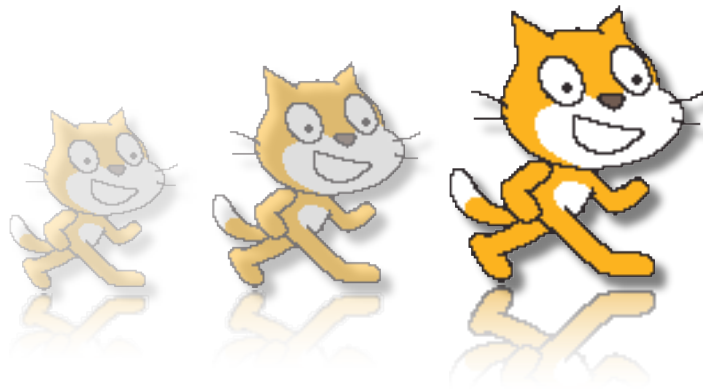


SCRATCH

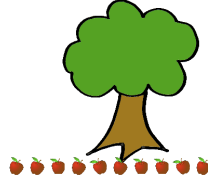


**Some lesson
ideas
for**

**Grades
K - 2**

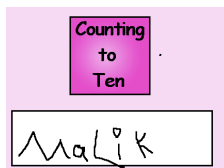
Kg - Apple Tree

This is a template that I made to introduce the students to scratch. It helps them to work on their motor skills and they seem to enjoy it. After they have used it a couple of times I show them how to switch the costume from a red apple to a green apple. On yet another day I have used it to have students draw their own costume for each apple. We try to make each apple into a different shape.

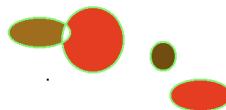


Kg - Ten

This is a template I provide where the students start by writing their name in the box of background one. Then they work on drawing a number of objects on each background. During this project I emphasize the use of the **undo** button to fix mistakes rather than using the eraser or the **clear** button.



One



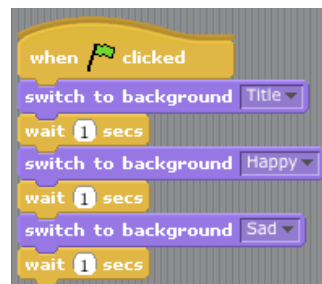
Four



Seven

Kg - Pumpkin

For the Pumpkin project I have the students write their name in the box and color the background. Then they draw a happy and a sad jack-o-lantern. This is the first project where I begin to have them make their own script. They use a **green flag** and then three **switch to background's** and three **wait's**. They really love making their own script to change the pumpkins face.

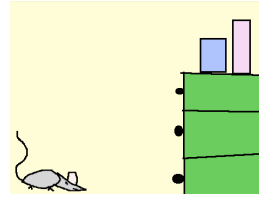


Kg - MouseViews

Read Mouse Views

Give lesson on how to draw a mouse

- oval for the body
- pointy shaped head
- semi-circle ear



Also instruct on how to draw a cabinet

- add knobs to show drawers
- draw some food on top

Introduce **glide**.

-Their mantra for using glide is “**move-doubleclick-glide**”.

I explain on the SmartBoard and have them come up to help.

- “*First we MOVE the mouse (sprite)!*”
- “*Then we DOUBLECLICK the mouse!*”
- “*And then we GET A GLIDE!*”
-



This first attempt at using glide is successful with most students. It is important to emphasize that there are three steps in the process and that they will be stacking four glides together.

The Script - The mouse starts in the bottom left corner - - - - - **move-doubleclick-glide**
The mouse glides over to the cabinet - - - - - **move-doubleclick-glide**
The mouse glides up to the top of the counter - - **move-doubleclick-glide**
The mouse glides up on-top of the food - - - - - **move-doubleclick-glide**

Kg - The Snowy Day

This is a big project that I have been doing and revising for several years. The students are learning about beginning, middle, and end of stories. I read them the book The Snowy Day by Ezra Jack Keats several times. We discuss the order of events and I have laminated images of each page that we put up on the board. I have the student draw the title and decorate the first background. Then I demonstrate how to draw Peter's bedroom window with buildings outside, a colored sky, and finally, snow on top of the buildings.

When all of the pictures are drawn I take one day and have them all draw the hill background and a Peter costume. The next day I have them think back to when they did the MouseView project.

move-doubleclick-glide - - - - move-doubleclick-glide - - - - move-doubleclick-glide

Depending on the size of the class and whether or not I have any assistants, most of the students will have Peter gliding by the end of the period.

