Bolded words are meant to be read by an adult and discussed with your Girl
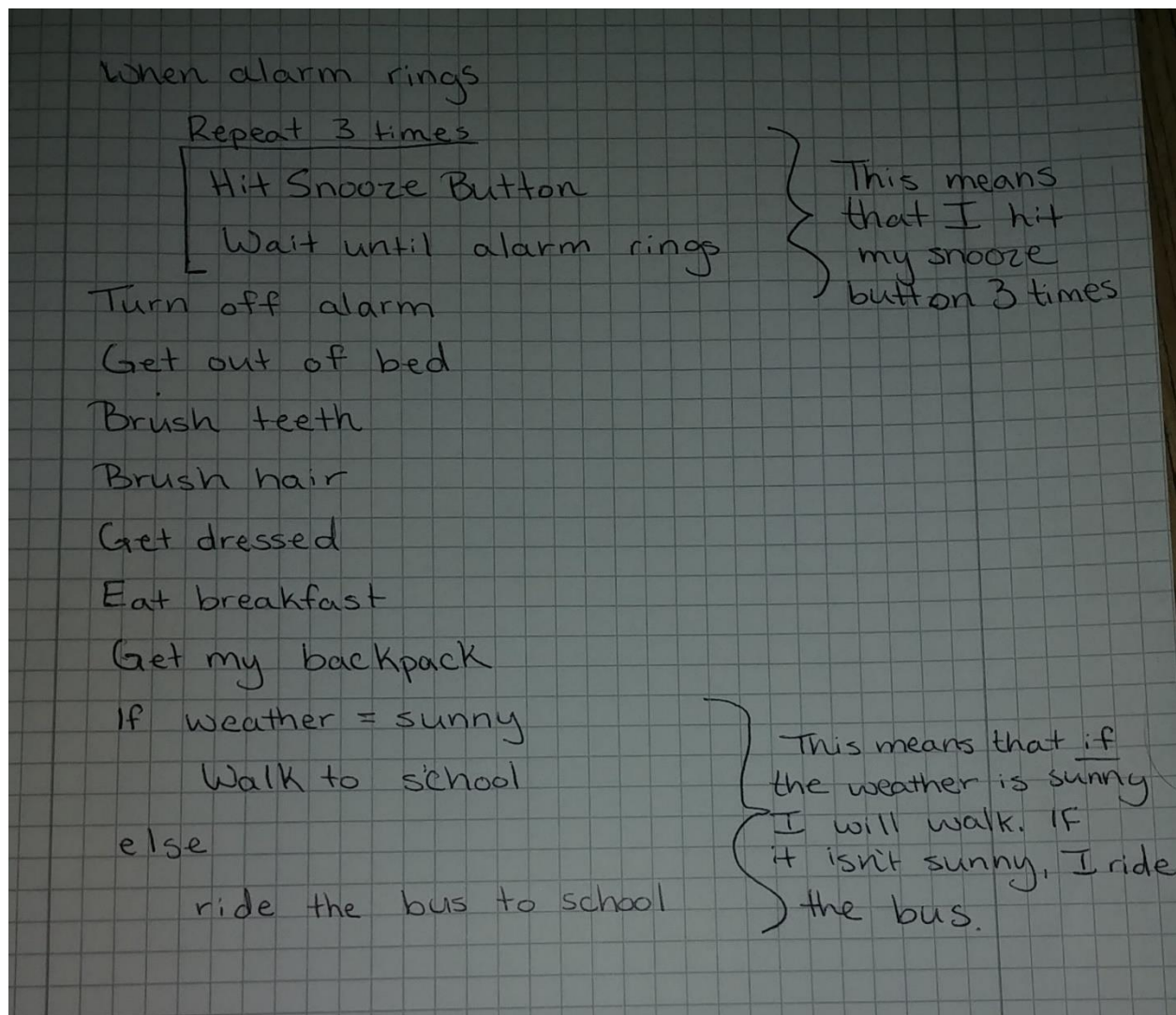
Activity 1: Create algorithms for a computer that follow a sequence

Think about your morning routine? Do you do some of the same things every morning? Do you brush your teeth? Do you eat breakfast? What about getting to school? Do you ride the bus? Do you walk? Does an adult take you?

With an adult's help, write down your morning routine.

An algorithm is a set of instructions that are followed step by step by the person or machine reading them. Let's write an algorithm that gives us a set of instructions of a normal school day morning!

Here's mine!

How would you create your morning algorithm?

Activity 2: Use Loops to improve your algorithm

Tell your girl to jump up. Wait until she jumps and then say jump up again. And then tell her to jump up a third time.

Do you think it would have just been easier if I had told you to jump three times?

Computers sometimes have to do something hundreds of times over and over. Instead of telling it to do the same thing over and over, we say do it 30 times.

Let's make a dance routine! You can use the moves Twist, Jump, and Jazz Hands to make your dance.

Mine would be:

Twist, Jump, Twist, Twist, Jazz Hands and you repeat it three times. That is a loop!

Now make your own!

Activity 4: Learn about women in computer science

Do you know someone who works with computers? What about the names of people that created the computers that we use today? Women have worked and designed computers since they started and Grace Hopper is one of those women.

Watch [this video](#) on Grace Hopper!

Activity 3: Use events to make things happen and make your own set of commands

What should you do when the fire alarm goes off?

What should you do if you are in a race and the referee says "GO!"

What should you do if you have cookies in the oven and the timer goes off?

What do all three of these things have in common? The general answer for this is that something happens that made you do something.

Together with your girl, create a set of commands that happen because of events. You could say that "every time I clap my hands, you take one step forward" or "If I snap my fingers, you twirl in a circle."

Create a set of commands and then try them out!

Computers do this all the time. When we hit the keys Ctrl + C the computer knows that it should copy something. When we hit Ctrl + V it knows to paste. There are hundreds of different commands that a computer knows!

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