored energy stability wind up paddle*

80 Resources

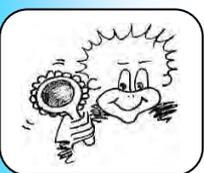
81 **DMT - Paddle Steamer**



82 **BABY TOY**  
*elasticity bounce pattern*

83-85 Resources

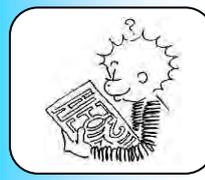
86 **DMT - Soft Toy for a Toddler**



87 **A RATTLEBOX**  
*bounce timing momentum incline*

88 Resources

89 **DMT - Board Game**



90 **MIGHTY MAZE**  
*measure design space entertain*

91 Resources

92 **DMT - Sandwiches**



93 **JACK and JILL**  
*raise lower lift winch load pulley*

94 Resources

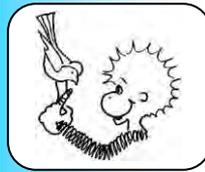
95 **DMT - A Pulley**



96 **THREE LITTLE PIGS**  
*strong stable sturdy weak collapse*

97 Resources

98 **DMT - A Toy Box**



99 **A BIRDFEEDER**  
*sturdy safe pattern colour*

100 Resources

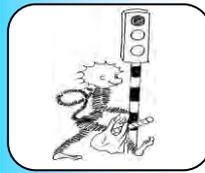
101 **DMT - Packaging for an Egg**



102 **THREE BILLY GOATS GRUFF**  
*strength rigidity space span support*

103 Resources

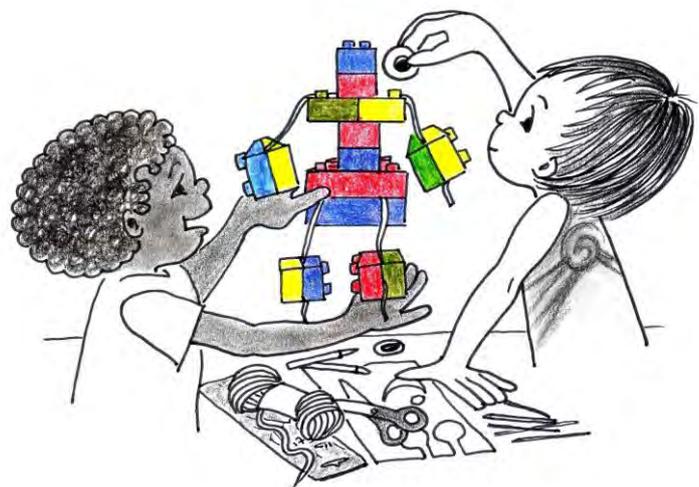
104 **DMT - Coconut Mice**



105 **DUPLO TOWN**  
*explore discover observe discuss plan*

106, 107 Resources

108 **DMT - Own Footwear**



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## HANDS ON TECHNOLOGY

# Builder 1



### Extra Materials

*Quakeshaker - see copymaster*  
*Crayons, kokis*



## TALL TOWER



### CONCEPTS

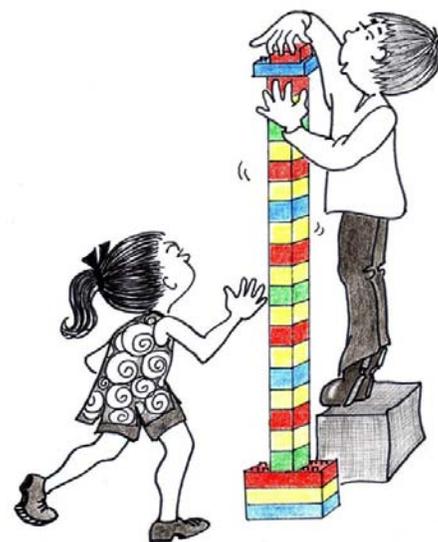
**strong sturdy tall balance**

### LISTEN

Introduce the topic with a story / poem. Have some pictures of tall buildings to show the children. Discuss the buildings and their uses.

### BUILD

- ▶ Children work in pairs to build the tallest tower possible.
- ▶ Think about these things:  
*What will cause your tower to fall?*  
*What makes it stronger?*  
*Can you make it taller, using the same number of bricks?*
- ▶ Rebuild the tower if necessary according to the new test theories.
- ▶ Compare your tower to the other groups - eg. This one is taller but less sturdy than that one.



