Procedures and Backpacks

Procedures will only work for the "context" they are defining. Anything written in the right procedure tab will work for **all** turtles. This is often referred to as a *global* procedure. Procedures defined in the backpack, will only work for **that one** turtle (private procedure).

Example:

On the right procedure tab enter:

```
to square
pd
fd 50
rt 90
fd 50
rt 90
fd 50
rt 90
fd 50
rt 90
pu
end
```

Create a turtle (t1). Put in its backpack the procedure:
```
to ssquare
pd
fd 10
rt 90
fd 10
rt 90
fd 10
rt 90
fd 10
rt 90
pu
end
```

Create a second turtle (t2). Put in its backpack the procedure:
```
to lsquare
pd
fd 100
rt 90
fd 100
rt 90
fd 100
rt 90
fd 100
rt 90
pu
end
```

In the command center type:

```
t1, square
```

Note what happens.

```
t2, square
```

Note what happens.

Type

```
cg
t1, ssquare
t1, lsquare
```

What happens?

Now try

```
cg
t2, ssquare
t2, lsquare
```

What happens?

The turtles can only use the procedures that are either defined *globally* or are in their own backpack.

Pages

To create a new page – go to Pages→New Page

Once you have multiple pages, you can move between pages using the blue arrows on the toolbar. To jump to another page, you can use a button and name it with the page name just like a procedure. For example, to go to page2, make a button and give it the instruction *page2*

Turtle Speed

Turtle speed is really a combination of using *fd*, *wait*, and *glide*. Play around using different numbers with these commands and see what they do.

glide	Makes the turtle glide over the *distance* indicated. The second input sets the turtle's gliding speed. The maximum distance and maximum speed for **glide** are 9999 and 99, respectively.	Given that there is a turtle on the page:
distance		`glide 50 1`
speed		`glide 100 0.1`

```
repeat 10 [fd 50 wait 10]
repeat 10 [fd 50 wait 1]
repeat 10 [fd 10 wait 10]
repeat 10 [fd 10 wait 1]
repeat 10 [glide 10 1 wait 10]
repeat 10 [glide 10 1 wait 1]
repeat 10 [glide 10 .1 wait 10]
repeat 10 [glide 10 .1 wait 1]
```