

# MicroWorlds Quick Reference †

## 1. Turtles & Graphics

<b>forward / fd</b> <b>glide</b> <b>distance</b>	<b>back / bk</b>
<b>right / rt</b> <b>heading</b> <b>towards</b>	<b>left / lt</b> <b>setheading / seth</b>
<b>pos</b> (POStion) <b>xcor</b> (X COoRdinate) <b>ycor</b> (Y COoRdinate) <b>home</b>	<b>setpos</b> <b>setx</b> <b>sety</b>
<b>pensize</b> <b>pd</b> (Pen Down) <b>color</b>	<b>setpensize</b> <b>pu</b> (Pen Up) <b>setcolor / setc</b>
<b>bg</b> (BackGround color) <b>freezebg</b>	<b>setbg</b> <b>unfreezebg</b>
<b>ht</b> (Hide Turtle) <b>shape</b> <b>size</b> <b>stamp</b>	<b>st</b> (Show Turtle) <b>setshape / setsh</b> <b>setsize</b> <b>snapshape</b> <b>snaparea</b>
<b>snapshot</b>	<b>restore</b>
<b>who</b>	<b>newturtle</b>
<b>colorunder</b>	<b>cg</b> (Clear Graphics)
<b>fill</b>	<b>clean</b>
<b>infront</b>	

## 2. Words and Lists

<b>word</b> <b>list</b> <b>sentence / se</b>	<b>word?</b> <b>list?</b>
<b>first</b> <b>last</b>	<b>butfirst / bf</b> <b>butlast / bl</b>
<b>ascii</b>	<b>char</b>
<b>fput</b> (PUT First)	<b>lput</b> (PUT Last)
<b>item</b> <b>count</b>	<b>pick</b>
<b>empty?</b> <b>equal?</b> <b>number?</b>	<b>member?</b> <b>identical?</b>
<b>parse</b>	

## 3. Sound

<b>note</b> <b>setinstrument</b>	<b>rest</b>
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## 4. Objects

<b>newbutton</b> <b>newslider</b> <b>newtext</b>	<b>remove</b>
<b>freeze</b> <b>transparent</b> <b>hidetext</b> <b>get</b> <b>turtlesown</b>	<b>unfreeze</b> <b>opaque</b> <b>showtext</b> <b>set</b>
<b>ask</b>	<b>talkto / tto</b>
<b>stamptext</b>	<b>textwho</b>
<b>resetvideo</b>	

## 5. Text Editing

<b>print / pr</b> <b>insert</b>	<b>delete</b>
<b>cut</b> <b>copy</b>	<b>clipboard</b> <b>paste</b>
<b>textitem</b> <b>textcount</b>	<b>textpick</b>
<b>tc</b> (Text Color) <b>fontsize</b>	<b>settc</b> <b>setfontsize</b> <b>setfont</b> <b>setstyle</b>
<b>search</b> <b>select</b> <b>selected</b>	<b>found?</b> <b>unselect</b>
<b>sol</b> (Start Of Line)	<b>eol</b> (End Of Line)
<b>cf</b> (Char Forward) <b>cu</b> (Char Up)	<b>cb</b> (Char Back) <b>cd</b> (Char Down)
<b>top</b> <b>eot?</b> (End Of Text?)	<b>bottom</b>
<b>cleartext / ct</b>	

## 6. Command Center

<b>show</b>	<b>cc</b> (Clear Commands)
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## 7. Input/Output

<b>question</b> <b>announce</b>	<b>answer</b>
<b>openworksheet</b> <b>getcell</b>	<b>closeworksheet</b> <b>setcell</b>
<b>key?</b>	<b>readchar</b>
<b>mousepos</b>	

† Developed by OpenWorld Learning / OWL based on LCSi's categorization scheme.

## 8. Project Management

<b>namepage / np</b>	<b>pagelist</b>
<b>newpage</b>	
<b>getpage</b>	<b>getproject</b>
<b>projectsize</b>	<b>newprojectsize</b>
<b>procedures</b>	<b>setfooter</b>
<b>merge</b>	<b>presentationmode</b>

## 9. Disk Access

<b>saveshape</b>	<b>loadshape</b>
<b>savepict</b>	<b>loadpict</b> <b>placepict</b>
<b>chdir</b> (CHange DIR) <b>directories</b>	<b>currentdir</b>
<b>textlist</b> <b>pictlist</b>	<b>projectlist</b> <b>files</b>
<b>savetext</b>	<b>loadtext</b>
<b>exporttext</b>	<b>importtext</b>
<b>saveproject</b>	<b>erfile</b> (ERase FILE)

## 10. Assigning

<b>make</b> <b>name</b> <b>names</b>	<b>thing</b> <b>name?</b>
<b>local</b>	<b>let</b>
<b>createprojectvar</b>	<b>projectvars</b>
<b>clearname</b>	<b>clearnames</b>

## 11. Math

<b>sum</b>	<b>+</b>
<b>difference</b>	<b>-</b>
<b>product</b>	<b>*</b>
<b>quotient</b>	<b>/</b>
<b>remainder</b>	
<b>less?</b>	<b>greater?</b>
<b>sin</b>	<b>cos</b>
<b>tan</b>	<b>arctan</b>
<b>abs</b> (ABSolute value)	<b>minus</b>
<b>exp</b>	<b>ln</b> (Natural Log) <b>log</b>
<b>power</b>	<b>sqrt</b> (Square Root)
<b>int</b> (INTeger part)	<b>round</b>
<b>random</b>	<b>rerandom</b>
<b>pi</b>	

## 12. Time

<b>resett</b> (RESET Timer)	<b>timer</b>
<b>wait</b>	

## 13. Flow of Control and Logic

<b>to</b>	<b>end</b>
<b>output / op</b>	<b>stop</b>
<b>dolist</b> <b>repeat</b>	<b>dotimes</b>
<b>if</b>	<b>ifelse</b>
<b>and</b> <b>not</b>	<b>or</b>
<b>forever</b> <b>launch</b> <b>when</b>	<b>cancel</b>
<b>clickon</b> <b>setinstruction</b>	<b>clickoff</b>
<b>carefully</b> <b>run</b>	<b>errormessage</b>
<b>touching?</b>	<b>done?</b>
<b>everyone</b>	<b>listen</b>
<b>stopall</b> <b>waituntil</b>	<b>stopme</b>
<b>onreadline</b>	

## 14. Workspace

<b>recycle</b>	<b>space</b>
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## 15. Serial Port Primitives

<b>.serialinit</b>	<b>.setbaud</b>
<b>.recc</b>	<b>.send</b>

## 16. Dynamic Link Libraries

<b>.dllprim</b> (DLL Primitive)	
<b>.malloc</b> (Mem ALLOCation)	<b>.free</b>
<b>.lock</b>	
<b>.db</b> (Deposit Byte)	<b>.eb</b> (Examine Byte)
<b>.dw</b> (Deposit Word)	<b>.ew</b> (Examine Word)
<b>.dl</b> (Deposit Long)	<b>.el</b> (Examine Long)
<b>.ds</b> (Deposit String)	<b>.es</b> (Examine String)