### EXTEND

- \* Work with your partner to build a strong, tall tower that will be able to withstand an earthquake.
- \* Hold your model in front of the Quakeshaker and note at which colour it topples over.



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# HANDS ON TECHNOLOGY

## Builder 1



### Extra Materials

*Paper tongues cut out for snakes*  
*Stick -on labels (for joining blocks)*  
*Wool*



## SAMMY SNAKE



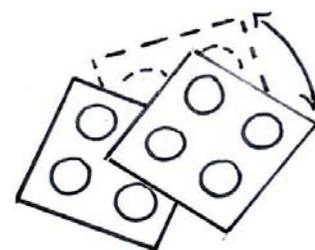
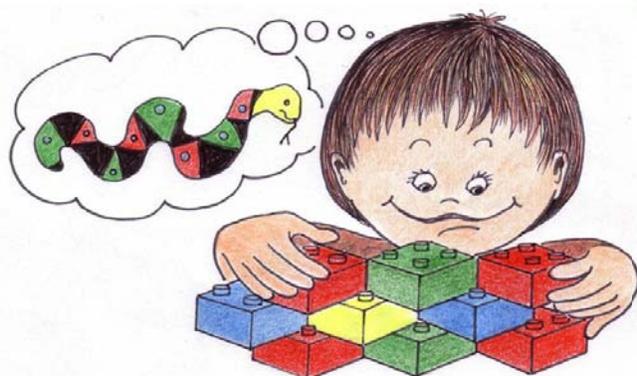
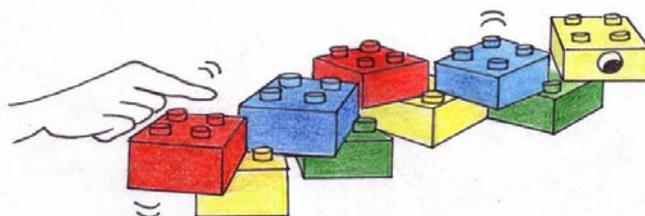
**move slide flexible swivel hinge pattern**

### LISTEN

Read a story/poem about snakes. Enjoy a factual book about snakes. Point out the colour and pattern of various types of snakes. Can you move like a snake? Play some "snakey" music and allow the children to show you how they can move like snakes.

### BUILD

- ▶ Build a snake, using your blocks.
- ▶ Compare your snake with your friend's snake. Which one is longer/shorter - discuss differences. Record your comparisons on a chart.
- ▶ *Can you make a snake with a repeat pattern? Does your snake move like a real snake?*
- ▶ Think of a way to connect your bricks to allow for movement, swivelling or flexibility.
- ▶ Try joining your snake using stickers/wool.
- ▶ Redesign your snake, think about pattern and movement.
- ▶ Add a paper tongue and a brick with eyes.



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# Builder 1



### Extra Materials

- Various types of paper
- Feathers, wool, scissors
- Dry branch / twig on which to hang birds



