

## DUPLO WORKSHOP

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LEGO dacta Teacher Trainer

### 1. The following LEGO dacta® products will be discussed

- LEGO dacta, Early Simple Machines, 89651
- LEGO dacta, Fun Time Gears, 89652
- LEGO dacta, Early Structures, 89660
- LEGO dacta, DUPLO Toolo, 89104

### • LEGO dacta, Early Simple Machines

#### Themes

- Around the House
- Playing Outdoors
- Push and Pull
- Up and Down, Round and Round
- Fun and Games
- Machines and Tools

### •Examples of when to use above themes

- Families ( Around the Home )
- Community Helpers ( Machines & Tools, Push and Pull )
- Sharing ( Playing Outdoors )

### • Sample activities related to each theme

- Around the House
  - mobile phone
  - picture frame
- Playing Outdoors
  - seesaw
  - moving toy
- Push and Pull
  - car and launcher
  - cab and trailer
- Up and Down, Round and Round
  - crane
  - turntable
- Fun and Games
  - clown's eyes
  - guess the colour
- Machines and Tools
  - merry-go-round
  - egg beater

- **More ideas ....**

- Children as Inventors, using red problem cards
  - No room to play, red card # 1
  - Wind speed tester, red card # 2
  - A computer mover, red card # 3
  - An entertainment machine, red card # 4
  - A carnival ride, red card # 5

- **Fun Time Gears**

- paper crimper machine
- pattern maker
- the spinner
- moving pictures
- mixing machine

- **Toolo**

- construct models that lift, turn, and bend

- **Early Structures ( new )**

- Themes**

- balance within structures
  - create a creature
  - toppling towers
  - hanging around
- ways of building structures
  - wobbling walls
  - going fishing
  - keeping dry
- making structures stable
  - what's inside
  - what's the score
  - what's underneath
- creating movement within structures
  - in a spin
  - in the goal
  - in its mouth
- the best shape for the job
  - arch bridge
  - double-V bridge
  - bend and wiggle
  - sky scrapers

## **2. Some of the many cross curricular and general skills possible using the LEGO dacta kits**

- Language Development
  - describing models
  - describing process
  - learning technical vocabulary
- Social Studies
  - work and machines
  - community helpers/careers
  - tools and vehicles
- Physical Development
  - fine motor skills
  - visual discrimination
  - eye-hand coordination
- Art
  - creativity
  - aesthetics
  - imagination
  - design
- Social/Emotional Development
  - cooperative play and patience
  - imagination
  - design
- Mathematics
  - measuring
  - estimating
  - counting
  - sorting
  - sequencing
  - using mathematical language
  - spatial relations
  - weight
- Science and Technology
  - simple machines
  - learning how things work
  - problem solving
  - trial and error
  - cause and effect
  - observing
  - hypothesizing
  - predicting
  - balance/stability
  - structures and forces
  - applying scientific concepts to real-life situations

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#### **4. Managing working with DUPLO and a whole class**

- **ideas**

- i) work in pairs
- ii) use cooperative learning model
- iii) build true to life models of things they see in real life
- iv) build to problem solve
- v) use software to help, eg. How Things Work
- vi) have shelf space available strictly for LEGO
- viii) Use DUPLO curriculum guides

- **management**

- i) use library card sign out system
- ii) have spare parts on hand
- iii) trusted monitors to sort out the kits
- iv) Spreadsheet tracking chart
- v) Rubbermaid containers to store kits
- vi) Use a camera or Quickcam to take pictures of models

#### **5. Other Resources**

- **Early Simple Machines Activity Pack**

- **Activity Centers binders**

- ( Science, Technology and Society Themes for Early Childhood )
- Community and Transportation
  - Buildings and Structures
  - Animals and Creatures

- **AIMS Resources**

UNDER CONSTRUCTION

- **Web Sites**

- [www.lego.com](http://www.lego.com)
- [www.lego.com/dacta/school/](http://www.lego.com/dacta/school/)
- [www.bced.gov.bc.ca/branches/pser/welcome.htm](http://www.bced.gov.bc.ca/branches/pser/welcome.htm)

- **Software**

- How Things Work
- Big Job
- Road Construction Ahead

- John Morrow, Spectrum, 604 942 5835

**References** : LEGO Dacta, Early Simple Machines, Fun Time Gears and  
Early Structures, Teachers Guides

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