Next is the chaotic part, I show them how to record their voice. I have them work in teams for this because I feel it would be too hard for some of them to click the record button - talk - click the stop button without too much delay. Once they have their voices recorded we are ready for the script.

The Script - For the stage the script just consists of **switch to background** and **play sound until done**. It seems straight forward but go slow for those students who struggle. When all the sounds and backgrounds are attached, then they may drag up the **broadcast Peter** and attach it to the bottom.



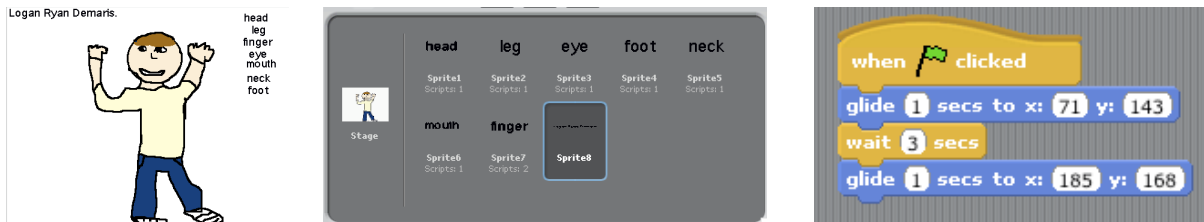
01 - Body

I believe his example is pretty self explanatory. The 1st grade students were studying the body in their classrooms so I came up with a simple project for them to practice using glide.

They were not given a template for this project, instead, they each started a new document and created all the word sprites and background.

Next, they began to figure out how to make each word glide over to its correct position and return.

Finally, we added the voice. Students were not allowed to add or record voice until they were finished with the other parts! They love recording their own voice.



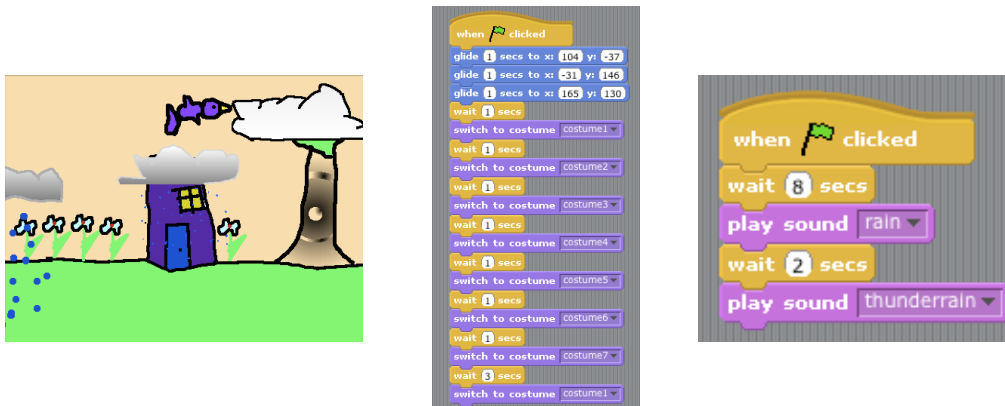
01 - Weather

As they were working on creating a weather exhibit at our school I worked with the teachers to come up with this project.

Students were shown different types of clouds as an introduction and we read [The Little Cloud](#) by Eric Carle. Then we started by drawing a basic Cumulus (cotton ball) cloud costume and filling it with white.

Next, we copied it 3 more times and then filled each one with a darker shade of gray to make it look like a rain cloud. Then, the students copied the dark cloud and added some rain drops. Then copy the cloud with a few raindrops and add some more rain drops . . . continue until there is no more room to add rain. If there was time I told the students they could add a lightning bolt!

The Script - Start with **“switch costume”** and **“wait”** to animate the cloud
Then add **“goto”** and **“glide”** to make the cloud move
Finally, use another **“green flag”**, a **“wait”**, and a **“play sound”** to make rain or thunder sounds happen at the correct time.



01 - Insects

I have sometimes had to teach this unit before the classroom teachers begin the insect unit so I make sure that I take time to introduce the vocabulary and emphasize it.

I have 30 laminated copies of insects (some repeats) that each child will use to draw from. I start by drawing an insect on the smartboard and I let the students come up and help. I really emphasize the anatomy of the insect parts and the details in the photo. The more time you spend in getting the students to look carefully at their insect the better looking insects you will have.

When the drawing is finished we make a copy of it. If it is a flying insect they will need to move or redraw part or all of the wings to give the effect of flapping. If it is a crawling insect the legs will need to be repositioned to give the illusion of walking. The main thing to remember when moving legs or wings is that they should remain attached to the same point of the thorax or else the animation will look a bit clunky.