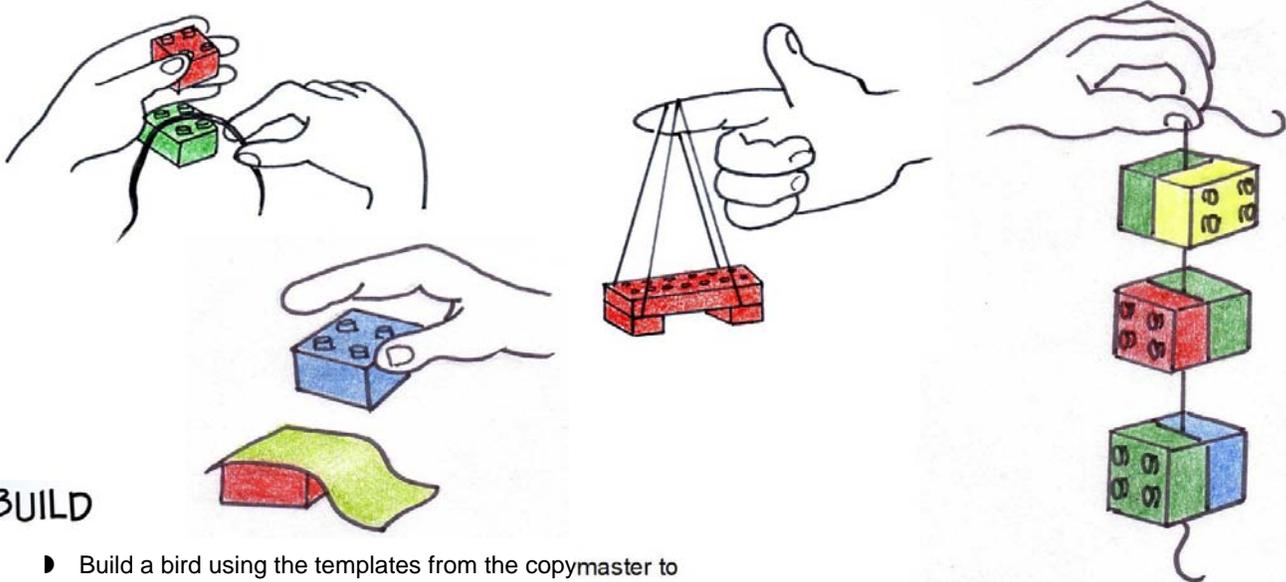
## PAPER PRANKS - Bird Mobile



### rough smooth grip attach texture

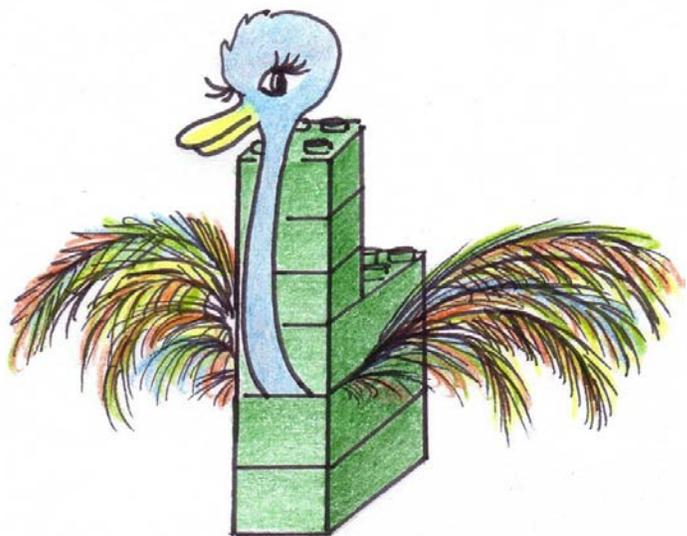
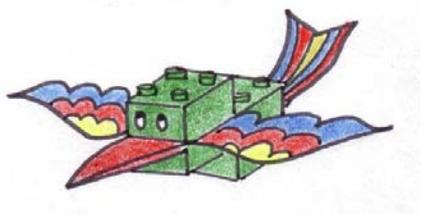
### LISTEN

Using paper with Duplo blocks can be a lot of fun. How can we do this without using glue or tape? Listen to children's ideas and then try some of them out.



### BUILD

- Build a bird using the templates from the copymaster to make wings and a beak from paper.
- See how many different birds you can make.
- Can you attach some feathers to your birds?
- Hang them from a branch / twig.



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# Builder 1



### Extra Materials

Various types of paper  
Feathers, wool, scissors  
Pipecleaners



## PAPER PRANKS

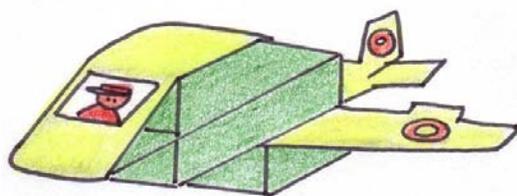
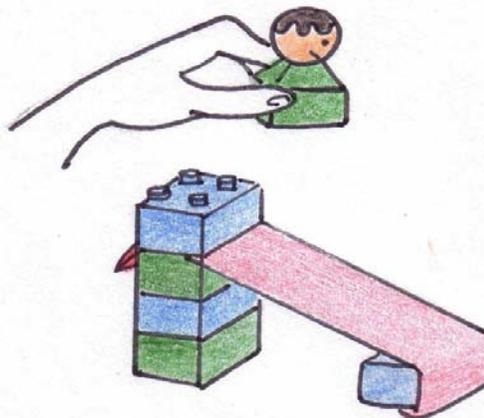
### CONCEPTS



