

# Teaching Kids Programming



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# What Technologies Do Kids Like?



# What works

- **Code First** - action
- **Pairing** - keeps the kids together, makes coding social and fun.
- **Intentional Coding** – intelligent translating
- **Recipes** – small steps
- **Variations** –reinforces concepts & speeds up learning, brings joy!
- **Iterations** – switching which kid is at the keyboard every 5 minutes, and pairs after every recipe, keeps it fresh
- **Constant Visual Feedback** – fun and faster learning





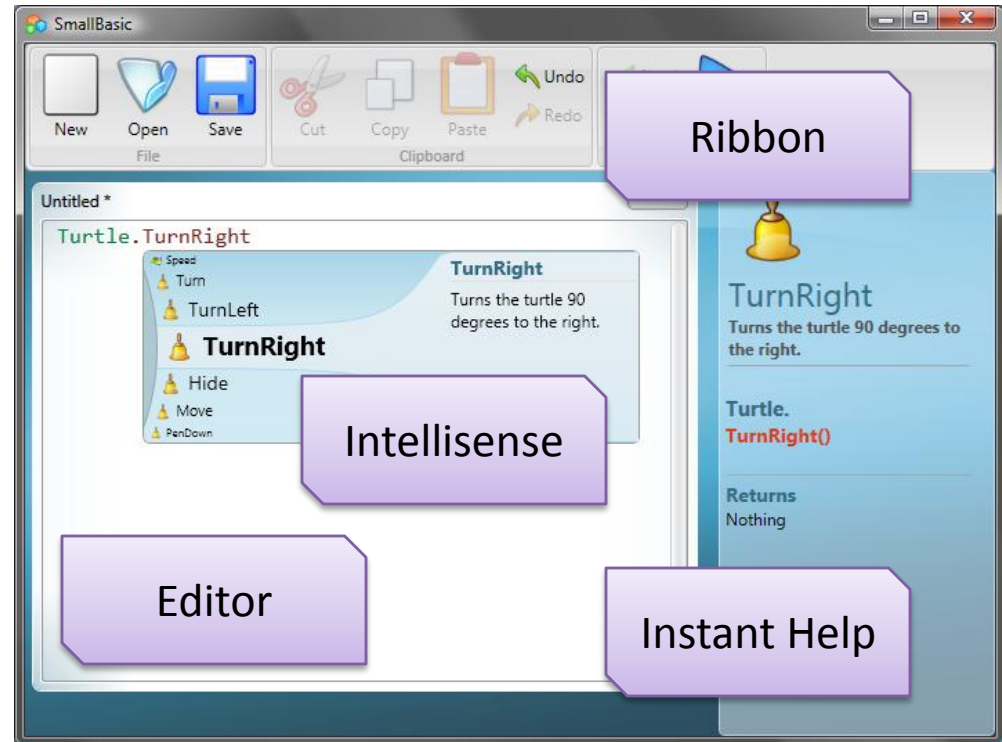
# Small Basic

Core Language + IDE + Extensions

\*\*we have validated teaching methods in multiple languages\*\*

# Environment

- **Zero Setup** – just start coding!
- **Intelligent IDE** - faster learning
- **Extensible Language** – simplify concepts
- **Graduate**– to full OOP language
- **Localized** – many languages



# Extensibility

## Extend SmallBasic

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### Teaching Extensions for Small Basic Recipes

This is a site to work with extensions to the SmallBasic language

### Features - here is a list of the objects we've added

See the Documentation Tab for more detail about these objects

Colors

ColorWheel


MessageBox

ProgramWindow


ShapeMaker

Tortoise

### Requirements

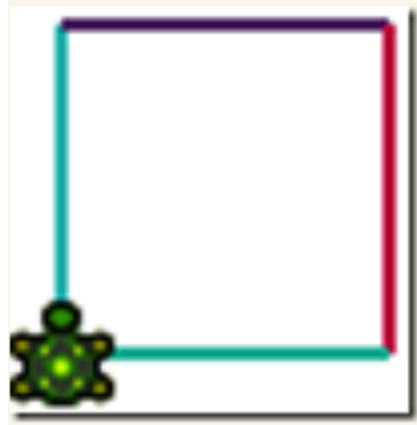
.NET Framework 3.5 or better <http://msdn.microsoft.com/en-us/netframework/aa569263.aspx> 

SmallBasic <http://msdn.microsoft.com/en-us/devlabs/cc950524.aspx> 

SmallBasic Recipes (optional, however these recipes use these extension objects <http://smallbasic.com/smallbasic.com/wiki/Recipes.ashx> 

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# Recipes and Variations





# Small Basic Recipes

Modified: 2009/12/21 18:11 by 75.215.63.213 - [Uncategorized](#)

## Small Basic Recipes

These are the recipes we have been developing to teach & introduce programming. expect more to show up from week to week.

Thanks and Enjoy,

[LynnLangit](#) & [LlewellynFalco](#)

## How to use Recipes

Use the **import** button in SmallBasic and enter the 6-Digit ID to get the recipe into yo

Then translate each line of the recipe into a line of code. In the end, you will have a p  
encourage you to run it often, as soon as you think it will show

You'll need to download the latest version of [Teaching Extens](#)

Recipes are a great way to learn & explore SmallBasic

Program	Import ID	Image
Simple Square	<a href="#">MXD413-9</a> <a href="#">NTW886</a> (step by step)	

## Microsoft Small Basic



Program Listing:

List Program

*' Show the tortoise (run #1)*

*' Make the tortoise move as fast as possible (run #6)*

*' Do the following 4 times (run #5)*

*' Change the color of the line the tortoise draws to "blue" (run #3)*

*' Move the tortoise 50 pixels (run #2)*

*' Turn the tortoise to the right (90 degrees) (run #4)*

*'Repeat*



# Other Stuff

- Technologies – Kodu, XNA, Robotics
- Software – **FREE**
  - [DreamSpark](#), [WebSpark](#), [BizSpark](#)
  - Know your Academic Developer Evangelist
- Events
  - [DigiGirly](#), [Dare2BDigital](#)
  - TeachingKidsProgramming, TeachCamp
  - [ImagineCup](#)



# Get Started

- Small Basic - [download](#)
- Small Basic Extensions - [download](#)
- Small Basic recipe [wiki](#)
- Teaching Programming screencasts
  - [Setting up](#)
  - [First recipe](#)
  - [Variation](#)
- Teaching Programming [blog](#) (best practices)
- Other languages - [teaching](#)