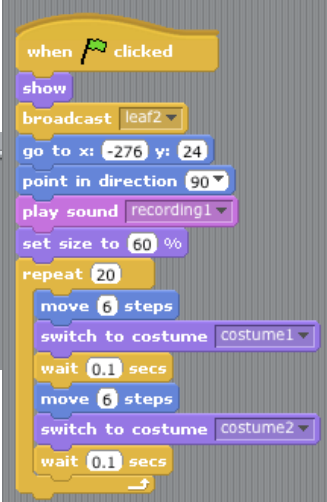
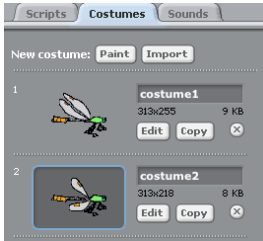

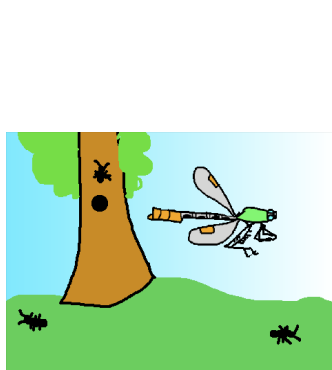
Before they begin to work on the script they should decide on where their insect is crawling. This can be a fun creative decision and kids will put insects in very funny places. On a couch, arm, plate, . . .

The Script - Use **“repeat”** with **“move”**, **“switch costume”**, **“wait”**. I make this a mantra for the students; Move-SwitchCostume-Wait ----- Move-SwitchCostume-Wait

They also need to use **“goto”** and **“point in direction”**

Finally, I have the students record three sounds containing facts that they have learned about insects and then we work together to put the sounds into our scripts.

the more advanced students will have more than one repeat and they will have their insect change directions at the end of each one.



The image displays four screenshots from a Scratch project. On the left is a scene with a tree and a dragonfly. The middle-left screenshot shows the 'Backgrounds' panel with three backgrounds: 'background1' (landscape), 'background2' (tree), and 'background3' (blank). Below it is a script starting with 'when I receive leaf2', followed by 'switch to background background1', 'when I receive tree', 'switch to background background2', and 'when I receive flute', 'switch to background background3'. The middle-right screenshot shows the 'Costumes' panel with two dragonfly costumes, 'costume1' and 'costume2'. The rightmost screenshot shows a script starting with 'when clicked', followed by 'show', 'broadcast leaf2', 'go to x: -276 y: 24', 'point in direction 90', 'play sound recording1', 'set size to 60%', and a 'repeat 20' loop containing 'move 6 steps', 'switch to costume costume1', 'wait 0.1 secs', 'move 6 steps', 'switch to costume costume2', and 'wait 0.1 secs'.

02 - Plants

During the second grade plant unit I teach this to kids.

I start by giving each student a laminated color photo of a unique flower. Then they begin to draw their flower making sure to show all of the flowers parts and as much detail as they can.

Next, we make another costume that shows a seed. After that, we copy the seed once and show it beginning to germinate.

Once again, we copy the germinating seed and show it growing a little more. This continues until we grow our flower adding stem(s), leaves, buds, and finally flowers when it has reached full size. I try to get the students to do it in 8-9 costume changes. It can be tricky to start from the seed and arrive at something that resembles their finished flower but they all seem to enjoy the project.

Once the drawings are done we work on the script.

Finally, they are allowed to draw the background.

02 - Portrait

Being able to draw portraits is part of the second grade curriculum so I told the teachers that I would teach this for them.

First, I did a lesson on faces - where and how big to draw each facial feature.

Then, the students drew their portraits (we did not use mirrors but you could) using only black lines. Only after I checked them for accuracy did I let them add color.

Next, I demonstrated how to copy the costume and change one eye to make it look closed (erase it and replace it with just a straight line). If there is time, I also have the students copy their original face again, erase the mouth and then redraw it to look open.

When the drawings are done then we work on making a script to show our face winking, and/or talking.

One of the last steps is to record them saying something. They were studying dinosaurs at the time so I had each student make two recordings; one saying "Hello, my name is . . ." and the other was a new fact they have learned about a dinosaur.

Finally, I have them draw a background. In this sample I choose to show how to make a window scene for the students to try if they wanted, most of them went on to try it.

02 - Memories

The 2nd graders did a writing project about a memory so I came up with an assignment for them to illustrate it.

First, they drew several pictures to go along with their memory (one per paragraph of writing).

Next, they read their stories out loud and recorded each paragraph separately.

Finally, they assembled their script.

The Script - A long list of "**next background**" with "**play sound until done**"