rough smooth grip attach texture

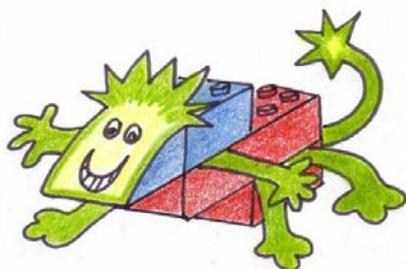
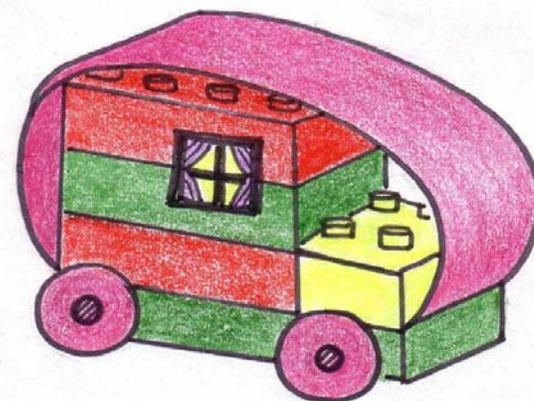
### EXTEND

- \* Attach paper to your bricks to build a slide.
- \* Build a staircase leading to the top.



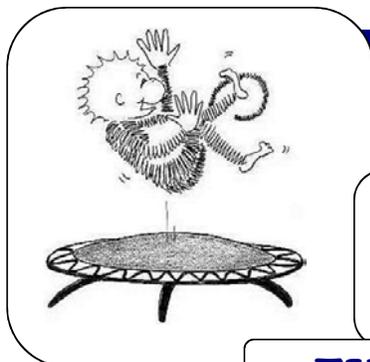
- \* Think of your own design for an aeroplane.
- \* Use templates to cut out necessary shapes for wings and tail.

- \* Use a trolley to build a rounded caravan.
- \* Use different types and textures of paper.



- \* See how many different creatures you can build.
- \* Add feathers and pipecleaners for interesting models!

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**Builder 1***Extra Materials*

*Elastic bands, plastic film, rubber  
Marbles, orange bag netting  
Old stockings, scraps of furry material, sponge*

**FUN in the PARK - Trampoline****bounce elasticity forces springs****LISTEN**

Read about Tigger, from Winnie the Pooh stories. Tigger loves to bounce! What other animals can bounce or hop?  
Who likes to bounce on their bed? Does Mom think this is a good idea?  
What could we use to jump on that Mom would approve of? Discuss.  
What does a trampoline (and a bed) have, that allows you to bounce?

**BUILD**

- ▶ Build a frame for a trampoline.
- ▶ Try out different materials to complete your trampoline.
- ▶ Each time, test the material with a marble dropped from the same height.
- ▶ Which material gives the best bounce? Discuss the properties of the different materials.
- ▶ Using the same frame, build the trampoline with elastics, all going in the same direction.
- ▶ What happens to the marble now?
- ▶ Add the same number of elastic pieces going in the opposite direction. Test it with your marble.
- ▶ How safe is your trampoline?
- ▶ Are there hard bits that could hurt someone? If so, design some protection.
- ▶ Measure the highest "bounce back" after you have dropped your marble from about 15cm high.

**EXTEND**

- \* Make a poster, showing how to do 4 different tricks on your trampoline.
- \* Design and make a set of steps to make it easier to climb up to your trampoline.

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## HANDS ON TECHNOLOGY

### Builder 1

#### Extra Materials

*Plastic cling wrap or cellophane  
Paper, crayons and safe scissors  
Little stones, pebbles or rocks*

*Wool, sticky tape  
Sea shells, corals  
Plastic bugs*



## FISH TANK

### CONCEPTS



**behind in front clear transparent**

### LISTEN

Who has a fish tank at home? What kind of fish do you keep in there? Discuss.  
Read a story or a poem about fish.

### BUILD

- ▶ Cut out and decorate some paper fish (see copymaster or make your own).
- ▶ Build a fish tank with as many transparent sides as you like.



- ▶ Use sticky tape and wool to hang your fish from the top.
- ▶ Arrange pebbles, rocks, shells, coral in your fish tank to keep the fish happy.
- ▶ Add some paper seaweed.

### DESIGN, MAKE & TEST

#### A Bugbox

Design a box for garden bugs that:

- ◆ is easy to see into.
- ◆ has safe hiding places for the bugs or insects.
- ◆ will not allow the bugs to escape.
- ◆ will provide plenty of water, air and food for the bugs.



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